EXHIBIT A
(part 2 of 3)

PowerPoint Slide:

Instructor Review Notes

Exercise

Using material from the Seattle Office of Civil Rights, the slide above will be displayed and officers will be asked questions about each item. Some biases can be subtle and not necessarily deliberately thought of when faced with new information.

- **What do they all have in common?**
- **Which is the most expensive?**
- **Which one would be at a grandparents' house?**
- **What do you think of when you see the folding chair?**
- **Which is the most comfortable?**

Desired result: Psychology and cognitive science have determined that our brain creates, mental shortcuts, through schema and stereotypes, that assist us grouping things for cognitive efficiency.

- Students will recognize that we come to quick conclusions based on mental associations in order to facilitate processing of information. It is an effective shortcut to categorize all of the objects as "chairs"; to clump things together based on a prominent characteristic. However, there are fundamental differences between the chairs with respect to uses, comfort, expense, and the like. Despite these differences among the individual chairs, our brain automatically maps the item to a "chair" schema or group in our brain and we immediately know they are furniture to sit on. Our brains want to be efficient. These mental shortcuts are hard-wired to improve our cognitive efficiency.

- Although we acknowledge they are all chairs, we unconsciously categorize them based on our experiences, perceptions, and assumptions. A preference of one over another or a systematic association can be a bias.
- Could the most expensive chair be the antique chair; or the specialty chair?
- May an assumption based on prior groupings of information or experiences be inaccurate?

PowerPoint Slide:

Schema

Schema describes an organized pattern of thought or behavior that sorts categories of information and the relationships among them.

- **Mental shortcuts**
- **Organize and categorize objects, places, events, activities, and people**
- **Automatic—we are not aware**
- **Used innately to understand, predict, and make sense of the world**

Implicit Bias Taskforce, Toolbox PowerPoint Instructional Manual, ABA Section of Litigation, pg 24 & 32

PowerPoint Slide:

What do officers typically associate with a suspects quick hand movement to their waistband?

Instructor Review Notes

- **Is that a schema?**
- **Have you ever been in similar circumstances, where the movement turned out to not be a "reach" for a weapon?**
- **Why were you mistaken?**

We use schemas in police training to develop quick realistic pictures or associations that facilitate decision-making. Scenarios that present a suspect drawing a firearm from their waistband creates a picture that facilitates threat recognition and decision making under time-pressure. We associate certain movements with potential threats. The sudden reach may or may not be accurate; requiring an assessment of the actual threat. There is significant support that training improves schema development, which impacts cognitive load; supporting threat recognition, assisting with correct association of schema and improving performance under stress. Schemas can and often are a good thing, but can be predicated on incomplete information. In police work we evaluate the schema used by comparing it to training, and applying the reasonable officer standard to determine if officer actions were legal.

One of many articles:

Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot, Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

PowerPoint Slide:

Stereotypes

- **Similar to the concept of schema** we use stereotypes to categorize people
- We use them to sort people into recognizable groups-We use them when we expect or assume—often without thinking—that, because a person belongs to a particular group, they must possess the characteristics that we have come to associate with that group

What is Implicit Bias?
http://www.americanvaluesinstitute.org/?page_id14
Posted on August 24, 2009

PowerPoint Slide:

How do stereotypes surface in the real world?

Instructor Review Notes

What is the NFL's institutional view of a 5'10" quarterback?

What are other biases toward quarterbacks and how have they evolved over time?

Desired result: Recognize that there is a group or collective bias. The NFL clearly has a bias against small quarterback's in spite of their success-Wilson and Breese. The success of these quarterbacks has led to considering a QB outside the norm, but the biases remain strong. Even after winning the super bowl, commentary about QB's in the 2014 draft focused on physical attribute of height and how a taller QB brings the required "tools" to the game.

When we think of a high-quality quarterback, we might think of a certain type of person (prototypical 6'06', 240 QB). When presented with a different person, we might assume that they will not be as effective. This is an example of applying the characteristics of a group to a person—and basing decisions on it.

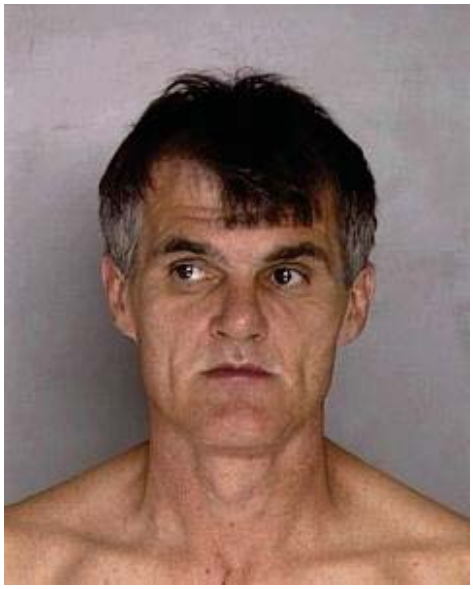
PowerPoint Slide:

Do we have stereotypes in police work?

What are the characteristics you associate with a child rapist?

Describe the image that came into your mind

Many officers will associate a child rapist with an older white male.



http://thetimes-tribune.com/news/child-rapist-sentenced-to-20-to-40-years-in-prison-1.1575033

29 % under 17 YOA

73% under 29 YOA

Sexually Assaulted Children: National Estimates and Characteristics, David Finkelhor, Heather Hammer, and Andrea J Sedlak, National Incidence Studies of Missing, Abducted, Runaway, and Throwaway Children, August 2008, US DOJ, Office of Justice Programs

https://www.ncjrs.gov/pdffiles1/ojjdp/214383.pdf

PowerPoint Slide:

Do stereotypes create problems for you?

https://www.youtube.com/watch?v=RhSH928N9b8

Instructor Review Notes

- **Is the stop legal?**
- **Why did the officer stop the person if it appears illegal to be an illegal detention?**

The video will be stopped just after contact and the instructor will ask question regarding the legality of the stop and any potential for stereotypes/bias. The above video shows arguably a stereotypes/bias that is wrong and resulted in an illegal detention. This creates significant problems for the involved officer and agency.

Using stereotypes or biases creates problems for officers when:

- They are wrong
- Used as the sole basis or primary factory to make decisions
- Acting on pre-judged information puts officer in an a position of acting without well thought out support for decisions-unsupported decisions create errors
- It creates significant professional problems for officer
- It supports public perception of police bias
- Profiling/pre-judging/stereotyping is morally and ethically wrong

Desired response: Officers will instantly form a mental picture. Schemas/stereotypes are part of the human condition used to bring order and create mental efficiency in processing information. We all use them, but what matters is what we do with those mental shortcuts. Officers should understand that problems occur when they act on a stereotype as the sole basis for a decision.

Biases: We All Have Them.

PowerPoint Slide:

What in your opinion is an explicit bias?

Is racism an example of explicit bias?

Explicit Bias Defined-

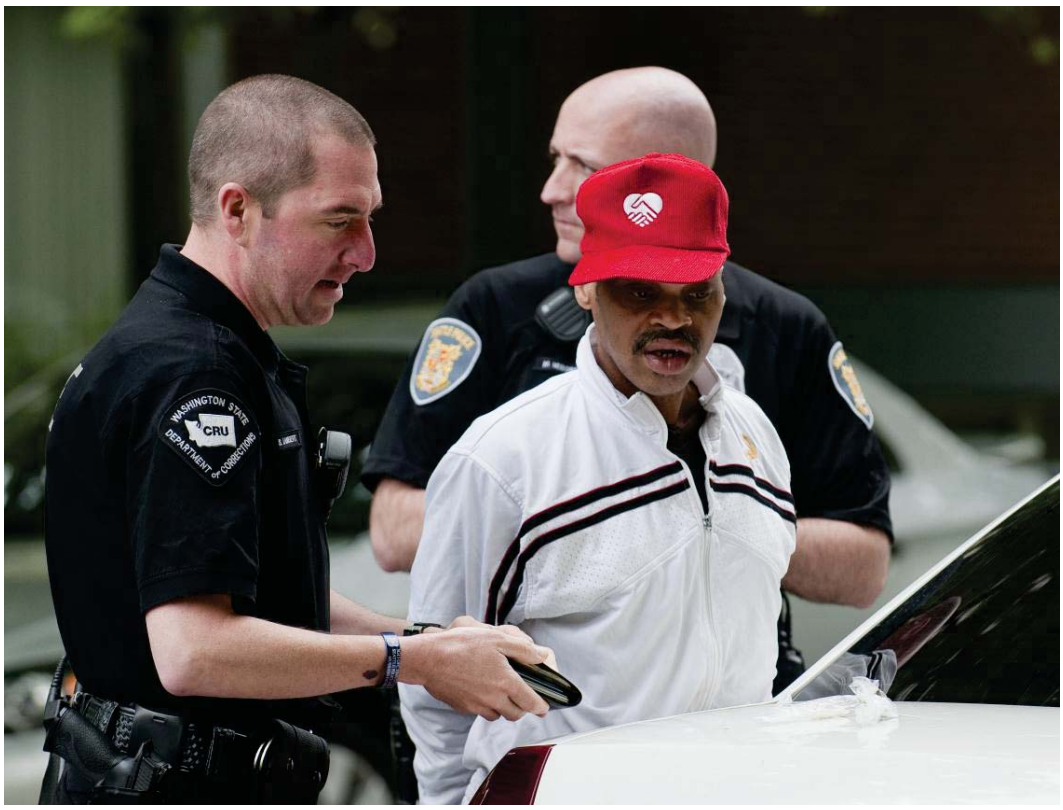
- It is an attitude or stereotype that somebody is consciously aware of having
- Racism would be an explicit bias in which a person has conscious animus toward a group and is unconcerned about their bias
- Social scientist have determined that bias is very unlikely to manifest itself as explicit bias-85%+ believe they are unbiased in relation to race

http://med.stanford.edu/diversity/FAQ_REDE.html

COPS, U.S. Department of Justice, Fair and Impartial Policing Course, Module 1, page 4

Instructor Review Notes

Desired results: The instructor is seeking a group discussion to define explicit bias. The questions above will prod officers to understand the distinct nature of an explicit bias.



What in your opinion is an implicit bias?

PowerPoint Slide:

Implicit Bias Defined:

- Bias operating outside of awareness or conscious recognition
- Based on attitudes or stereotypes

Instructor Review Notes

Desired results: The instructor is seeking a group discussion to define implicit bias. The questions above will prod officers to understand the distinct nature of an implicit bias.

PowerPoint Slide:

Fundamental Concepts of Implicit Bias

- Bias is a normal human attribute—even well-Intentioned people have biases
- Biases are often unconscious or "implicit"
- Implicit biases manifest even in individuals who, at the conscious level, reject prejudices and stereotyping—People who express beliefs in equality and against racism may nonetheless of innate associations between certain people and certain characteristics
- Implicit biases can influence our actions
- Understanding how implicit bias can affect our perceptions and behavior is the first step to "override" implicit bias

Biases are part of the human condition. We all have them.

COPS, U.S. Department of Justice, Fair and Impartial Policing Course, Module 1, page 8

Video Presentation:

http://www.youtube.com/watch?v=_uNPpFZLelE

Instructor Review Notes

- **We all have biases; can they be based in part on facts?**
- **Were any of George Clooney's comments based on facts?**
  - Parents with strollers are slow? Stereotype? Bias?
- **Even if based on fact, does that necessarily make them accurate?**
  - No
- **Have biases ever impacted you? Personally or professionally? How?**

Desired results: We all have biases and many feel they have been impacted by bias. Often, our experiences support biases. Our brain uses facts and past experience to build schema and stereotypes that allow us to operate efficiently. However, that efficiency can lead to errors. Recognizing bias, that such bias may not be something about which we are consciously aware, and the errors that may result from bias, is an important step to achieving bias-free policing.

Race/Crime Association

Video presentation:

http://www.youtube.com/watch?v=_QXyyj1RiCE

Will be edited to approx. 3 minutes

COPS, U.S. Department of Justice, Fair and Impartial Policing Course, Module 2, page 30

Instructor Review Notes

In this scene, the character, played by Sandra Bullock, fears that two Black men are criminals and this turns out to be accurate. Her stereotype became true.

Of course, this happens sometimes. Yet there are also situations where a fear—or lack of fear—based on biases is inaccurate. You may assume a woman does not have a gun, when she does.

Your implicit biases might be right sometimes, but they can also be wrong. Because they are not reliable, you should not police based on your biases. Race/crime association in society is very strong even with individuals who have strong anti-bias beliefs. The video is used to present a clear bias/stereotype as a starting point to explore the issue and identify problems of implicit bias for officers.

PowerPoint Slide:

Do you think that there is an association between race and crime in society?

Is it implicit or explicit?

Instructor Review Notes

Yes. There are numerous studies to support this assertion. This bias is often one that is not conscious. It has been found to exist among individuals of all races, ages, and other categories.

PowerPoint Slide:

Why do you think we have race/crime associations?

Instructor Review Notes

- **Several significant studies suggest that there is a strong race/crime association in society equally represented in non-police and police**

  Seeing Black: Race, Crime, and Visual Processing, Eberhardt, Goff, Purdie, Davies
  Journal of Personality and Social Psychology Copyright 2004 by the American Psychological Association 2004, Vol. 87, No. 6, 876–893

  http://www-psych.stanford.edu/~mcslab/PublicationPDFs/Seeing%20black.pdf

  The Correlates of Law Enforcement Officers 'Automatic and Controlled Race-Based Responses to Criminal Suspects
  B. Michelle Peruche and E. Ashby Plant *Florida State University* BASIC AND APPLIED SOCIAL PSYCHOLOGY, *28*(2), 193–199 Copyright © 2006, Lawrence Erlbaum Associates, Inc.

  http://fairandimpartialpolicing.com/docs/pob8.pdf

  Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot,
  Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

Several factors may contribute to this stereotype:

- "a natural response, given the high proportion of Blacks convicted of violent crimes in the United States."
  Eberhardt, pg 891

- Higher levels of disrespect, hostility, economic/social disadvantage and higher crimes rates in disadvantaged neighborhoods may contribute to police race/crime association. Police interaction may also be impacted by these groups perception of being victimized by police. At times this could be unintentional; the "residents at the bottom rungs of the social ladder(may) perceive that community policing activities unfairly target them and are not likely to be happy about that" Reisig pg 247 Policing efforts and strategies may contribute to "perceptions that police unfairly target their transgressions, largely in African American communities throughout the United States." Additionally these conditions may reinforce disrespectful activities as "defensive and legitimate." Pg 248-249

  Suspect Disrespect Toward Police, Reisig, Mccluskey, Mastrofski, and Terrill,Justice Quarterly, June 2004, 21,2, Law Module, pg 241

PowerPoint Slide:

There is a very strong association even in people who have strong beliefs contrary to bias-

> "There is nothing more painful to me at this stage in my life than to walk down the street and hear footsteps and start thinking about robbery. Then look around and see somebody white and feel relieved."
>
> **Rev. Jesse Jackson**

Implicit Bias Taskforce, Toolbox Powerpoint Instructional Manual, ABA Section of Litigation, pg 32, Operation PUSH in Chicago (27 November 1993). Quoted in "Crime: New Frontier – Jesse Jackson Calls It Top Civil-Rights Issue" by Mary A. Johnson, 29 November 1993

PowerPoint Slide:

What would be the negative effects of race/crime association for police officers?

Instructor Review Notes

Officer Safety: Could lead to officer safety concerns—making decisions based on bias or stereotypes rather than the facts of a certain situation

Example: Not treating an *armed* elderly woman as threat

Unjust: Equitable and fair police actions must be based on information more than bias or a hunch; it must be predicated on articulable facts that reasonably support the officer's legal conclusions.

Desired results: Based on many studies, there are strong race/crime associations in American society.

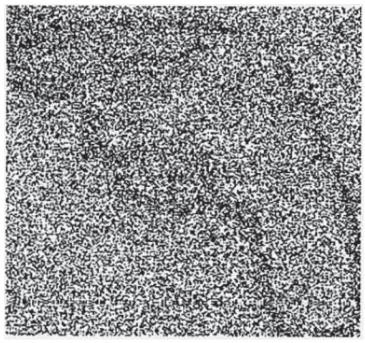
Although they exist, students will be presented material in the following section demonstrating that these biases can be un-trained or through police training their impact on decisions becomes negligible.

Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot, Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

COPS, U.S. Department of Justice, Fair and Impartial Policing Course, Module 2, page 30

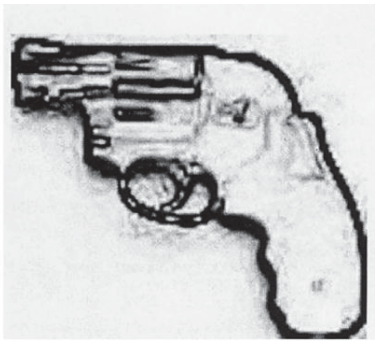
How does implicit bias impact police officers?

PowerPoint Slide:



Frame 1

Frame 20



Frame 41

Instructor Review Notes

In one study, subjects were exposed to Black male faces and White male faces prior to displaying crime related objects. (gun, knife, etc.)

- Exposure to Black male faces facilitated the identification of crime-related objects—they could see crime-relevant things more quickly
- Exposure to White male faces slowed the identification of crime-relevant objects—they saw crime-relevant things more slowly

"It is important to note that although visual processes may reinforce stereotypic associations, the associations themselves are consequences of widely shared cultural understandings and social patterns."

Seeing Black: Race, Crime, and Visual Processing,
Eberhardt, Goff, Purdie,Davies Journal of Personality and Social Psychology Copyright 2004 by the American Psychological Association 2004, Vol. 87, No. 6, 876–893

Eberhardt, et al (2004). Fair & Impartial Policing Module 1, pp. 19-24

PowerPoint Slide:

Instructor Review Notes

In another study, Denver police officers and randomly chosen community members, participated in a shoot/don't shoot study, using a video game simulation. The video game presented suspects who are black and white. The background changed and the objects in the suspect's hand varied throughout the 100 slide presentation. All participants were told that if a weapon is observed it is a shooting situation.

Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot, Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

PowerPoint Slide:

- **In the study, police officers were slower to shoot armed white suspects than they are to shoot armed black suspects.**
- **560 ms vs 572 ms (difference of 12 ms or 12/1000th of a second)**

What does the consistent difference suggests that may be impacting the speed of officer's reactions?

Instructor Review Notes

Implicit bias/stereotypes:

When the situation conformed to a bias (e.g., an *armed* Black man), participants shot more quickly. When the situation did not conform to the bias (e.g., an *armed* White man), participants shot more slowly.

- **It appears that people are slower to fire at an armed white suspect because it presents a picture that is inconsistent with stereotypes.**

Explicit bias or values:

Even subjects who expressed beliefs and values in a pre-study questionnaire that reflected the lack of explicit bias or racism and a dedication to equality manifested the same effects.

PowerPoint Slide:

How do you think the community members perform?

Instructor Review Notes

Let the class offer suggested responses

- Community member's responses mimic officer's performance; they hold the same level of bias to shoot faster black armed suspects than white armed suspects.

PowerPoint Slide:

Do you think that police officers made more correct shoot/don't shoot decisions?

Instructor Review Notes

YES.

On average, officers were quicker to make correct shoot/ don't-shoot decisions than were civilians; they shot more armed subjects and did not shoot more unarmed subjects. It appears that police were better able to differentiate armed targets from unarmed targets.

- Although police officers may be affected by culturally shared racial stereotypes (i.e., showing bias in their response times), they are no more liable to this bias than are the people who live and work in their communities. (higher proportion of civilians were minorities than officer sample). This is further evidence that we all have implicit biases.
- For officers however, the stereotypic interference ended with reaction times. ***The bias did not translate to the decisions they ultimately made.***

PowerPoint Slide:

How do you think that researchers explained the difference between police officers and civilians?

How would you explain it?

Instructor Review Notes

- The researchers suggested that the officer's training and experience may have allowed them to more consciously "*override automatic associations*"

"We suggest, then, that police training and on-the-job experience in complex encounters may allow officers to more effectively exert executive control in the shoot/don't-shoot task, essentially overriding response tendencies that stem from racial stereotypes."

Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot, Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

- Denver officers showed no bias to shoot based on race
- For officers however, the stereotypic interference ended with reaction times. ***The bias evident did not translate to the decisions they ultimately made. This separation of effects may reflect the officers' ability to override automatic associations (Kunda & Spencer,2003), perhaps as a function of their training and expertise.***
- The data suggests that the officers' training and/or expertise may improve their overall performance (yielding faster responses, greater sensitivity and reduced tendencies to shoot) and decrease racial bias in decision outcomes.
- ***It appears based on Correll's study, that although race appears to impact the processing time to decide to shoot, the decision to shoot by officers does not appear to be impacted by race-***

Across the Thin Blue Line: Officers and Racial Bias in the Decision to Shoot, Joshua Correll, Interpersonal Relations and Group Processes, Journal of Personality and Social Psychology, 2007 vol 92,no 6,1006-1023

Note** the prior study by Peruche **(The Correlates of Law Enforcement Officers' Automatic and controlled Race-Based Responses to Criminal Suspects** , B. Michelle Peruche and E. Ashby Plant BASIC AND APPLIED SOCIAL PSYCHOLOGY, *28*(2), 193–199 Copyright © 2006) is largely ***discounted by Correll's findings . Correll's work more accurately represents lethal force encounters i.e. suspect displaying a handgun as opposed to superimposing a weapon on a person. Peruche did find that more experienced officers are less impacted by bias. Correll also used many more officers in his study (237 vs. 50).

Due to the significance of Peruche's prior work, Correll attempted to replicate Peruche's results; modifying his exposure time, but was not successful. It appears that when using more ***realistic*** testing procedures, officer do not show a bias to shoot. Peruche also found that after exposure to the program officers are no more likely to mistakenly shoot unarmed white suspects vs. unarmed black suspects. Peruche at Pg. 196 This is consistent with Correll's overall findings.

PowerPoint Slide:

Do you think a black officer's performance would vary from other officers? Why?

Instructor Review Notes

The performance was the same for black officers—like other officers and civilian subjects, they showed a tendency to shoot armed black suspects faster than armed white suspects.

Researchers concluded that black officers may also have a race/crime association bias.

PowerPoint Slide:

Do you think the race/crime associations apply to other ethnic groups?

Black, Asian, and Latino?

Instructor Review Notes

Correll conducted a 2012 study that examined implicit biases on decisions to shoot hostile multiethnic suspects. The study supported the results discovered in his 2007 research. The 2012 used police officers from around the nation including Washington State officers. The 2012 study conducted the experiment using the same methodology as 2007 and added the additional targets of Latino and Asian suspects. The research resulted in the following

- Officers slowest to react to armed Asian suspects
- Officers next slowest to respond to armed white suspects
- Officers reacted faster with armed Latino suspects
- Officers were fastest with armed Black suspects
- Results suggest more violence stereotypically associated with Blacks and Latinos
- The higher the perceived violent crime in a community the higher the bias to shoot armed Latino suspects and a reduced bias toward white suspects

The World is Not Black and White: Racial Bias in the Decision to Shoot in a Multi-ethnic Context, Melody Sadler, Joshua Correll, Bernadette Park, Charles M. Judd, Journal of Social Issues, Volume 68, Issue 2, June 2012, pages 286-313

PowerPoint Slide:

"It is interesting to note that biases in reaction times toward Blacks and Latinos were overcome by the time the decision was made, and in fact, there was no evidence that target race biased a police officer's ability to correctly shoot armed targets and to not shoot unarmed targets."

"Finally, it is interesting to note that reaction time bias and sensitivity (accuracy) bias were generally uncorrelated. The only exception was a significant negative relationship for White targets. The more bias in reaction times to White targets(slower to react) is, the less accurately participants responded to the objects White targets held."

Instructor Review Notes

The 2012 quote continues to support the results discussed above in the 2007 study. Officers are impacted by race in the speed of threat assessment but are not likely to let race impact their decision to shoot. It does however present significant officer safety issues with potential for slower reaction to armed white suspects. Also the stronger the implicit bias toward whites the less accurate to identify a threat.

The implicit race bias in the study appears tied to the perception of threats posed by the representative groups. This appears impacted by the perceived level of violence within the community they police.

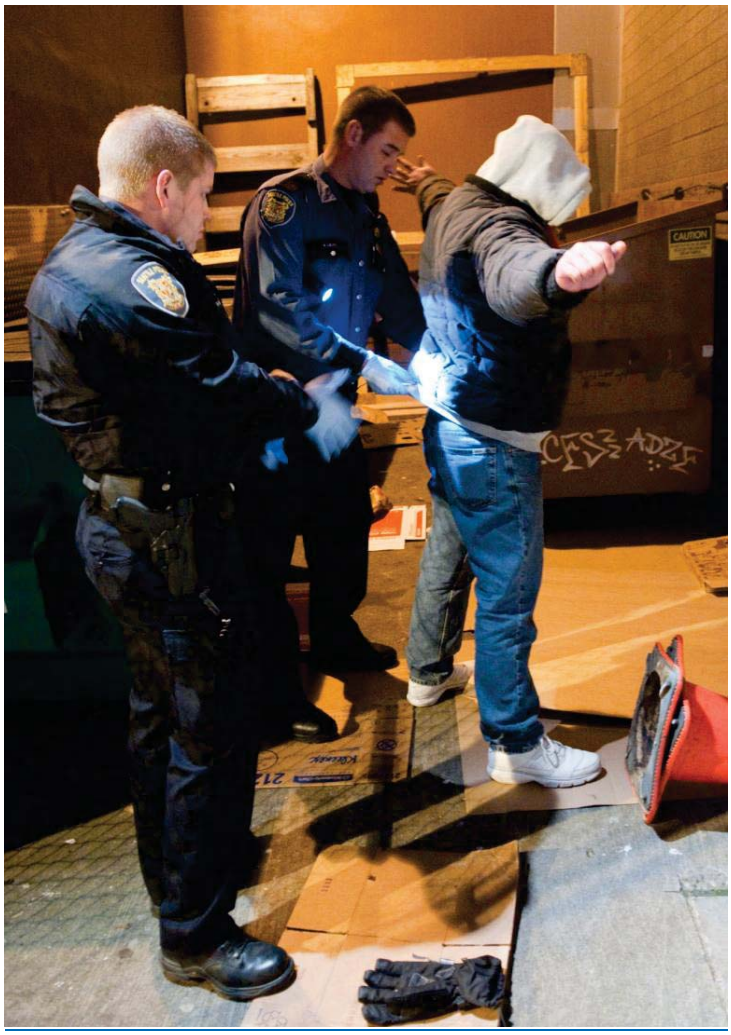
Police simulation training appears to reduce escalation and reduce the impact of race on how the encounter progresses

PowerPoint Slide:

What is the significance of the race-crime implicit bias?

Instructor Review Notes

- Everyone one has it and it is a very strong bias in society
- May create officer safety concerns, slower reactions to inconsistent stereotypes
- Increased scrutiny may support the community perception of police bias



PowerPoint Slide:

How could the race-crime association impact the determination of whether you have reasonable suspicion for a *Terry* stop?

Instructor Review Notes

- Who an officer chooses to monitor/scrutinize before deciding to make a stop

- Although race/crime association implicit bias appears to exist, officers may through training unlink bias, forcing them to act on facts supporting a legal detention.

  "[T]his study suggests that police officers are more likely to form non-behavioral suspicions for individuals who are members of a minority group. This finding is consistent with psychological theory of cognitive scheme in suggesting that blacks are more likely to be viewed suspiciously by the police for reasons that appear innocuous . . . **However, this does not influence the ultimate decision to stop and questions suspects. Instead, it appears that police officers require a clearer prompt, such as a suspect committing a traffic offense, or matching a reported description of a suspect crime, before they decide to exercise their discretion to stop a suspicious person or vehicle . . .** [Nonetheless], the findings from this study are important in that they provide . . . empirical evidence that race is an important predictor of the suspicion formed by the police in actual street-level encounters with citizens." (Alpert at 426–427)

PowerPoint Slide:

How can you reduce the possibility implicit biases are impacting your decision to initiate a contact?

Instructor Review Notes

Consciously force yourself to think in terms of observable, articulable facts and behaviors.

Reasonable suspicion must be based on observable, articulable facts. Officers must be able to state not only how their experience and training relate to their judgments of suspicion on a particular occasion but also be able to link those factors with an individual's reasonably suspected criminal activity.

L. Song Richardson , Cognitive Bias, Police Character, and the Fourth Amendment, 44 Arizona State Law Journal 268 (Spring 2012).

Do not avoid initiating contacts.

Studies show that the mere *awareness* that you may have implicit biases that your mind sometimes uses can reduce the effects of "implicit biases." Understanding implicit bias can affect our actions and is the first step to "override" implicit bias. Rely on observable and articulable facts to make decisions.

Fair and Impartial Policing Module 1, p. 36.

Exercise:

If time permits:

Have you ever had to deal with a co-worker you just don't like, but you wanted to treat them fairly?

How did you approach that interaction?

Did consideration of your own bias and what it takes to be fair, impact the interaction?

- We have all dealt with "that" person, the one we just don't care for, it can be difficult

- Often when concerned about treating people fairly, even those we have a bias toward, if we cognitively consider being fair and impartial, we are likely to reduce the impact of the bias. Many people have experiences with other employees, squad mates, supervisor/subordinates, team mates where they must interact with the person regardless of whether they like them. This is an example of how if we identify a potential bias, bring it to conscious consideration then we are less likely to act on the bias.

PowerPoint Slide:

Do you think that there is a community bias toward police?

Instructor Review Notes

- **What would be the likely community perception of this incident based on this picture?**

Desired result: Honest reaction to the picture. Likely response would be the assumption officers are using force to make an arrest.

Police in Baltimore County, Maryland struggled to take an armed suspect into custody. Authorities there answered a report of a man attacking a woman. The attacker was armed with a knife, and refused to follow commands to surrender. Officers used pepper spray, which was ineffective. They then attempted a TASER application, which the suspect defeated.

PowerPoint Slide:

Instructor Review Notes

- **What would be the likely community perception of this incident based on this picture?**

  The above picture will be shown first and the class will be asked what they believe the community's perception would be of this incident. The picture would likely raise question of race and police abuse.

- **If you hear of an officer using a high level of force what is your reaction when you find out the suspect is white?**
- **Are there biases toward police? Are they express biases because the people who have them are aware of their attitudes toward police? Could they be implicit?**

https://www.youtube.com/watch?v=5RrEZSFMB6A

Video is available if time permits; highlights community commentary related to the above incident.

- **Is the Seattle Police Department sometimes impacted by events outside its control?**
- **How do we address those events?**
- **Does promoting procedural justice impact biases toward police?**

Desired results: Police are impacted by biases toward them that may not be based on reality- the bias is false. We are further impacted by actions of officer not affiliated with Seattle Police Department. We can counter that perception through interaction with the community, seeking to enhance the perception of fairness during our interactions, listening and explaining our decisions. This incident in the videos highlights how events not tied to this organization and largely outside our control could support the national perception of officers and police agencies. The first video shows that the community members clearly have concerns about police response to this incident. The second link to the story about the event highlights the potential implications of this incident. Further the eventual outcome is largely immaterial and disconnected from the event usually by a significant period of time. In other words the impact of the event is immediate and requires officers to continuously work to support the perception of procedural justice enhancing police legitimacy.

Result of incident:

A Los Angeles federal jury unanimously rejected a civil rights lawsuit by a Venice skateboarder who claimed several Los Angeles police officers wrestled him to the ground, beat him and punched him in the head.

Los Angeles Times, June 23, 2014

http://www.latimes.com/local/lanow/la-me-ln-venice-stakeborder-who-claimed-lapd-beat-him-loses-case-20140623-story.html

Video Presentation

http://www.youtube.com/watch?feature=player_detailpage&list=PL972F14C05D75C195&v=PtdH5hMz0SU#t=68s

Fair and Impartial Policing, http://fairandimpartialpolicing.com/training/resources.html

Instructor Review Notes

- **What would you do on that call?**
  Nothing, no police action required
- **Is it possible somewhere in the country a police call like that could be generated?**
  Yes
- **Who is demonstrating a bias? The police or the community member who called?**
  Community
- **Can we be impacted by other people's biases?**
  Yes

Desired Result: Instructor will stop the video at the point of police contact. We want the officers to recognize that we do not control all aspects of a contact and can be impacted by external biases or bias by proxy. Again the goal is to identify the bias, attempt to unlink it from the decision, implement controlled behavior, slow down to permit deliberative processing and explain our actions.

PowerPoint Slide:

Is race the only bias?

Instructor Review Notes

Desired results: The instructor is seeking a group discussion on discernable characteristics linked to biases. The questions above will prod officer's to find areas of linkage to implicit bias. The class monitor will use information below to guide discussion. There are numerous studies related to biases linked to discernable characteristics. We will let the students come up with the list.

Research has documented implicit biases linked to:

- Ethnicity and race
- Gender
- Sexual orientation
- Body shape
- Age

Implicit Bias Taskforce, Toolbox PowerPoint Instructional Manual, ABA Section of Litigation, pg 32
COPS, U.S. Department of Justice, Fair and Impartial Policing Course, Module 3, page 4 **Seattle Office of Civil Rights**

- For example, a 2008 study found that—in a similar shoot/don't shoot study subjects were more likely to shoot individuals wearing an Islamic headdress

Unkelbach, et al; Fair & Impartial Policing Module 1, pp. 26-28.

PowerPoint Slide:

Are police the only profession impacted by bias?

Instructor Review Notes

Desired results: The instructor is seeking a group discussion on discernable characteristics linked to biases observed in other professions. There is significant research to demonstrate other professions have linked characteristics to bias. The questions above will prod officer's to suggest other professions impacted by bias. We will again let them come up with the list.

Relevant to Members of All Professions

- Implicit biases have been noted in studies focusing on:
- Doctors & nurses (relating to race, class, weight)
  http://link.springer.com/article/10.1007/s11606-007-0258-5
  http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3140753/
- Defense attorneys, prosecutors, and judges (relating to gender, race, and ethnicity)
  http://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1364&context=facpub&sei-
- School teachers
- Social service providers

Can we change a bias?

PowerPoint Slide:

The Seattle Times

Winner of Nine Pulitzer Prizes

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Ex-Seattle police official helped expose corruption in department

By Stuart Eskenazi
Seattle Times staff reporter

At a time blind eyes were cast to corruption within the ranks of the Seattle Police Department, Assistant Chief Eugene Corr helped expose an illegal payoff system — and then paid a price for his courage.

Mr. Corr, 82, who died of lung cancer Sunday, emerged through it all with his integrity intact, earning distinction as a model public servant.

Instructor Review Notes

- **In the sixties and early seventies SPD was associated with allowing illegal gambling and taking bribes. Do you think SPD is currently associated with this type of corruption?**
- **What changed that perception?**
- **How long do you think it took to change that stereotype?**

Desired result: Have people acknowledge that biases change over time. They may also change as a result of additional modifying experiences or changes in behavior. Consistently addressing the concern institutionally and individually led to a change of the public's perspective of SPD. Training, policy and public leadership altered established biases.

Section summary
PowerPoint Slide:

What is a bias?

Do we all have them?

Are we always aware of a bias?

What is the race/crime association stereotype?

Can police override the stereotype?

Can biases change?

Overlaying Strategies for Reducing Implicit Bias on Police Work

PowerPoint Slide:

How can we minimize implicit bias?

What tactics, strategies, and procedures can officers use to reduce the effects of implicit bias?

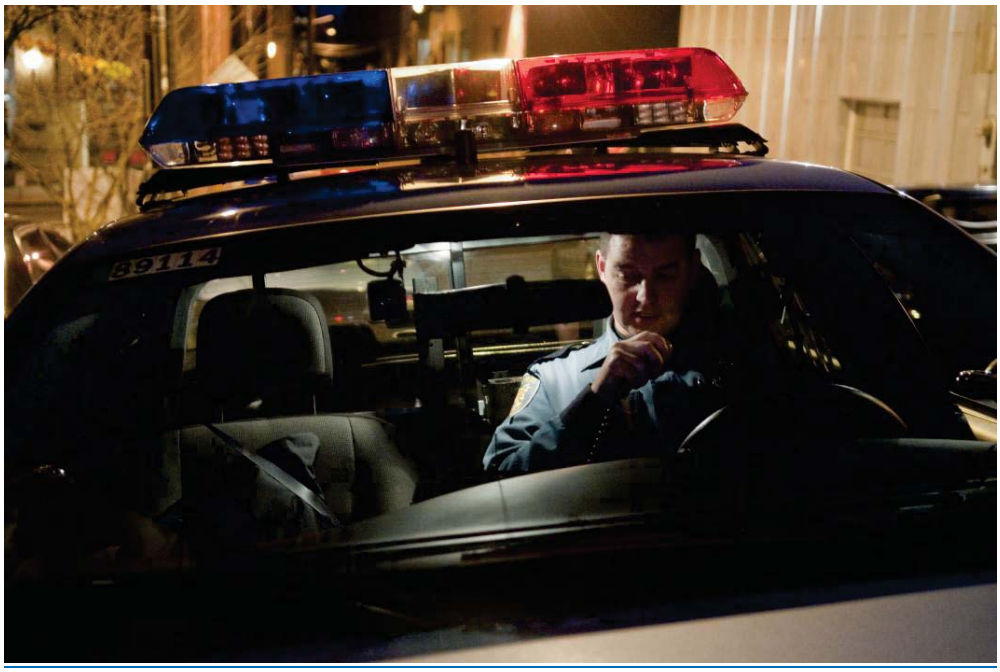
Instructor Review Notes

Officers will be presented with each tactical concept, policy, and assess how each promotes the reduction of bias. The bullet points below will flash onto the screen and officers will be asked how they support a reduction in bias and reduce likelihood of using force. Below each bullet are instructor notes to assist in directing conversation. This block will demonstrate how many of our best practices can and will reduce the impact of bias and the need to use force. This block is intended to quickly link anti-bias/force strategies with best practices. Equitable policing practices reduce the perception that officers and the Seattle Police Department acts with bias. It provides officers with clear skills and steps for reducing the perception of bias.

As discussed in the prior PowerPoint slide the effects of biases can be reduced and changed.

Implicit biases can also be changed when people "invest the effort to practice specific strategies to avoid stereotypic or prejudicial responses." [Dasgupta & Asgari 643, Fiske & Gilbert] In addition to these intentional approaches, implicit biases can be changed by changing the "social context people inhabit rather than by directly manipulating their goals, motivation, or effort," with the longer the period of exposure to counter stereotypes, the greater the decrease in stereotypes. [Dasgupta & Asgari 643-44, see also Fiske & Gilbert (describing impact of direct experience)]

Implicit Bias Task Force, Toolbox PowerPoint Instructional Manual, ABA Section on Litigation**, at 50.**



PowerPoint Slide:

STRATEGY 1: Giving yourself, where feasible, more time and space to identify facts and reduce errors

How does more time help reduce potential bias?

Instructor Review Notes

More time permits "controlled responses" and "reduce ambiguity" of situations.

***See* ABA Implicit Bias Taskforce, ABA Section of Litigation "Toolbox PowerPoint Instruction Manual," at 49**

PowerPoint Slide:

Existing SPD training has already provided you with many of the tools you need.

- **Time, distance and shielding**

Instructor Review Notes
○ Less likely to use force
○ Threat assessment permits modification of decisions
○ More time to make decisions, process information, less likely to act on intuition or bias
○ Minimizes likelihood of exigency/quick decision process
○ Forces assessment of the impact of decisions

- **Contact/cover and team tactics, High Risk Vehicle Stops, Multiple Officer Building Searches**

Instructor Review Notes
○ More time to process and control environment
○ Separation of parties and controlling the scene, may help reduce cognitive load, supporting deliberative processing
○ Forces threat assessment requiring evaluation of options, consider implications of decisions, and potential impact
○ Less likely to use force
○ Facilitates control of the scene

- **Less lethal tools, K9, rifles, SWAT and police tools/tactics**

Instructor Review Notes
○ Present alternative force options
○ Usually requires team tactical considerations minimizing risks to officers and the community
○ Changes analysis to increase review of feasibility of various tactics, not locked into one option
○ Changes dynamics of lethal force option, asks why particular force option was required
○ Promotes deliberation when feasible
○ Time spent evaluating choices promotes Bias free decisions and perceptions

- **Training**

Instructor Review Notes
○ Shifts focus on officer priorities away from biases, to officer safety concerns
○ Improves proper decision making
○ Improves ability to process time pressure information

- **De-escalation**

Instructor Review Notes
○ Use words, actions, tactics, etc. to reduce the likelihood to use force
○ Supports the concept of letting the community voice their concerns

PowerPoint Slide:

STRATEGY 2: THINK ABOUT BEING ABLE TO ARTICULATE YOUR REASONING PROCESS—

"WHAT ARE MY CLEAR, ARITCULTABLE REASONS FOR DOING THIS"?

Seattle Office of Civil Rights

Proven Strategies for Addressing Unconscious Bias in the Workplace, August 2008, vol 2, issue 5

H**elping Courts Address Implicit Bias, Strategies to Reduce Implicit Bias**, National Center for State Courts, Open Society Institute, and the State Justice Institute

Implicit Bias Task Force, Toolbox PowerPoint Instructional Manual, ABA Section on Litigation,

How will this help you?

Instructor Review Notes

Focusing on actionable facts unlinks potential bias and asks you to assess the legitimacy of the information supporting the intended action.

PowerPoint Slide:

STRATEGY 3: EDUCATION AND TRAINING BUILDS AWARENESS

Attending training—and being aware of that experiences, stereotypes, and schema may be influencing your decision-making even if you're not immediately aware of it—can help you "override" or minimize implicit bias

PowerPoint Slide:

STRATEGY 4: WHEN INTERACTING WITH THE COMMUNITY, USE "LEED"

Section summary
PowerPoint Slide:

Seattle Police Department

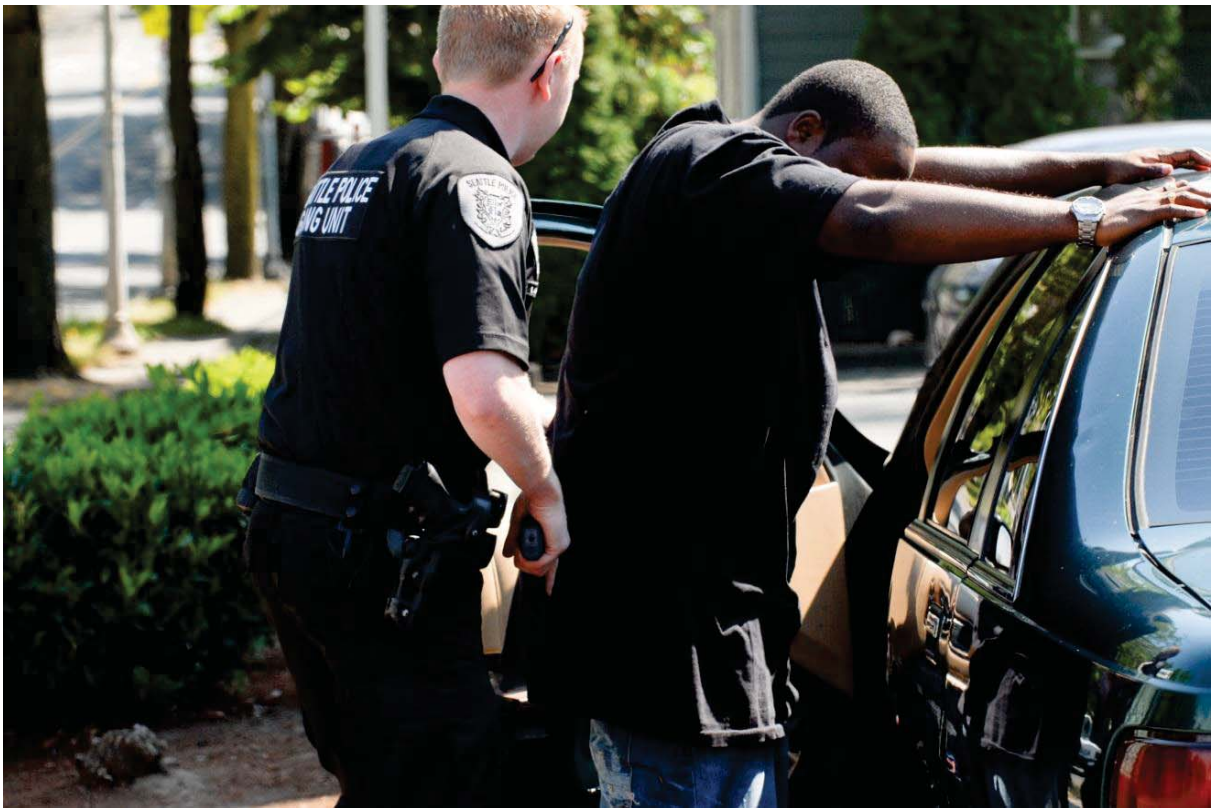
Implicit Bias Tool Kit:

STRATEGY 1: Give yourself, where feasible, more time

STRATEGY 2: Rely on articulable facts

STRATEGY 3: Education and training builds awareness

STRATEGY 4: Use "LEED"



LEED

*L*isten and *E*xplain, with *E*quity and

*D*ignity

PowerPoint Slide:

What problems does LEED help us address?

LEED ties our commitment to equality and respect to clear, explicit behavior and verbal communication.

Operational Implementation

How do we operationalize LEED:

PowerPoint Slide:

Three steps of LEED

- Introduction
- Engagement
- Closing

PowerPoint Slide:

Introduction

1. Make the scene safe
2. Greet the person, identifying yourself, treat them with respect
3. Slow the situation down if feasible and begin a deliberative process for evaluating the fairness of your intended response
4. Tell the person the reason for the contact
5. Use appropriate tactics which will likely reduce the need to make exigent decisions

Video presentation:

http://www.youtube.com/watch?v=mXPeLctgvQI

Instructor Review Notes

Do the officers in the video use the introduction concepts of LEED?

Are they professional?

What is the impact of this type of media on the community? Does it create a bias?

What is the bias?

- The video is funny, but clearly show officers who are not acting professionally, do not listen to the person contacted, do not explain the reason for the contact and by their actions do not treat people with dignity.
- How would the person in the video feel about the incident after receiving the citation?

Desired results: It is obvious that in spite of the intended humor, these officers are concerned with their own personal desires over the need to treat the people contacted with respect and dignity. We want officers to identify that a professional approach combined with a willingness to explain our actions supports the perception of procedural justice and police legitimacy.

PowerPoint Slide:

Engagement

1. Let the person contacted "Voice" their concerns-let them tell you their side of the story
2. Actively listen to the person attempting to identify their issue
3. Attempt to find a point of agreement or understanding for your decision or the nature of the contact
4. Ask if they have questions or concerns
5. After the person has expressed their concerns explain the outcome of the law enforcement action

Video Presentation:

http://www.youtube.com/watch?v=9VRNaru--eE

Video will be edited to approximately 4 minutes in length

Instructor Review Notes

- What is your take-away of the video? Was the officer professional?
- Did the citizen have legitimate concerns?
- How did the officer address those concerns? Did he listen?
- Do the subjects in the video respect the authority (legitimacy) of the officer?
- What did his partner do?
- How effective was the partner?
- How should this incident have been addressed by their department?
- What are the rights of civilians to observe, comment on and document/record officer actions?

Desired results: We want officers to identify that a professional approach combined with a willingness to explain our actions supports the perception of procedural justice and police legitimacy. The officer in this case does not seem to understand the limits of his authority and is unwilling to explain his decisions. He backs himself into a corner and when his authority is not accepted the officer "loses" it. The group should also reach the conclusion that this contact could have significant professional impact on the officer-discipline, time off or potentially termination. The officer was disciplined. It is important to point out how effective the backup officer was in separating the primary officer and explaining the event to the subjects.

PowerPoint Slide:

Closing

1. Do what you said you would
2. Provide your information to any person contacted or anyone at the scene interested in the incident
3. Make efforts to follow up with victims

Video Presentation:

http://www.youtube.com/watch?v=hPCmk4iZ6J8

Video will be edited to approximately 3 minutes in length

Instructor Review Notes

- What is your take-away of the video?
- Was there potential in this contact for assertion of bias/racism?
- How did the officer address these concerns?
- Was it effective?
- Is it likely those involved will be "happy" with the contact?
- What is the officer goal or reasonable expectation from the contact?

Desired results: We want officers to identify that a professional approach combined with a willingness to explain our actions supports the perception of procedural justice and police legitimacy. The video also presents an officer that understands his legal authority, is capable of explaining his actions and clearly recognizes he is answerable to the community he serves. Biases require identification and through our conduct we challenge the bias or change our behavior. This can apply to perceived biases toward police.

Documentation and Reporting of Bias

If we are not aware of a problem, can we address the issue?

Officers will review policy highlighting the definition of bias within the policy, the complaint of bias reporting requirements, and how the incident must be investigated. This will be a quick review highlighting information already discussed in related e-Learning modules.

PowerPoint Slide:

How does the Seattle Police Department define bias?

Definition: Per Manual section 5.140 Bias-based policing is the different treatment of any person by officers motivated by any characteristic of protected classes under state, federal, and local laws as well other discernible personal characteristics of an individual.

PowerPoint Slide:

What does the policy say regarding prohibited activity?

Instructor Review Notes

- Officers may not engage in bias policing.
- Officers may not express verbally, in writing or by other gesture-any prejudice or derogatory comments concerning personal characteristics
- Officers may not retaliate against someone who complains of bias policing
- Officers and supervisors who condone or fail to report bias will be subject to discipline.
- Supervisor's failure to respond to, document or review an assertion of bias will be subject to discipline.

Officers will review the policy section by section. The desire is to ensure uniform understanding of the policy and how it is to be applied. Additionally the reporting and documentation requirements will emphasized as this block is instructed.

Seattle Police Manual 5.140(2)

PowerPoint Slide:

Who should report bias?

Instructor Review Notes

- Anyone who observes or is aware of the bias shall report the incident.

Seattle Police Manual 5.140(4)

PowerPoint Slide:

When may officers act on discernible characteristics as defined in policy?

Instructor Review Notes

When used to establish reasonable suspicion or probable cause if the characteristic is part of a specific suspect description based on trustworthy and relevant information that links a specific person to a particular unlawful incident.

Officers are expected to consider relevant personal characteristics of an individual when determining whether to provide services designed for individuals with those characteristics (e.g., behavioral crisis, homelessness, addictions, etc.).

Seattle Police Manual 5.140(3)

PowerPoint Slide:

What does this mean?

Instructor Review Notes

Officers must articulate specific facts and circumstances that support their use of such characteristics in establishing reasonable suspicion or probable cause. Use of race as a component descriptor of a suspect of a crime is an example:

If the suspect of a burglary is described as an Asian male, 5'06', approximately 145 pounds, blue jeans and a white t-shirt with a mariners logo on the front, then a stop of a person matching this description would be based on clear articulable facts.

Seattle Police Manual 5.140(3)

PowerPoint Slide:

What is a reportable bias complaint?

Instructor Review Notes

From the perspective of a reasonable officer, a subject complains they have received different treatment from an officer because of any discernible personal characteristic.

Seattle Police Manual 5.140(3)

PowerPoint Slide:

Does the complaint have to be a direct assertion of bias?

Instructor Review Notes

When in doubt contact a supervisor and document the incident.

PowerPoint Slide:

What are the reporting requirements for a complaint of bias?

Instructor Review Notes

Until approval of new reporting procedures or forms the information below applies:

Where there has been a complaint employees will complete a GO report to document the circumstances of the complaint and steps that were taken to resolve it.

This GO must include the following information, if the person is willing to provide it:

The person's name,

Address Phone number,

or email address,

and Contact information for witnesses who observed the events.

All reports involving a complaint of bias-based policing must be reviewed and approved by a supervisor before the end of the employee's shift.

Seattle Police Manual 5.140(6)

PowerPoint Slide:

Who conducts the preliminary investigation?

Instructor Review Notes

A supervisor will conduct the preliminary investigation.

The complainant has an option of having the incident referred to OPA.

If the supervisor determines there is misconduct then the issue will be referred to OPA.

Seattle Police Manual 5.140(7)

PowerPoint Slide:

What are the procedures for an employee who receives a complaint?

Instructor Review Notes

1. Receive the call
2. Call a supervisor and get one to respond to the scene.
3. Do not detain the complainant to await arrival of a supervisor.
4. Document the incident and actions taken in a GO.

Seattle Police Manual 5.140 PRO-1

PowerPoint Slide:

What are the procedures for a supervisor when a complaint is reported?

Instructor Review Notes

1. Responds to the scene
2. Gathers all relevant information
3. Provides specific information on how to file a complaint.
4. Documents the preliminary investigation in a supplement to the GO.
5. Sends report with a cover memo to the bureau chief via chain of command.

Seattle Police Manual 5.140 PRO-1

PowerPoint Slide:

What is Disparate Impacts and how will the department address them?

Instructor Review Notes

In furtherance of providing equitable services the Seattle Police Department it is committed to eliminating policies and practices that have an unwarranted disparate impact. It is possible that the long term impacts of historical inequality and institutional bias could result in disproportionate enforcement, even in the absence of intentional bias. The Department's policy is to identify ways to protect public safety and public order without engaging in unwarranted or unnecessary disproportionate enforcement. If disparate impacts are identified, the Department will consult as appropriate with neighborhood, business and community groups, including the Community Police Commission, to explore equally effective alternative practices. The Disparate Impacts section of the policy is not a basis to impose discipline upon any employee of the Department.

Seattle Police Manual 5.140 PRO--9

LEED Exercise:

The following video and PowerPoint slides are presented with no discussion about the force used or the results of the incident. Let the material tell the story. The presentation is intended to provide a backdrop for applying LEED when there is an assertion unfair treatment or a concern of bias is made or is likely be made by a person contacted.

http://www.youtube.com/watch?v=W1bbfmUX6rU

Seattle cop does the unthinkable to resistant jaywalker: punches girl, 17, in the mouth

Examiner.com, June 17, 2010

Why girl punched by Seattle cop was in the wrong

by Dr. Wilmer J. Leon III June 21, at 8:56 AM , The Grio, MSNBC

Black Police Defend Cop who Punched Teen; Girl Apologizes

http://www.eurweb.com. Jun 21, 2010

"The law is clear: You can't shove a police officer, period."

Prosecutor Dan Satterberg

Woman punched by officer in jaywalking stop pleads guilty to assault

Seattle Times, October 6, 2010 at 7:53 PM

Desired results: The video and the accompanying news source references will be shown. No comment will be made on the force or the reasonableness of the force. Let the material tell the story. This was a highly charged event for the community and for the department. Many within and outside of the Seattle Police Department still have strong feelings about the incident and how it was handled. The instructor will let the material stand and move to scenarios forcing the officers to address how they would deal with community concerns related to the event.

How should we respond to events that raise concerns of racial bias or when we may be impacted by community perceptions?

Four hours after the jaywalking/assault arrest you are out on routine patrol in the area where the incident occurred. At the start your shift you learned during roll call, that the jaywalking/assault video has gone viral and is receiving significant media coverage. You also were told that there have been minor demonstrations in the community over the jaywalking/assault arrest. You are now on patrol within four blocks from where the jaywalking/assault arrest occurred. You are a single officer car and as you turn the corner you see:

http://www.youtube.com/watch?v=_P8xvHujDQA

The doors of the cars are open, the vehicles are blocking traffic, and there are several people around the cars. There appears to be a heated argument between several people and a fight breaks out. After you observe the fight one of the men breaks out the window of the car closest to you. Shortly after the window is broken several people notice your patrol car at the end of block.

As an officer what do you have?

- Significant amount of unknown information related to the event
- The officer appears to have observed the crime of property damage
- Officer should recognize safety concerns about approaching and potentially taking police action as single officer
- Worried that the earlier event could impact your interaction

What should you do?

- Make a threat assessment-do I need to act
- Attempt to build in time to address your concerns
- Use good tactics to reduce the likelihood of confrontation/force-request a backup officer prior to taking police action if possible
- When it can be safely done approach the scene
- Attempt to De-escalate anyone who is hostile or confrontational
- Control the scene, make it safe

Due to the events that occurred during the day and based on your observations, could you just drive away from the incident? Why or why not?

- No we can't, we have observed a crime, and we owe it to the community to investigate
- Wouldn't driving away amount to a bias-making decisions based stereotypes
- Isn't this wrong even if is trying to avoid the likely need to use force-motives really do not alter the impact
- Would you do this in another neighborhood or if the people involved were not African American
- Can we do things to achieve our law enforcement objectives while minimizing the potential for conflict

Using LEED and procedural justice concepts how would you address the people contacted during the investigation?

- Listen to the person, let them be heard
- Treat their concerns as legitimate
- Explain the process
- Let them voice their concerns even if the comments become charged
- Explain any action taken and why
- Treat the person professionally

You and another officer determine you have probable cause for property damage and you arrest the suspect. By the time of the arrest most of the people have left the scene but several family members have arrived as you put the suspect in your patrol car. The mother of the suspect comes over and is upset with the arrest of her son.

What should you do?

- Explain why the arrest was made
- Explain what will happen
- Let her voice her concerns
- Attempt to calm her down
- Provide information about the incident including the case number and your contact information
- Do what you say you will

During the incident the sector sergeant arrives on scene. The sergeant is standing next to you as the suspect's mother approaches and is upset over her son's arrest. The primary officer initially deals with the mother but her focus now shifts to the sergeant The mother questions the need for the arrest and says he is in custody because the police are bias.

What should the sergeant do?

- Listen
- Explain why the decisions were made by the officer
- Explain the arrest process
- Explain the process for reporting bias, begin the investigation
- Explain how officers are held accountable and if misconduct is discovered the matter will be referred to OPA
- Provide OPA contact information and ask if she would like to make a complaint
- Provide contact information

After the initial assertion of bias the person comments on the earlier jaywalking arrest and asks how can she trust the police or expect them to "police their own".

What should the sergeant do about questions related to the jaywalking/assault arrest and the ongoing investigation?

Describe the investigation process

Tell how all use of force incidents are investigated by the officers, sergeants, lieutenants and captain. Ultimately the Chief of the Seattle Police Department is responsible to ensure that a fair, thorough and complete investigation is conducted.

The UOF must be reasonable, necessary and proportional. The chain of command will determine if the force is legal and within policy.

- The UOF will also be reviewed by the **Use of Force Review Board** for thoroughness and completeness, to determine if appropriate training and tactics were used and if the force is legal and within policy.
- Explain how the department is subject to external civilian review
- Explain how SPD is open and transparent and at any point anyone can assert that the actions of the officer were misconduct, excessive force, criminal or bias and refer the matter to OPA.
- Explain how an incident may also be reviewed by external evaluators, city government, and the legal system to ensure it is appropriately investigated.

Should you address specifics of the jaywalking/assault investigation?

No, do not judge the force; let the investigation process run its course. As an uninvolved person, not present during the event, you do not possess information that would allow you accurately comment on the actions of the officer. It would be appropriate to explain to concerned community members how officers are trained, and how policy, case law and department procedures affected the actions of the officer.

Fifteen hours after the jaywalking/assault arrest, a large group of community members and media meet at a local church to discuss the event. The leaders of the group have asked Police Commanders to attend the meeting to address concerns raised by the incident. Several Seattle Police Department commanders are present. Prior to the start the meeting department commanders have been briefed by investigators and have an idea of the fact pattern surrounding the juvenile's arrest. After learning of the incident, the commanders were informed that the officer was present at the arrest location at the request of the administration of a local high school. The precinct commander decided to send a single officer to enforce the jaywalking law;, knowing that several hundred juveniles jaywalk daily at this location. During the command briefing, an assistant chief has also raised the question of should this have been a law enforcement operation at all? Finally, the police commanders know the female suspect attempted to assist in the escape of a friend, struck the officer who responded with one punch to the females face, and then the officer took the suspect into custody after a struggle. The community group and media are asking how the department can be trusted and how can they fairly investigate the incident. Several people assert the incident reflects bias on the part of the Seattle Police Department.

Where mistakes made during this incident? If so what are they?

- Should this have been a police function to address significant jaywalking as school gets out with a single officer
- Does this use of police at this school to enforce a minor infraction contribute to the perception of bias
- Would we have done the same at other schools in Seattle
- Who should have raised these issues
- Could the school have better and less confrontationally dealt with the issue
- Who should have explained this to the school

How should we address mistakes we have made?

- Listen and let the community voice their concerns
- Explain how and why the command decisions were made
- Explain how these contributed to the event
- Apologize for command errors

How should they address specific questions about the involved officer?

- Not comment on specifics of the event or only comment on established facts
- Let the investigation run its course
- Careful to present information objectively regardless of implications
- Let the facts define the case
- Act decisively when information/facts are known
- Let the community know the Seattle Police Department will treat the officer fairly, allowing a thorough and complete investigation, which will drive how the incident is resolved

Experiential Debrief:

- What did we cover in this block of instruction?
- What did you do?
- What did you learn?
- What are the important concepts of this training?
- Were the focus skill sets achieved?
- What was similar to your expectations or past experience?
- What was different from your expectations or past experience?
- Why is this training important?
- How can you apply this training to your job?

Key Knowledge-Based Points

1) Do you have legal authority to be where you took enforcement action? Why?
2) Do you have a lawful purpose for the seizure? What?
3) Did you attempt De-Escalation? Was De-Escalation possible?
4) Could you have taken steps that would have reduced the likelihood of using force?
5) Was your decision in training within policy? Why?
6) What is your reporting requirement, if any, under policy?
7) How is the incident documented?
8) Would your decision be uniformly applied in all communities?
9) Is this Reasonable?
10) What post-investigation or post-incident actions should you take to explain your decision to the subject, the others impacted by the police action and to the community?

Logistical Support

General Planning and Logistical Concerns

Based on this ISD plan and the Use of Force ISDN, the Education and Training Section will provide 32 hours of training to 1300 officers, beginning in May and concluding in December of 2014. Using the model of 32-40 student officers per day of training, the Department must conduct 180 days of training from May to December. These numbers have a built-in redundancy to ensure compliance with required training. One day of training will consist of Crisis Intervention Training and be provided by the Washington State Criminal Justice Training Commission. CIT has minimal logistical impact for it has grant supported overtime backfill funding for patrol operations. Therefore, the true training load is 135 training sessions from May to December. Removing days that have high demand for police services and those routinely short staffed, holidays, Fridays, Saturdays and most Sundays, there are 131 days available for training. To provide the needed number of classes additional sessions on Sundays and double classes on a few selected dates will be scheduled.

Training Sites

Training will be provided at the Seattle Police Department Range, the Park 90-5 training annexes, use the Park 90-5 classrooms and at the precincts. All sites have sufficient training facilities with all needed logistical support. Student parking at Park 90-5 is limited and impacted by adjacent businesses. To address this concern the start time will begin earlier, when more access is available. Most courses at Park 90-5 will have a 0700 start time. The Range has substantial parking and could potentially handle several hundred students a day. If needed, police precincts will be used to ease the impact on Park 90-5 facilities. The Southwest Precinct will be an alternative training site providing additional classroom space, computers, and 20 available parking slots.

Personnel Logistical Concerns

The Education and Training Section will consult with Police Operations and Investigations Bureaus to reduce the training impact on operational needs. As an example, scheduling Investigations Bureau officers to training during the summer when patrol servicers are in high demand will lessen the training burden on patrol staffing. Education and Training Section will also need adjunct instructors and role players to provide training. Again, inter-departmental cooperation will reduce the strain on the Department to provide the required training.

Post-Course Evaluation

To maintain an effective, verifiable, and defensible training program it is essential that the Education and Training Section evaluate the impact of training on Seattle Police Department officer performance. Without robust accountability measures, there is a potential for erosion in the trust of our ability to address long-term systemic concerns. Operating from these principles, the evaluation of training must adapt to our training methodology.

The Education and Training Section core training methods demand that we build performance models or "schema" in officers to cope with time-pressured decision-making. This is essential; particularly in the area of use of force decision-making, where most events are tense, uncertain and rapidly evolving. The majority of our training requires officers to leave with the correct performance model properly imprinted. Therefore, problem performance is addressed immediately and all students are required to complete the instruction with correct execution of skills. The described methodology does not lend itself to the traditional pass/fail evaluation of student performance. However, as noted in the testing section, the Education and Training Section has instituted a "Go, No Go" documentation approach that will verify acceptable completion of training. Those failing to meet acceptable levels of performance will be remediated immediately and if they fail to reach the required level of competency prior to the end of training, they will be referred to the chain of command for review.

There are several opportunities to evaluate the effectiveness of training. Review of force incidents through the Use of Force Review Board is an existing method to critically evaluate training. The Use of Force Review Board provides a global review of application of best practices and trained skills. Supporting this process has been the creation of a remedial training system that verifies remediation of identified training issues. Field supervisors add to the review process by providing daily evaluation of acceptable performance and are required to address and document gaps in application of trained skills. These layers of review, combined with improved tracking of required attendance and verification of information receipt, go a long way towards painting a clearer picture of the efficiency of training.

Additional training evaluative tools can further support an assessment of in service training. Spot-testing through training events and/or online e-Learning questions can also provide metrics for evaluation of training. Outside surveys and community feedback will play a part in the assessment process. Using the tools described above, the Education and Training Section believes systems are in place to clearly evaluate training while continuing to utilize our methods for training delivery.

To bolster our evaluative process the Education and Training Section proposes the following steps be initiated in 2014:

I. Yearly review of Use of Force incidents; comparing current data to prior years, identifying key metrics and determining training impact on force trends, reporting methods and force decision-making.
II. Review of citizen complaints to determine training impact on reported misconduct or policy violations.
III. Review and comparative yearly analysis of officer discipline to discern trends and adapt training to address gaps in performance.
IV. Initiation in late 2014 of a police performance survey; asking for citizen input on several topics including officer professionalism, perceived procedural justice, potential for disparate treatment of groups within the community, and general community trust in the organization.
V. Form a board to randomly review police reporting of incidents for adequate performance, proper resolution, use of community outreach tools to ensure procedural justice, and whether officers' performance is consistently meeting the expectations of the Education and Training Section.
VI. Build student course evaluations and feedback systems into all Department training. Conduct a monthly review of evaluations looking for patterns, identified deficiencies or areas where high levels of demonstrated success have been noted.

One of the purposes of Post-Course Evaluations is to identify concerns that are not currently being addressed and adapt training as required. The Education and Training Section is seeking to develop a formative assessment of training to guide content delivery. Ideally, we will develop a process where we are constantly monitoring training, identifying and remediating group or individual deficiencies, and modifying training to address gaps in learned concepts and skills. This process will clarify good performance, facilitate officer self-assessment, encourage instructor dialogue about successful delivery options, provide opportunities to close the gap between current and desired performance, and furnish information that can shape future instruction.

In the longer term, the ETS will complete an internal report, assessing training effectiveness, and forward it to the chain command. This report will be used to guide training development for the next year's training cycle. The Education and Training Section's post course evaluation process provides a thorough review of the impact of training on officer performance and verification that critical analysis of applied training is meeting our performance objectives.

Revision Plan

Testing

Where applicable, the Education and Training Section will test officers to verify acceptable levels of performance. If training permits, officers will be required to perform at a measurable level to pass the block of instruction. Testing in the traditional sense does not fit well with our training methodology. The goal of the Education and Training Section is to ensure all officers receive, understand and can functionally apply trained skills. For a majority of training, officers cannot leave training or move beyond an instructional block without successfully completing the task. We effectively require 100% passing performance or the officer is removed from training to receive remediation.

For each training block, the student's decisions and tactics will be evaluated to ensure they are consistent with course goals and are performed to the satisfaction of an Education and Training Section subject matter expert. An evaluation form will be completed stating whether an officer met the required level of performance or did not satisfactorily meet expectations. This will be a "Go" or "No Go" process with a description noting performance concerns. (see appendix for sample) If remediation is unsuccessful, the officer will be referred to the chain of command for review.

E-Learning and Facilitated Classroom Instruction require completion of the course and demonstrated understanding of concepts to the satisfaction of an Education and Training Section subject matter expert. Embedded in each training method are questions, short tests, interactive discussions, and demonstration of required skills. The students must show they understand the concepts and can apply them to successfully complete the course. Each student will be marked pass or fail, and referred to the Education and Training Section for remediation if needed.

Accountability Measures

Assessing the adequacy of in-service training through periodic testing of officer understanding permits evaluation of training concepts and instructional methods. Spot testing will allow the gathering of training data and assist in an analysis of course effectiveness. The Education and Training Section intends to implement statistical sampling to verify understanding of key training concepts. Collected data will be used to identify training effectiveness, gaps in current curriculum and the most successful methods of instruction.

The evaluation of training will be an ongoing process throughout the training cycle. It will consist of both external review and internal evaluations. The process of Post-Course Evaluation discussed above will be conducted as in-service training is proceeding and will furnish an external training effectiveness perspective. For internal analysis, all students will be asked to provide course evaluations assessing multiple performance metrics. Desired feedback

on course usefulness, practical applicability of trained concepts, instructional effectiveness, and consistency of training are but a few of the areas to be reviewed.

Using internal and external evaluations, training will adapt to address identified areas of concern. The Education and Training Section routinely modifies training to deliver the most effective curriculum. Feedback will be tracked and changes in training will be noted to verify department-wide consistency. Occasionally, revisions can create sufficient inconsistency in training to demand organization-wide remediation. Using e-Learning and the online Training Digest significant alterations in training will be disseminated and officer receipt of revisions verified.

Appendix:

Supporting Material

Procedural Justice

Shaping Citizen Perceptions of Police Legitimacy: A Randomized Field Trial of Procedural Justice, Criminology Volume 51, Issue 1, pages 33–63, February 2013

Research exploring the relationship between procedural justice policing and citizen perceptions of police legitimacy is a well-trodden pathway (e.g., Reisig, Bratton, and Gertz, 2007; Tyler, 2003, 2004). Numerous studies using a variety of different methods of inquiry have identified how perceived fairness in policing is important for shaping people's willingness to obey police and cooperate with legal authorities (Tyler, 1990; Tyler and Fagan, 2008). If citizens perceive that the police act in a procedurally just manner—by treating people with dignity and respect, and by being fair and neutral in their actions—then the legitimacy of the police is enhanced (e.g., Mastrofski, Snipes, and Supina, 1996; Reisig and Lloyd, 2009; Sunshine and Tyler, 2003). These studies show that the legitimacy of authority is important for encouraging compliance and cooperation (Tyler and Fagan, 2008) and highlight the importance of community engagement in crime management (Huq, Tyler, and Schulhofer, 2011).

The process-based model of legitimacy (Tyler, 2003) proposes a direct and measureable relationship between how police treat people and then, in turn, what people think of police (see also Engel, 2005; Gau and Brunson, 2009; Murphy, Hinds, and Fleming, 2008; Murphy, Tyler, and Curtis, 2009). Yet whether procedurally just encounters with police influence generalized perceptions of police legitimacy, or influence only specific assessments of police pertaining to the encounter (or both specific and generalized perceptions), is less understood in the extant literature. We do know that when police are evaluated as exercising their authority fairly in a general manner, they are viewed as more legitimate (see also Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Murphy, Hinds, and Fleming, 2008; Reisig, Bratton, and Gertz, 2007). Yet these judgments of police by citizens are not linked explicitly to assessments of specific police–citizen encounters. Indeed, the link among encounters, citizen assessments of police, and their long-run, generalized views of legitimacy often is inferred rather than tested (see Dai, Frank, and Sun, 2011).

Our article uses the world's first randomized field trial of legitimacy policing—the Queensland Community Engagement Trial (QCET)—to test directly the impact of an experimental

manipulation of procedural justice during police–citizen encounters on both specific and global perceptions of police. We operationalized the four key components of procedural justice (citizen participation, dignity and respect, neutrality, and trustworthy motives) into a script delivered as the experimental condition by police to drivers during police-initiated random breath testing (RBT) traffic roadblocks. The experimental condition was compared with the business-as-usual mode of RBT traffic operations. Previous findings from QCET show that the experimental condition had a significant impact on citizen attitudes to drinking and driving as well as on their specific views of police in relation to the encounter, relative to the business-as-usual traffic stop (see Mazerolle et al., 2012).

The goal of this article is to test the influence of the experimental manipulation on both specific and generalized views of police legitimacy and how these views influence people's satisfaction and willingness to cooperate with police. Drawing on the way past research has explored the relationship between specific assessments of police and generalized perceptions of police legitimacy (see Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Reisig, Bratton, and Gertz, 2007; Weitzer and Tuch, 2005), we use the QCET data to test our hypothesized model. Using structural equation modeling, we examine the effects of the experimental manipulation on specific citizen views about police and then assess how these views then condition their general views about the police.

We begin our article with a review of the extant literature informing our study. We then provide a brief overview of the QCET and present our data, measures, and analytic strategy, while teasing out the impact of the brief, police–citizen encounters on perceptions of both the encounter itself and citizens' general perceptions of police. Our results support the theorized causal model: We show that a single, short, and positive encounter with police can influence citizen views and that this single, procedurally just experience can shape people's general orientation toward the police. Our findings suggest that the police have a lot to gain from acting fairly during even very short traffic encounters with citizens. These findings are of particular importance given prior research that has questioned whether a favorable experience can improve general attitudes toward the police (see Skogan, 2006).

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Police require voluntary cooperation from the public to be effective in controlling crime. They need citizens to comply with their directives and a tacit willingness to obey the law in general. A significant body of research during the last 20 years has shown that people obey the law and cooperate with legal authorities primarily if and when they view those legal authorities as legitimate (Tyler, 2006). The legitimacy of social institutions, such as the police, is thus paramount for maintaining social order. Legitimacy is known to be a by-product of how the police treat people and make decisions when they are exercising their regulatory authority. Fairness in decision making, through neutral and nondiscriminatory behavior and fair

interpersonal treatment that respects other people and their rights, is key to securing cooperation and gaining voluntary acceptance of the decisions made by legal authorities.

Legitimacy is thus "a property of an authority that leads people to feel that the authority or institution is entitled to be deferred to and obeyed" (Sunshine and Tyler, 2003: 514). Legitimacy, therefore, is considered to be particularly key for voluntary cooperation and compliance because it reflects an individual's own values rather than a reliance on outcomes to regulate behavior (Hinds and Murphy, 2007; Tyler, 2001), signifying an important social value that can be called on to gain public compliance and cooperation (Tyler, 2006; Tyler and Huo, 2002).

In policing, the process-based perspective argues that perceptions of police legitimacy are affected by encounters with individual police officers (Skogan and Frydl, 2004; Tyler, 2003, 2004). Research on the antecedents to legitimacy has suggested that perceptions of procedural justice, or the fairness of police behavior and the processes through which police decisions are made, are of great importance to fostering legitimacy (Sunshine and Tyler, 2003). Procedural justice, as described in the literature, typically comprises four essential components: citizen participation (or voice), fairness and neutrality, dignity and respect, and trustworthy motives (Goodman-Delahunty, 2010; Murphy and Cherney, 2011; Tyler, 2008; Tyler and Huo, 2002). Research has found that police–citizen encounters that involve the use of procedural justice enhance the quality of police–citizen interactions, leading citizens to be more satisfied with the interaction and outcome (Mastrofski, Snipes, and Supina, 1996; McCluskey, 2003; Reiss, 1971; Tyler and Fagan, 2008; Wells, 2007). People who feel they have been dealt with in a procedurally fair way are less likely to believe that they have been personally singled out (e.g., racially profiled) and are more likely to accept the decisions (e.g., fine or sentence) made by authorities (Tyler and Wakslak, 2004).

The extant literature has demonstrated a direct link between procedurally just encounters and citizen perceptions of the police specific to the encounter. Yet whether positive encounters with police can influence more generalized beliefs about procedural justice and legitimacy of the police has not been as well understood in the extant literature. We do know that contact and experience with police shape citizens' overall satisfaction with police (see Frank, Smith, and Novak, 2005; Lai and Zhao, 2010; Weitzer and Tuch, 2005). We also know that if the police are evaluated as exercising their authority fairly, then they are viewed as more legitimate (see also Elliott, Thomas, and Ogloff, 2011; Fischer et al., 2008; Ivkovic, 2008; Murphy, Hinds, and Fleming, 2008; Reisig, Bratton, and Gertz, 2007). When authorities are viewed generally as procedurally unjust, their legitimacy is undermined, leading to support for disobedience and resistance (Fischer et al., 2008). Sunshine and Tyler (2003) explored the influence of general evaluations of police use of procedural justice on people's judgments about police legitimacy, finding that global views of procedural justice are a key antecedent of legitimacy. Overall, these judgments were not linked to specific police–citizen encounters but were considered general perceptions of police.

Skogan's (2006) analysis of survey data, however, found little support for the argument that the police can gain globalized feelings of legitimacy from the public by acting in a "satisfactory" manner, but the analysis did find that the police can lose it easily by acting in an unsatisfactory way. Using data from a 2003 survey of contacts and evaluations of the police in Chicago, as well as from seven other samples in different states and countries, Skogan's multivariate analyses indicated that the impact of having a bad experience with the police is much larger than a positive experience. Positive experiences, including experiences that encapsulated many of the components of a procedurally just approach, were found to have a very small and nonsignificant effect on Skogan's outcome measure of generalized confidence in the police. Skogan (2006) thus argued that professional treatment does not necessarily produce more public confidence in the police because there is an asymmetrical effect of negative compared with positive encounters with the police.

In response to Skogan's research findings, Bradford, Jackson, and Stanko (2009) used London Metropolitan Police Public Attitude Survey data to test Skogan's finding that contacts with the police largely have a negative impact on the public's confidence in the police. Skogan (2006) used an aggregated measure of confidence, including several items measuring the apparent effort the police put into the case, their politeness and fairness, and citizens' overall satisfaction with the experience. Bradford, Jackson, and Stanko (2009) extended this measure of "confidence" and assessed whether positively received police–citizen encounters could influence public confidence in the police positively in terms of police effectiveness, fairness, and community engagement. Using survey data, Bradford, Jackson, and Stanko (2009) concurred with Skogan, finding that contact with the police may have an asymmetrical negative impact on perceptions of police effectiveness. However, they also found that positive encounters with the police can improve confidence in police fairness and community engagement (Bradford, Jackson, and Stanko, 2009).

The criminological literature has suggested that preexisting opinions of the police have a lot to do with shaping citizen perceptions of their encounters with police (see Brandl et al., 1994; see also Rosenbaum et al., 2005). Brandl et al. (1994: 119), for example, found that "global attitudes have substantial effects on specific assessments of police performance, and that the effects of specific assessments of police performance on global attitudes are modest in comparison." Hawdon (2008: 187) argued similarly that "people are likely to form their general impressions of the police before they have any personal contact with them … that in turn influences the interaction between the individual and the police when such contact does occur."

The vicarious experience perspective also suggests that stories that people hear about police from friends, family, and the media shape the way that citizens interpret and evaluate their own encounters with police (see Brunson, 2007; Gallagher et al., 2001; Hohl, Bradford, and Stanko, 2010; Reisig and Parks, 2003; Warren, 2011; Weitzer and Tuch, 2006). Indeed, Warren (2011: 369) found that people who "hear negative stories about police contacts from friends

and family are approximately four times as likely to perceive disrespect during their own police encounter."

Disentangling the relationship between 1) global, preexisting views of police; 2) citizen views of police following an encounter with police; 3) generalized views of police legitimacy; and 4) often-cited outcomes of legitimacy (satisfaction and cooperation) is difficult using survey-based correlational data. It is made even more difficult because of the lack of survey research that can control and differentiate the nature of the police–citizen encounter to determine how different encounters might shape generalized views of police. Our article seeks to understand these relationships more clearly using results from a randomized field trial. We compare and contrast two distinct types of police–citizen encounters and how they differentially influence citizen perceptions of police during the encounter as well as their more general orientations to police.

****See original article for detailed modeling explanation and data****

The key finding of our analysis shows that perceptions of procedural justice in the specific context not only influence specific attitudes about police, but also more general beliefs about the police: Citizens who perceived the RBT traffic encounter to be procedurally just had more positive specific as well as generalized views of police (model 1). Model 1 was the simplest model presented and fitted the data better than the more complex models, which is interesting in itself: It shows that specific views of police, derived from a very short encounter with police, can shape generalized views of police.

Our subsequent models (models 2 and 3), built on model 1, demonstrated that perceptions of procedural justice also were related to perceptions of police legitimacy. Indeed, the indirect effects of the experimental RBT encounter on general perceptions of procedural justice, legitimacy, satisfaction, and cooperation were found to be significant. Through perceptions of the specific RBT experience, the experimental encounter was related to increases in general perceptions of procedural justice, legitimacy, satisfaction, and cooperation. Overall, our findings show that the more "procedurally just" the police strive to make even a short encounter, the more likely citizens are to perceive the police as legitimate. Put simply: A little bit of being nice goes a long way.

We also found that although the effect of encounter-specific perceptions on perceptions of legitimacy was considerably smaller than the impact of general perceptions, this effect was significant. It seems that perceptions of procedural justice could be expected to have a short-term effect on legitimacy, although this is likely to dissipate over time, whereas the effect of the specific encounter on general perceptions flowing through to legitimacy could have a long-term effect. Clearly, we do not have follow-up longitudinal data at this point to support this idea, but it seems a plausible explanation.

The inclusion of paths from general perceptions of procedural justice to legitimacy-related outcomes (satisfaction and cooperation) showed that satisfaction was directly related to

perceptions of procedural justice, whereas cooperation was only indirectly related through legitimacy. This finding suggests that, at least in the Australian context, performance-based, instrumental factors influence citizen satisfaction with police (see also Hinds and Murphy, 2007). However, satisfaction with the way police do their job was not found to impact the willingness to cooperate, suggesting that the legitimacy of the police is the guiding factor for willingness to cooperate. The importance of legitimacy both of the police and of the law itself is reflective of the findings from Murphy and Cherney (2012), who found that some minority groups will only cooperate with institutions (like the police) if they agree with the legitimacy of the laws enforced.

Our study challenges Skogan's (2006) finding that police have little to gain from positive encounters with the public and a lot to lose from negative encounters. In our study, we find that the police have a lot to gain from even very short, positive encounters. Not only did citizens feel well treated by the police during the experimental encounter, but these positive encounters also engendered more positive feelings about the police in general. That is, in our study, citizens who received the experimental treatment had higher ratings of the procedural justice of the specific officer. These ratings of the specific officer also translated into enhanced perceptions of the procedural justness of police in general and higher reported perceptions of police legitimacy and satisfaction with the police. Citizens who received the experimental encounter also indicated that they would be more likely to cooperate with the police. Given that all indirect paths from the experimental condition were significant, this result indicates that this single encounter had far-reaching effects on the way citizens perceive and act toward the police. This study shows that police have a lot to gain from using procedurally just approaches in even very short, police-initiated traffic encounters with citizens.

Although our study provides some important insights into the immediate and potentially long-term benefits of police engaging citizens in procedurally just ways, our field trial only assesses the effects of police–citizen encounters in one type of forum: in our case, traffic stops where the police conducted breath tests to determine whether people were driving under the influence of alcohol. Clearly, the wide range of police–citizen encounters is likely to influence citizen perceptions in a variety of ways. Our study is thus limited in that it demonstrates only the outcomes of procedurally just encounters in just the one type of setting. Other types of settings might generate different results. We suggest, therefore, a series of replication studies of this trial, using similarly operationalized scripts undertaken in different field settings. For example, we would be very interested to observe whether the same results could be found in police responses to domestic violence calls for service or during face-to-face street encounters in entertainment districts or as part of any problem-oriented policing intervention. We recognize, of course, the challenges of conducting replication studies in settings that are less controlled than the RBT traffic operations used in our field trial.

We also recognize the limitations of how we operationalized the key constructs of procedural justice: dignity and respect, voice, trustworthy motives, and neutrality. Each of these constructs

was turned into a script (with prompts) for the police to use during the experimental encounters. We acknowledge that because of the nature of RBTs—it is compulsory by law in Australia that drivers do the test—citizen "voice" and participation in the decision-making process was not possible for the RBT encounter. Nonetheless, the script executed by the officers did indeed give drivers a chance to have a voice by asking them for their thoughts on what were the priority problems for the community. Clearly, future research in different types of encounters could operationalize the constructs of procedural justice in more precise ways.

Despite the shortcomings of the QCET trial reported in this article, the complete absence of research that tests, under field trial conditions, the impact of a procedurally just encounter on citizens' perceptions of legitimacy and cooperativeness with the police in general is somewhat surprising. Procedural justice and legitimacy of the police have been areas of great interest to both police agencies and researchers during the past 30 years. Our results clearly show, under field trial conditions, that even a single, short, positive encounter with police directly shapes citizen views about the actual encounter as well as their general orientations toward the police. As such, we demonstrate that the police have much to gain from acting fairly during even very short encounters with citizens.

1.

From the observations of the RBT operations, more than 99 percent of drivers provided a negative reading. On average, there were only 2 positive tests per operation (range 0–10), resulting in a total of 111 positive tests during the course of the trial.

2.

Additional supporting information can be found in the listing for this article in the Wiley Online Library at http://onlinelibrary.wiley.com/doi/10.1111/crim.2013.51.issue-1/issuetoc.

3.

Mazerolle et al. (2012) used a different measure of procedural justice (specific to the encounter) than the procedural justice latent variable used in this article. In this study, we used five items (rather than the seven used in the previous paper) to focus on fair and respectful treatment.

4. 4

Additionally, we did fit several different models to assess the impact of the experimental manipulation on specific and general perceptions of procedural justice on the outcomes related to legitimacy, satisfaction, and cooperation. Importantly, when we added more complexity and paths to the theoretical model presented and tested in this article (model 3), the addition of these extra paths (or changing the direction of the paths) did not change the substantive results. That is, we found consistently that the experimental manipulation influenced both

specific and general views and that the experimental condition more strongly influenced specific views than generalized views and that alternative paths did not alter this finding.

Jump to…

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Jump to…

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Bias Supporting Material

Implicit Bias and Social Justice

http://www.opensocietyfoundations.org./voices/implicit-bias-and-social-justice.

I conducted this interview with Rachel Godsil, director of research at the American Values Institute, about how implicit bias not only affects individuals but society as a whole. The American Values Institute, an Open Society Foundations grantee, is a consortium of researchers from universities across the country and social justice advocates from a wide range of groups and perspectives.

What is implicit bias?

Implicit bias occurs when someone consciously rejects stereotypes and supports anti-discrimination efforts but also holds negative associations in his/her mind unconsciously. Scientists have learned that we only have conscious access to 5 percent of our brains—much of the work our brain does occurs on the unconscious level. Thus, implicit bias does not mean that people are hiding their racial prejudices. They literally do not know they have them. More than 85 percent of all Americans consider themselves to be unprejudiced. Yet researchers have concluded that the majority of people in the United States hold some degree of implicit racial bias.

How does implicit bias manifest itself in our daily lives?

The areas researchers have studied show that implicit bias can affect people's decisions and their behavior toward people of other races. For example, a doctor with implicit racial bias will be less likely to recommend black patients to specialists or may recommend surgery rather than a less invasive treatment. Managers will be less likely to invite a black candidate in for a job interview or to provide a positive performance evaluation. Judges have been found to grant dark-skinned defendants sentences up to 8 months longer for identical offenses.

Implicit bias also affects how people act with people of another race. In spite of their conscious feelings, white people with high levels of implicit racial bias show less warmth and welcoming behavior toward black people. They will sit further away, and their facial expressions will be cold and withdrawn.

These same implicitly biased white people are also are more apt to view black people as angry or threatening and to predict that a black partner would perform poorly on a joint academic task. White people with stronger implicit bias against black people actually do perform poorly on a difficult task after interacting with a black person—suggesting that, without knowing it, they were challenged mentally by the effort of appearing non-biased.

Do these research findings differ from previous studies about racial bias? What were some of your most surprising findings?

Much of this research is surprising to those working for racial justice. To begin with the positive: White people appear to want to be fair and non-discriminatory when they are *aware* that they may be influenced by race. The study involving doctors showed this clearly; when the doctors were told that race had been shown to influence treatment decisions, all signs of racially different treatment disappeared. Jurors, too, wanted to be fair. In a jury study, four sets of jurors were asked to recommend conviction and sentencing for an assault charge:

- In the first scenario, a black man hits his white girlfriend in a bar.
- In the second, a white man hits his black girlfriend in a bar.

- In the third, the black man says, “How dare you laugh at a black man in public,” before he hits his girlfriend.
- And in the fourth, the white man says: “How dare you laugh at a white man in public.”

White jurors recommended higher sentences for the black man than the white man in the first scenario, but not the fourth. In the fourth, race was an explicit issue, and the White jurors clearly wanted to be fair. In the first, it was more subtle, so their implicit biases affected their decision-making.

Our challenges: the levels of implicit bias are very high, and the research is far more developed in measuring bias than effectively changing it. We know that people are less implicitly biased if they are exposed to “counter-stereotypical” individuals, but most white people lead very segregated lives.

How does implicit bias tie into Claude Steele’s idea of stereotype threat?

Stereotype threat refers to a person’s anxiety or fear that their performance on a difficult task will confirm a negative stereotype about their group. Claude Steele was able to illustrate this phenomena beginning in 1995 by having white and black undergraduates take a difficult verbal test. One group was told that this test was a measure of their verbal ability, while the other was told that the goal of the study was to learn how people experienced test-taking and that their score was not relevant. The students in both groups took the same difficult test, but there was a wide racial disparity in the performance of white and black students when they thought the test was “diagnostic” of their intelligence.

The students’ scores were almost identical when they thought their score was not being measured. Hundreds of other studies have been done to confirm this finding, and it applies to all sorts of groups depending on the context. Implicit bias and stereotype threat are linked because both are a result of the strength of negative stereotypes about race and gender within our culture. And both occur without the individual knowing about them.

How can those working in the field of social justice use these research findings to structure their messaging?

The most important lesson is that if our messages accuse people of being racist, they will do more harm than good to our work. Because the vast majority of people consider racism to be immoral they will be highly resistant to any message that suggests that they or people like them are racist or biased. Some white people will experience guilt when confronted with a message suggesting that they are racist, but this group is a small minority who are likely to be our allies already. We need to appeal to people’s best selves, to encourage them to act on their conscious egalitarian values, and to create a broader coalition for social justice work.

What is Implicit Bias?

http://www.americanvaluesinstitute.org/?page_id14

Posted on August 24, 2009

Also known as **Hidden Bias** or **Unconscious Bias,** Implicit Bias arose conceptually as a way to explain why discrimination persists, even though polling and other research clearly shows that people oppose it. Some conjectured that people sought to hide their bias from pollsters – and simply lied about their views for fear of appearing prejudiced.

In 1995, Doctors Anthony Greenwald and M.R. Benaji posited that it was possible that our social behavior was not completely under our conscious control. In *Implicit Social Cognition: Attitudes, Self-Esteem and Stereotypes,* Greenwald and Benaji argued that much of our social behavior is driven by learned stereotypes that operate automatically – and therefore unconsciously — when we interact with other people. Three years later, Greenwald et al developed the **Implicit Association Test** (IAT), which has become the standard bearer for measuring implicit bias (you can take the test yourself here).

In order to understand how the IAT works, it's important to back up and take a look at how our minds store, process and think through information. Our minds work through what are called "schemas". As UCLA law professor Jerry Kang describes it, "Schemas are simply templates of knowledge that help us organize specific examples into broad categories. A stool, sofa and office chair are all understood to be 'chairs.' Once our brain maps some item into that category, we know what to do with it—in this case, name sit on it. Schemas exist not only for objects, but also for people. Automatically, we categorize individuals by age, gender, race and role. Once an individual is mapped into that category, specific meanings associated with that category are immediately activated and influence our interaction with that individual."

These schemas we use to categorize people are called **stereotypes**. Stereotypes have a bad reputation in everyday life, but in social science circles, a stereotype is simply the way our brains naturally sort the people we meet into recognizable groups. Stereotyping is different from its close cousin **prejudice**, which is the (generally negative) *attitude* or *reaction* towards people because they're members of a specific group. As Jerry Kang and Mahzarin Banaji discuss in their article *Fair Measures*, "mechanisms of bias [are] produced by the current, ordinary workings of human brains—the mental states they create, the schemas they hold, and the behaviors they produce. Obviously, both history and societal factors play a crucial role in providing the content of those schemas, which are programmed through culture, media, and the material context." The schema, in other words, is

where our implicit bias lives. Implicit Bias tests attempt to dig into our stereotypes and find out how biased they are and how we are governed by them.

The IAT uses reaction time measurement to look at subconscious bias. To take a simple example, imagine that you are asked to associate a list of positive words (pretty, sweet, calm) with a list of flower names. Next, you are asked to associate a list of negative words (ugly, scary, freaky) with a list of insect names. So far so easy, right? Most of us like flowers and aren't crazy about bugs.

But what if you reverse it? You are in front of a computer screen and the left half of the screen contains a picture of a spiny poisonous caterpillar and the word "calm" on the right hand of the screen is a picture of a tulip and the word "freaky". When a positive word *or* an insect name comes up, you press the left arrow. When a negative word or a flower name comes up, you press the right arrow.

The second task turns out to be complicated — we don't generally associate insects with positive words. This complication leads us to do worse (react more slowly) on a test that pairs insects with "pretty," "sweet," and "calm" than one that pairs insects with "ugly," "scary," and "freaky." By measuring reaction times in tests like these, Greenwald postulated that scientists are able to measure your association of positive words with flowers and negative words with insects. We call the positive association a **preference** and the negative association a **bias**.

Although this seems innocuous enough, it gets less so when "flowers" and "insects" are swapped out for what's called **in-group** (the group you belong to) and **out-group** (groups you aren't a member of) perceptions. When similar tests are administered to people with regards to race (i.e. measuring Japanese Americans' associations about Koreans) they frequently demonstrate bias. It turns out that it is generally harder for people to associate out-group images and names with positive words.

Real World Effects

What scientists have also discovered over the last decade is that the IAT works as a very good predictor of people's behavior. This is why implicit bias matters. While the measuring of hidden opinions about various groups might seem on the surface to be inconsequential, it becomes something else entirely when we see bias' impact on real world behaviors. Study after study in a wide range of fields has shown the potential real-world impact of implicit bias on people's quality of life. Studies show, for example, that doctors are more likely to prescribe life-saving care to whites, that managers are more likely to hire and promote members of their own in-group and that referees in basketball might be more likely to subtly favor players with whom they share a racial identity.

One reason why investigating Implicit Bias is so essential is the effect it has on our country's discussion of discrimination. We are used to thinking of discrimination being about individual bigoted people acting overtly to cause some harm against someone because of their race, gender or sexuality. While there are still some cases of this happening, this mode of thinking about discrimination is obsolete, and it actually hampers our journey towards equality. As long as discrimination is about a moral flaw in an individual, discussing bias and discrimination is impossible because hanging over the conversation is the idea that someone must be a hate-filled bigot. Implicit Bias, on the other hand, offers the idea that discrimination and bias are *social*, rather than *individual* issues, and that we can thus all participate in promoting equality.

No advance in social science is without some controversy – and a few have challenged both the idea of implicit bias and the tools to measure it. For a more in-depth discussion of the challenge, click here. It is important to recognize though that the overwhelming evidence supports the salience of implicit bias and the utility of the IAT. Our goal here at the American Values Institute is not to prove the existence of implicit bias, but rather to investigate implicit bias to see how it affects our society. As a consortium of researchers from universities across the country and social justice advocates from a wide range of groups and perspectives we have come together to devise new ways to counter implicit bias. We seek to prevent implicit bias from undermining our national ideals, both during elections and in the creation of public policy.

Addressing Implicit Bias in the Courts*

http://www.ncsc.org/~/media/Files/PDF/Topics/Gender%20and%20Fairnes/IB_Smmary_033012.ashx

Fairness is a fundamental tenet of American courts. Yet, despite substantial work by state courts to address issues of racial and ethnic fairness,[1] public skepticism that racial and ethnic minorities receive consistently fair and equal treatment in American courts remains widespread.[2]

Why?
Perhaps one explanation may be found in an emerging body of research on implicit cognition. During the last two decades, new assessment methods and technologies in the fields of social science and neuroscience have advanced research on brain functions, providing a glimpse into what Vedantam (2010) refers to as the "hidden brain". Although in its early stages, this research is helping scientists understand how the brain takes in, sorts, synthesizes, and responds to the enormous amount of information an individual faces on a daily basis.[3] It also is providing intriguing insights into how and why individuals develop stereotypes and biases, often without even knowing they exist.

The research indicates that an individual's brain learns over time how to distinguish different objects (e.g., a chair or desk) based on features of the objects that coalesce into patterns. These patterns or schemas help the brain efficiently recognize objects encountered in the environment. What is interesting is that these patterns also operate at the social level. Over time, the brain learns to sort people into certain groups (e.g., male or female, young or old) based on combinations of characteristics as well. The problem is when the brain automatically associates certain characteristics with specific groups that are not accurate for all the individuals in the group (e.g., "elderly individuals are frail"). Scientists refer to these automatic associations as implicit—they operate behind-the-scenes without the individual's awareness.

Scientists have developed a variety of methods to measure these implicit attitudes about different groups, but the most common measure used is reaction time (e.g., the Implicit Association Test, or IAT).[4] The idea behind these types of measures is that individuals will react faster to two stimuli that are strongly associated (e.g., elderly and frail) than to two stimuli that are less strongly associated (e.g., elderly and robust). In the case of race, scientists have found that most European Americans who have taken the test are faster at pairing a White face with a good word (e.g., honest) and a Black face with a bad word (e.g., violent) than the other way around. For African Americans, approximately a third show a preference for African Americans, a third show a preference for European Americans, and a third show no preference (Greenwald & Krieger, 2006, pp. 956-958).

There is evidence that judges are susceptible to these implicit associations, too. Rachlinski, Johnson, Wistrich, and Guthrie (2009), for example, found a strong White preference on the IAT among White judges. Black judges also followed the general African American population findings, showing no clear preference overall (44% showed a White preference but the preference was weaker overall). The question is whether these implicit associations can influence, i.e., bias, an individual's decisions and actions, and there is growing evidence that the

answer is yes. Research has demonstrated that implicit bias can affect decisions regarding, for example, job applicants (e.g., Bertrand & Mullainathan, 2004; Rooth, 2010; Ziegert & Hanges, 2005), medical treatment (e.g., Green, Carney, Pallin, Ngo, Raymond, Lezzoni, & Banaji, 2007), a suspect's dangerousness (Correll, Park, Judd, & Wittenbrink, 2002; Correll, Park, Judd, Wittenbrink, Sadler, & Keesee, 2007; Plant & Peruche, 2005), and nominees for elected office (Greenwald, Smith, Sriram, Bar- Anan, & Nosek, 2009; Payne, Krosnick, Pasek, Leikes, Akhtar, & Thompson, 2010).

Kang (2009) describes the potential problem this poses for the justice system:

> Though our shorthand schemas of people may be helpful in some situations, they also can lead to discriminatory behaviors if we are not careful. Given the critical importance of exercising fairness and equality in the court system, lawyers, judges, jurors, and staff should be particularly concerned about identifying such possibilities. Do we, for instance, associate aggressiveness with Black men, such that we see them as more likely to have started the fight than to have responded in self-defense? (p. 2)

The problem is compounded by judges and other court professionals who, because they have worked hard to eliminate explicit bias in their own decisions and behaviors, assume that they do not allow racial prejudice to color their judgments. For example, most, if not all, judges believe that they are fair and objective and base their decisions only on the facts of a case (see, for example, Rachlinski, et al., 2009, p. 126, reporting that 97% of judges in an educational program rated themselves in the top half of the judges attending the program—statistically impossible—in their ability to "avoid racial prejudice in decisionmaking"). Judges and court professionals who focus only on eliminating explicit bias may conclude that they are better at understanding and controlling for bias in their decisions and actions than they really Rachlinski, et al. (2009) also found preliminary evidence that implicit bias affected judges' sentences. Additional research is needed to confirm these findings. More importantly for the justice system, though, is the authors' conclusion that "when judges are aware of a need to monitor their own responses for the influence of implicit racial biases, and are motivated to suppress that bias, they appear able to do so" (p. 1221). The next section discusses potential strategies judges and court professionals can use to address implicit bias.

Reducing the Influence of Implicit Bias

Compared to the science on the existence of implicit bias and its potential influence on behavior, the science on ways to mitigate implicit bias is relatively young and often does not address specific applied contexts such as judicial decision making. Yet, it is important for strategies to be concrete and applicable to an individual's work to be effective; instructions to simply avoid biased outcomes or respond in an egalitarian manner are too vague to be helpful (Dasgupta, 2009). To address this gap in concrete strategies applicable to court audiences, the authors reviewed the science on general strategies to address implicit bias and considered their potential relevance for judges and court professionals. They also convened a small group discussion with judges and judicial educators (referred to as the Judicial Focus Group) to discuss potential strategies. These efforts yielded seven general research-based strategies that may help attenuate implicit bias or mitigate the influence of implicit bias on decisions and actions.[5]

Strategy 1: Raise awareness of implicit bias

Individuals can only work to correct for sources of bias that they are aware exist (Wilson & Brekke, 1994). Simply knowing about implicit bias and its potentially harmful effects on judgment and behavior may prompt individuals to pursue corrective action (cf. Green, Carney, Pallin, Ngo, Raymond, Iezzoni, & Banaji, 2007). Although awareness of implicit bias in and of itself is not sufficient to ensure that effective debiasing efforts take place (Kim, 2003), it is a crucial starting point that may prompt individuals to seek out and implement additional strategies

.

Strategy 2: Seek to identify and consciously acknowledge real group and individual differences

The popular "color blind" approach to egalitarianism (i.e., avoiding or ignoring race; lack of awareness of and sensitivity to differences between social groups) fails as an implicit bias intervention strategy. "Color blindness" actually produces greater implicit bias than strategies that acknowledge race (Apfelbaum, Sommers, & Norton, 2008). Cultivating greater awareness of and sensitivity to group and individual differences appears to be a more effective tactic: Training seminars that acknowledge and promote an appreciation of group differences and multi-cultural viewpoints can help reduce implicit bias (Rudman, Ashmore, & Gary, 2001; Richeson & Nussbaum, 2004).

Strategy 1: Potential Actions to Take

- **Individual:** Seek information on implicit bias by attending educational sessions, taking the IAT, and reading relevant research.
- **Courts:** Provide education on implicit bias that includes judicial facilitators/ presenters, examples of implicit bias across other professions, and exercises to make the material more personally relevant. Addressing Implicit Bias in the Diversity training seminars can serve as a starting point from which court culture itself can change. When respected court leadership actively supports the multiculturalism approach, those egalitarian goals can influence others (Aarts, Gollwitzer, & Hassin, 2004). Moreover, when an individual (e.g., new employee) discovers that peers in the court community are more egalitarian, the individual's beliefs become less implicitly biased (Sechrist & Stangor, 2001). Thus, a system-wide effort to cultivate a workplace environment that supports egalitarian norms is important in reducing individual-level implicit bias. Note, however, that mandatory training or other imposed pressure to comply with egalitarian standards may elicit hostility and resistance from some types of individuals, failing to reduce implicit bias (Plant & Devine, 2001).

In addition to considering and acknowledging group differences, individuals should purposely compare and individuate stigmatized group members. By defining individuals in multiple ways other than in terms of race, implicit bias may be reduced (e.g., Djikic, Langer, & Stapleton, 2008; Lebrecht, Pierce, Tarr, & Tanaka, 2009; Corcoran, Hundhammer, & Mussweiler, 2009).

Strategy 2: Potential Actions to Take

• **Individual:** Participate in diversity training that focuses on multiculturalism, associate with those committed to egalitarian goals, and invest effort in identifying the unique characteristics of different members of the same minority groups.

• **Courts:** Provide routine diversity training that emphasizes multiculturalism and encourage court leaders to promote egalitarian behavior as part of a court's culture.

Strategy 3: Routinely check thought processes and decisions for possible bias

When individuals engage in low-effort information processing, they rely on stereotypes and produce more stereotype-consistent judgments than when engaged in more deliberative, effortful processing (Bodenhausen, 1990). As a result, low effort decision makers tend to develop inferences or expectations about an individual early on in the information-gathering process. These expectations then guide subsequent information processing: Attention and subsequent recall are biased in favor of stereotype-confirming evidence and produce biased judgment (Bodenhausen & Wyer, 1985; Darley & Gross, 1983). Expectations can also affect social interaction between the decision maker (e.g., judge) and the stereotyped target (e.g., defendant), causing the decision maker to behave in ways that inadvertently elicit stereotype-confirming behavior from the other person (Word, Zanna, & Cooper, 1973). Individuals interested in minimizing the impact of implicit bias on their own judgment and behaviors should actively engage in more thoughtful, deliberative information processing.

Strategy 3: Potential Actions to Take

• **Individual:** Use decision-support tools such as note-taking, checklists, and bench cards and techniques such as writing down the reasons for a judgment to promote greater deliberative as opposed to intuitive thinking.

• **Courts:** Develop guidelines and/or formal protocols for decision makers to check and correct for implicit bias (e.g., taking the other person's perspective, imagining the person is from a non-stigmatized social group, thinking of counter-stereotypic thoughts in the presence of an individual from a minority social group). When sufficient effort is exerted to limit the effects of implicit biases on judgment, attempts to consciously control implicit bias can be successful (Payne, 2005; Stewart & Payne, 2008).

To do this, however, individuals must possess a certain degree of self-awareness. They must be mindful of their decision-making processes rather than just the results of decision making (Seamone, 2006) to eliminate distractions, to minimize emotional decision making, and to objectively and deliberatively consider the facts at hand instead of relying on schemas, stereotypes, and/or intuition.

Strategy 4: Identify distractions and sources of stress in the decision-making environment and remove or reduce them

Tiring (e.g., long hours, fatigue), stressful (e.g., heavy, backlogged, or very diverse caseloads; loud construction noise; threats to physical safety; popular or political pressure about a

particular decision; emergency or crisis situations), or otherwise distracting circumstances can adversely affect judicial performance (e.g., Eells & Showalter, 1994; Hartley & Adams, 1974; Keinan, 1987). Specifically, situations that involve time pressure (e.g., van Knippenberg, Dijksterhuis, & Vermeulen, 1999), that force a decision maker to form complex judgments relatively quickly (e.g., Bodenhausen & Lichtenstein, 1987), or in which the decision maker is distracted and cannot fully attend to incoming information (e.g., Gilbert & Hixon, 1991; Sherman, Lee, Bessennof, & Frost, 1998) all limit the ability to fully process case information. Decision makers who are rushed, stressed, distracted, or pressured are more likely to apply stereotypes – recalling facts in ways biased by stereotypes and making more stereotypic judgments – than decision makers whose cognitive abilities are not similarly constrained. A decision maker may be more likely to think in terms of race and use implicit racial stereotypes (Macrae, Bodenhausen, & Milne, 1995; Mitchell, Nosek, & Banaji, 2003) because race often is a salient, i.e., easily-accessible, addition, certain emotional states (anger, disgust) can exacerbate implicit bias in judgments of stigmatized group members, even if the source of the negative emotion has nothing to do with the current situation or with the issue of social groups or stereotypes more broadly (e.g., DeSteno, Dasgupta, Bartlett, & Cajdric, 2004; Dasgupta, DeSteno, Williams, & Hunsinger, 2009). Happiness may also produce more stereotypic judgments, though this can be consciously controlled if the person is motivated to do so (Bodenhausen, Kramer, & Susser, 1994).
Given all these potential distractions and sources of stress, decision makers need enough time and cognitive resources to thoroughly process case information to avoid relying on intuitive reasoning processes that can result in biased judgments.

Strategy 4: Potential Actions to Take

- **Individual:** Allow more time on cases in which implicit bias might be a concern by, for example, spending more time reviewing the facts of the case before committing to a decision; consider ways to clear your mind (e.g., through meditation) and focus completely on the task at hand.

- **Courts:** Review areas in which judges and other decision makers are likely to be over-burdened and consider options (e.g., reorganizing court calendars) for modifying procedures to provide more time for decision making (see Guthrie, Rachlinski, Wistrich, 2007). Addressing Implicit Bias in the Courts 10

Strategy 5: Identify sources of ambiguity in the decision-making context and establish more concrete standards before engaging in the decision-making process

When the basis for judgment is somewhat vague (e.g., situations that call for discretion; cases that involve the application of new, unfamiliar laws), biased judgments are more likely. Without more explicit, concrete criteria for decision making, individuals tend to disambiguate the situation using whatever information is most easily accessible—including stereotypes (e.g., Dovidio & Gaertner, 2000; Johnson, Whitestone, Jackson, & Gatto, 1995).

In cases involving ambiguous factors, decision makers should preemptively commit to specific decision-making criteria (e.g., the importance of various types of evidence to the decision) before hearing a case or reviewing evidence to minimize the opportunity for implicit bias (Uhlmann & Cohen, 2005). Establishing this structure before entering the decision-making

context will help prevent constructing criteria after the fact in ways biased by implicit stereotypes but rationalized by specific types of evidence (e.g., placing greater weight on stereotype-consistent evidence in a case against a Black defendant than one would in a case against a White defendant).

Strategy 5: Potential Actions to Take

- **Individual:** Commit to decision-making criteria before reviewing case-specific information.

- **Courts:** Develop protocols that identify potential sources of ambiguity; consider the pros (e.g., more understanding of issues) and cons (e.g., familiarity may lead to less deliberative processing) of using judges with special expertise to handle cases with greater ambiguity.Addressing Implicit Bias in the Courts 11

Strategy 6: Institute feedback mechanisms

Providing egalitarian consensus information (i.e., information that others in the court hold egalitarian beliefs rather than adhere to stereotypic beliefs) and other feedback mechanisms can be powerful tools in promoting more egalitarian attitudes and behavior in the court community (Sechrist & Stangor, 2001). To encourage individual effort in addressing personal implicit biases, court administration may opt to provide judges and other court professionals with relevant performance feedback. As part of this process, court administration should consider the type of judicial decision-making data currently available or easily obtained that would offer judges meaningful but nonthreatening feedback on demonstrated biases. Transparent feedback from regular or intermittent peer reviews that raise personal awareness of biases could prompt those with egalitarian motives to do more to prevent implicit bias in future decisions and actions (e.g., Son Hing, Li, & Zanna, 2002). This feedback should include concrete suggestions on how to improve performance (cf. Mendoza, Gollwitzer, & Amodio, 2010; Kim, 2003) and could also involve recognition of those individuals who display exceptional fairness as positive reinforcement.

Feedback tends to work best when it (a) comes from a legitimate, respected authority, (b) addresses the person's decision-making process rather than simply the decision outcome, and (c) when provided before the person commits to a decision rather than afterwards, when he or she already has committed to a particular course of action (see Lerner & Tetlock, 1999, for a review). Note, however, that feedback mechanisms which apply coercive pressure to comply with egalitarian standards can elicit hostility from some types of individuals and fail to mitigate implicit bias (e.g., Plant & Devine, 2001). By inciting hostility, these imposed standards may even be counterproductive to egalitarian goals, generating backlash in the form of increased explicit and implicit prejudice (Legault, Gutsell, & Inzlicht, 2011).

Strategy 7: Increase exposure to stigmatized group members and counter-stereotypes and reduce exposure to stereotypes

Increased contact with counter-stereotypes—specifically, increased exposure to stigmatized group members that contradict the social stereotype—can help individuals negate stereotypes, affirm counter-stereotypes, and "unlearn" the associations that underlie implicit bias. "Exposure" can include imagining counter-stereotypes (Blair, Ma, & Lenton, 2001), incidentally observing counter-stereotypes in the environment (Dasgupta & Greenwald, 2001; Olson &

Fazio, 2006), engaging with counter-stereotypic role models (Dasgupta & Asgari, 2004; Dasgupta & Rivera, 2008) or extensive practice making counter-stereotypic associations (Kawakami, Dovidio, Moll, Hermsen, & Russin, 2000).

Strategy 6: Potential Actions to Take

- **Individual:** Seek feedback through, for example, participating in a sentencing round table discussing hypothetical cases or consulting with a skilled mentor or senior judge about handling challenging cases; ask for feedback from colleagues, supervisors and others regarding past performance; document and review the underlying logic of decisions to ensure their soundness.

- **Courts:** Periodically review a judge's case materials and provide feedback and suggestions for improvement as needed; develop a bench-bar committee to oversee an informal internal grievance process and work with judges as needed; convene sentencing round tables to discuss hypothetical cases involving implicit bias issues and encourage more deliberate thinking. For individuals who seek greater contact with counter-stereotypic individuals, such contact is more effective when the counter-stereotype is of at least equal status in the workplace (see Pettigrew & Tropp, 2006). Moreover, positive and meaningful interactions work best: Cooperation is one of the most powerful forms of debiasing contact (e.g., Sherif, Harvey, White, Hood & Sherif, 1961).

In addition to greater contact with counter-stereotypes, this strategy also involves decreased exposure to stereotypes. Certain environmental cues can automatically trigger stereotype activation and implicit bias. Images and language that are a part of any signage, pamphlets, brochures, instructional manuals, background music, or any other verbal or visual communications in the court may inadvertently activate implicit biases because they convey stereotypic information (see Devine, 1989; Rudman & Lee, 2002; Anderson, Benjamin, & Bartholow, 1998; for examples of how such communications

Strategy 7: Potential Actions to Take

- **Individual:** View images (e.g., by hanging photos, creating new screen savers and desk top images) of admired individuals (e.g., Martin Luther King, Jr.) of the stereotyped social group; spend more time with individuals who are counter-stereotypic role models; practice making positive, i.e., counter-stereotypic, associations, with members of minority social groups.

- **Courts:** Assess visual and auditory communications for implicit bias and modify to convey egalitarian norms and present counter-stereotypic information; increase representation of stigmatized social groups in valued, authoritative roles in the court to foster positive intergroup relations and provide immediately accessible counter-stereotype examples.can prime stereotypic actions and judgments; see also Kang & Banaji, 2006). Identifying these communications and removing them or replacing them with non-stereotypic or counter-stereotypic information can help decrease the amount of daily exposure court employees and other legal professionals have with the types of social stereotypes that underlie implicit bias.

Conclusion

Research shows that individuals develop implicit attitudes and stereotypes as a routine process of sorting and categorizing the vast amounts of sensory information they encounter on an ongoing basis. Implicit, as opposed to explicit, attitudes and stereotypes operate automatically, without awareness, intent, or conscious control and can operate even in individuals who express low explicit bias (Devine, 1989). Because implicit biases are automatic, they can influence or bias decisions and behaviors, both positively and negatively, without an individual's awareness. This phenomenon leaves open the possibility that even those dedicated to the principles of a fair justice system may, at times, unknowingly make crucial decisions and act in ways that are unintentionally unfair. Thus although courts may have made great strides in eliminating explicit or consciously endorsed racial bias, they, like all social institutions, may still be challenged by implicit biases that are more difficult to identify and change.

Devine (1989) argues that "prejudice need not be the consequence of ordinary thought processes" if individuals actively take steps to avoid the influence of implicit biases on their behavior. Avoiding the influence of implicit bias, however, is an effortful, as opposed to automatic, process and requires intention, attention and time. Combating implicit bias, much like combating any habit, Addressing Implicit Bias in the Courts involves "becoming *aware* of one's implicit bias, being *concerned* about the consequences of the bias, and learning to *replace* the biased response with non-prejudiced responses—ones that more closely match the values people consciously believe that they hold" (Law, 2011).

Once judges and court professionals become aware of implicit bias, examples of strategies they can use to help combat it and encourage egalitarianism are:

- Consciously acknowledge group and individual differences (i.e., adopt a multiculturalism approach to egalitarianism rather than a color-blindness strategy in which one tries to ignore these differences)
- Routinely check thought processes and decisions for possible bias (i.e., adopt a thoughtful, deliberative, and self-aware process for inspecting how one's decisions are made)
- Identify sources of stress and reduce them in the decision-making environment
- Identify sources of ambiguity and impose greater structure in the decision-making context
- Institute feedback mechanisms
- Increase exposure to stereotyped group members (e.g., seek out greater contact with the stigmatized group in a positive context)

Those dedicated to the principles of a fair justice system who have worked to eliminate explicit bias from the system and in their own decisions and behaviors may nonetheless be influenced by implicit bias. Providing information on implicit bias offers judges and court staff an opportunity to explore this possibility and to consider strategies to address it. It also provides an opportunity to engage judges and court professionals in a dialog on broader race and ethnic fairness issues in a thoughtful and constructive manner:

Recognizing that implicit bias appears to be relatively universal provides an interesting foundation for broadening discussions on issues such as minority over-representation (MOR), disproportionate minority contact (DMC), and gender or age discrimination. In essence, when we look at research on social cognitive processes such as implicit bias we understand that

these processes are normal rather than pathological. This does not mean we should use them as an excuse for prejudice or discrimination. Rather, they give us insight into how we might go about avoiding the pitfalls we face when some of our information processing functions outside of our awareness. (Marsh, 2009, p. 18)

[1] See, for example, state court reports of racial fairness task forces and commissions, available through the National Center for State Courts at http://www.ncsc.org/SearchState and the National Center for State Courts' Interactive Database of State Programs to address race and ethnic fairness in the courts, available at http://www.ncsc.org/refprograms.

[2] See, for example, National Center for State Courts (1999, p. 37), reporting on a national survey of public attitudes about state courts that found 47% of Americans surveyed did not believe that African Americans and Latinos receive equal treatment in America's state courts, 55% did not believe that non-English speaking persons receive equal treatment, and more than two-thirds of African Americans thought that African Americans received worse treatment than others in court. State surveys, such as the public opinion survey commissioned by the California Administrative Office of the Courts report similar findings: A majority of all California respondents stated that African Americans and Latinos usually receive less favorable results in court than others, approximately two-thirds believed that non-English speakers receive less favorable results, and, a much higher proportion of African Americans, 87%, thought that African Americans receive unequal treatment (see Rottman, 2005, p. 29).

[3] Social science research on implicit stereotypes, attitudes, and bias has accumulated across several decades into a compelling body of knowledge and continues to be a robust area of inquiry, but the research is not without its critics (see "What Are the Key Criticisms of Implicit Bias Research?" in Appendix B in Casey, et al., 2012). There is much that scientists do not yet know. This project brief and the full report on which it is based are offered as a starting point for courts interested in exploring implicit bias and potential remedies, with the understanding that advances in technology and neuroscience promise continued refinement of knowledge about implicit bias and its effects on decision making and behavior.

[4] See "How Is Implicit Bias Measured" in Appendix B in Casey, et al. (2012) for more information on measures of implicit bias.

[5] See Appendix G in Casey, et al. (2012) for more information on the strategies.Addressing Implicit Bias in the Courts 17

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Race and Crime Association Supporting Material

BASIC AND APPLIED SOCIAL PSYCHOLOGY, *28*(2), 193–199 Copyright © 2006, Lawrence Erlbaum Associates, Inc.

The Correlates of Law Enforcement Officers' Automatic and Controlled Race-Based Responses to Criminal Suspects

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The current work explored law enforcement officers' racial bias in decisions to shoot criminal suspects as well as their self-reported beliefs about Black versus White suspects. In addition, this work examined what factors contribute to officers' racial biases and the likelihood of having these biases eliminated. Examination of the officers' explicit attitudes toward Black people and their beliefs about the criminality and difficulty of Black suspects revealed strong relationships with the quality of their contact with Black people on the job and in their personal lives. In addition, officers with negative compared to more positive beliefs about the criminality of Black people were more likely to tend toward shooting unarmed Black suspects on a shooting simulation. However, officers with positive contact with Black people in their personal lives were particularly able to eliminate these biases with training on the simulation. The findings are discussed in terms of their implications for the training of law enforcement personnel.

In recent years there has been growing interest in the influence of race on law enforcement officers' responses to criminal suspects. For many, the concern is that police officers are more likely to focus on minority group members, particularly Black and Latino people, in their investigations, leading them to target minority group members when making decisions about behaviors such as traffic stops, searches, and questioning. There is also concern that police officers may be more aggressive in their responses to minority compared to White suspects (Lusane, 1991; Quinney, 1970). Such responses may be influenced by stereotypic expectations. For example, it is possible that the stereotype that Black men are more likely to be violent and hostile may create expectations that Black people, particularly Black men, are more likely to be violent criminals than are White people (Brigham, 1971; Devine & Elliot, 1995). If law enforcement officers harbor such expectations, then decisions about whether a suspect is dangerous may be biased and result in more antagonistic responses to Black compared to White suspects, including decisions about the amount of force necessary to restrain a suspect and whether to shoot a suspect.

Recent research has examined whether race influences people's decisions to shoot criminal suspects (e.g., Correll,

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Judd, Park, & Wittenbrink, 2002; Greenwald, Oakes, & Hoffman, 2003; Plant & Peruche, 2005; Plant, Peruche, & Butz, 2005). These examinations have revealed that people are more likely to mistakenly decide that a Black suspect is in possession of a weapon compared to a White suspect. For example, in the work conducted by Correll and colleagues (2002), undergraduate students completed a computer simulation where they had to decide whether to shoot at a male suspect who appeared on the computer screen. Their decision was supposed to be based upon whether the suspect was holding a gun or neutral object (e.g., wallet, cell phone). The results indicated that college students were more likely to misinterpret neutral objects as weapons and mistakenly shoot when the suspect was a Black person compared to a White person.

Given the potentially disastrous implications of these biases, recent attention has focused on the elimination of biased responses toward criminal suspects (Plant & Peruche, 2005; Plant et al., 2005). Plant and her colleagues (2005)

asked undergraduate participants to complete a computer simulation similar to that of Correll et al. (2002) where participants made a decision as quickly as possible whether to shoot Black and White male suspects who appeared on a computer screen. The decision was based on whether a gun or a neutral object was present in the picture. In this computer simulation the race of the suspect was unrelated to the presence of a weapon and being influenced by the race of the sus

pect would only impair performance. Upon initial exposure to the program, participants were more likely to mistakenly shoot unarmed Black suspects than unarmed White suspects. However, after extensive practice with the program where the race of suspect was unrelated to the presence of a weapon, this racial bias was eliminated immediately after training and 24 hr later.

These findings indicate that repeated exposure to stimuli where race is unrelated to the presence or absence of a gun can eliminate race bias. Plant and her colleagues (2005) argued that over the course of multiple trials on the shooting task, participants came to inhibit the activation of the racial category because race was not diagnostic of weapon possession. As a result, the participants eliminated the automatic influence of race on their responses. In an important extension of this work, Plant and Peruche (2005) demonstrated that law enforcement officers also respond with racial bias in decisions to shoot suspects on computer simulations but that this bias can be eliminated with exposure to their program where race was unrelated to weapon possession.

The present work expands upon the previous literature and explores law enforcement officers' racial bias in decisions to shoot criminal suspects as well as self-reported racial bias in response to criminal suspects. Another goal of the current work was to examine the factors that may contribute to police officers' racial biases and the likelihood of having these biases eliminated. It is currently unclear, for example, whether positive and negative contact with Black people on the job or in an officer's personal life is related to law enforcement officers' beliefs regarding Black suspects or their split-second decisions whether to shoot criminal suspects. The current work explored the impact of a range of factors on law enforcement officers' responses to criminal suspects.

The present work examined law enforcement officers' explicit attitudes and beliefs about Black suspects and their more implicit responses because both types of responses are likely important in influencing reactions to criminal suspects. Previous research has revealed that White people's self-reported racial attitudes predict the degree of racial bias in their verbal behavior whereas their implicit attitudes relate to nonverbal friendliness and perceived friendliness of an interaction partner (Dovidio, Kawakami, & Gaertner, 2002). To date, we know very little about the self-reported attitudes and beliefs of police officers regarding Black people. These explicit responses may have important implications for their responses and interactions with Black citizens when on the job. For example, if a law enforcement officer believes that Black suspects are more likely to be violent and hostile than White suspects, Black suspects may be under greater scrutiny by the officer. In addition, the officer may interpret the behavior of the suspect through the lens of his or her stereo-typic expectations, which could lead the officer to interpret the behavior of Black suspects as more aggressive and dangerous than the same behavior performed by White suspects.

This in turn may lead to a more aggressive response from the law enforcement officer toward Black suspects compared to White suspects. Also, if a law enforcement officer believes that a Black person is more likely to be a dangerous criminal than is a White person, the officer may be more likely to subject Black suspects compared to White suspects to searches and may be less likely to give them warnings in lieu of tickets or citations.

One potentially important factor in understanding law enforcement officers' responses to Black suspects is the officers' previous contact with Black people both on the job and in their personal lives. The intergroup contact hypothesis suggests that when certain criteria are met, contact between members of outgroups improves intergroup attitudes (Allport, 1954). Pettigrew (1997) demonstrated that people who have intergroup friends are less likely to exhibit implicit and explicit intergroup bias. However, law enforcement officers frequently encounter citizens who are angry, frustrated, or frightened. Therefore, if the officers'contact with Black people is primarily on the job, then repeated exposure to upset or antagonistic Black citizens may reinforce stereotypes about Black people and exacerbate negative attitudes and responses to Black suspects. However, positive experiences with Black people on the job or in their personal lives may help to eliminate racial biases and counteract officers' negative stereotypes about Black people. Therefore, the current work examined the implications of law enforcement officers' contact with Black people both on the job and in their personal lives.

In addition to contact, it may also be important to consider whether other experiences on the job influence racial bias in responses to suspects. For example, most officers have some form of diversity training, which is intended to improve attitudes toward people from other racial and ethnic groups and decrease intergroup bias. If such training is effective, then the amount of diversity training should be negatively related to the degree of bias. In addition, it is possible that merely being on the force will influence the officers' responses based on race. For example, one could imagine that law enforcement officers with more experience may exhibit less bias than newer officers because they have more training and have learned to control the influence of stereotypes and base their responses in the field on the specific situation at hand. Alternatively, it may be that those individuals with more years in the area of law enforcement exhibit more bias than officers with less experience because over time, experiences on the job may strengthen negative stereotypic expectations. Another factor that may influence the degree of bias of a law enforcement officer is the frequency with which the officer has had to draw a weapon on a suspect in the recent past. For example, law enforcement officers who are frequently involved in situations where they must draw their weapon and point it at

a suspect may be more likely to interpret the behavior of suspects as threatening, which could influence their degree of racial bias.

THE CURRENT WORK

The goal of the current work was to examine the factors that are related to police officers' racial bias in decisions to shoot suspects as well as their explicit attitudes about Black people in general and beliefs about Black suspects in particular. To this end, certified police patrol officers first completed Plant and her colleagues' (2005) shoot/don't shoot computer simulation task. Examination of the officer's responses to the simulation allowed us to determine the officer's initial level of racial bias on the simulation and whether exposure to the simulation reduced this racial bias. Next, participants completed a traditional measure of attitudes toward Blacks (ATB, Brigham, 1993) and a measure of their beliefs about the criminality and danger of Black compared to White suspects. In addition, we explored the implications of the officers'contact with Black people both on the job and in their personal lives, the extent of their diversity training, their years on the force, and the number of times they had drawn their weapon on a suspect for their explicit and automatic responses to Black suspects. Based on previous work, officers with more positive contact experiences should have more positive implicit and explicit responses to Black people (Pettigrew, 1997; Tropp & Pettigrew, 2005). In addition, positive contact with Black people may be vital for counteracting negative experiences on the job and may increase officers' ability to eliminate racial biases. In contrast, negative contact with Black people on the job may increase racial biases or impede the elimination of racial biases. Further, it was possible that the more time on the force and the more time spent in diversity training, the more positive the officers' automatic and controlled responses to Black suspects.

METHOD

Participants

Fifty certified sworn law enforcement personnel in the state of Florida (83% men; 84% White, 10 % Black, 2% Native American, and 4% Hispanic) volunteered to participate in the study. It is important to note that the sample in the current study was the same as in Plant and Peruche (2005). Due to space restrictions, in Plant and Peruche's brief report, they presented only the basic findings (errors and latencies) from the shoot/don't shoot simulation. They did not report on the explicit attitude measures or the association between the self-report responses and the responses to the shoot–don't shoot simulation. The mean age of participants was 37 years (SD = 7.82) and law enforcement experience ranged from 2 to 32 years (M = 11.13, SD = 5.94). Two officers made too few valid responses to the computer simulation (i.e., responded to less than 20% of trials in the time limit), and two participants did not complete the self-report measures, leaving a sample of 46 officers.

Materials

To investigate the present hypotheses, we used the computer simulation from Plant et al.'s (2005) work. The program instructed participants to decide whether to shoot at suspects that appeared on a computer screen. This decision was to be based on whether a gun or neutral object was present in the picture. The stimuli consisted of pictures of Black and White college-aged men matched for attractiveness (Malpass, Lavigueur, & Weldon, 1974) with a picture of a gun or a neutral object (e.g., cell phone, wallet) superimposed on the picture (see Plant et al., 2005, for a full description of the program). Each participant completed 20 practice trials followed by 160 test trials. Participants were instructed to hit the "shoot" key if a gun was present, and they were instructed to hit the "don't shoot" key if a neutral object was present. To determine whether exposure to the program reduced racial bias in decisions to shoot, the trials were split in half and responses to the first half of the trials were compared to responses to the second half of the trials. Of interest was the number of errors (mistaken responses) that participants made as a function of the race of suspect, the object that the suspect was holding, and training (early vs. late trials).

Following the computer simulation, participants completed a questionnaire packet that included Brigham's (1993) ATB Scale. This scale contained 20 questions assessing attitudes toward Black people (e.g., "I would not mind at all if a Black family with about the same income and education as me moved in next door"). Responses were given on a 7-point scale and were averaged with higher scores indicating more positive attitudes toward Black people (α = .84). Participants also completed a questionnaire we created specifically for law enforcement personnel asking about their experiences on the job. The questionnaire included 15 items assessing perceptions regarding the criminality and violent behavior of Black compared to White suspects (e.g., "White suspects are less likely to be violent than Black suspects," "Black males are more likely to possess weapons compared to any other group") that were averaged with higher scores indicating more negative perceptions of Black suspects (α = .93). The packet also included questions regarding the quality of the officers' contact with Black people at work and in their personal lives. These questions were similar with the exception of the context of the contact

(personal vs. work). Four separate contact indexes were created based on factor analysis: positive personal contact (PPC; e.g., "My interactions with Black people over the last couple weeks have been very pleasant"; α = .76), negative personal contact (NPC; e.g., "In the last couple of weeks, I have had arguments with Black people," α = .79), positive work contact (PWC; α = .67), and negative work contact (NWC; α = .87). Officers were also

asked to report how many times over the previous 6 months they had drawn their weapon on a suspect (M = 1.59, SD = 3.89).[1] Finally, the officers were asked to report the number of hours of human diversity training they had completed (M = 50.76 hr, SD = 30.94 hr).

Procedure

The experimenter met participants in a private office at their department headquarters. The officers were run individually and were seated at a desk with a laptop computer. After the participants read the consent form, the experimenter provided instructions regarding the computer simulation and the participants completed the program. After the simulation, participants completed the questionnaire packet. They were then debriefed and thanked for their participation.

RESULTS

We were interested in whether the police officers' contact with Black people and their experiences on the job were related to their attitudes toward Black people in general and Black suspects in particular. Therefore, we conducted multiple linear regression analyses on the officers' attitudes toward Black people and their beliefs about Black suspects with contact on each of the four contact measures (e.g., PWC, NPC), hours of cultural diversity training, time in the law enforcement profession, and the number of times the officers had drawn their weapon on a suspect in the last 6 months all simultaneously included as predictors. This approach allowed us to examine the independent influence of each of the predictors on the attitude measures. Those effects not explicitly mentioned were not significant.

Analysis of Explicit Responses

The analysis of the general attitudes toward Black people (i.e., ATB scores) revealed an effect of PPC such that participants with more PPC reported more positive attitudes toward Black people than those with less PPC, $F(1, 38) = 9.18$, $p < .004$ ($\beta = .55$). There was also an effect of NPC, such that participants with more NPC with Black people reported more negative attitudes toward Black people, $F(1, 38) = 4.12$, $p = .05$ ($\beta = -35$). In addition, there was a marginal effect of NWC with high compared to low levels of recent negative contact with Black people at work being associated with negative attitudes toward Black people generally, $F(1, 38) = 3.94$, $p < .06$ ($\beta = -.30$).

[1]The variable of the number of times the officers drew their weapons was somewhat skewed; however, the findings from all analyses using a transformed version yielded basically identical results. Therefore, we chose to use the more easily interpretable untransformed variable.

The analysis of the officers' beliefs about the criminality and violent behavior of Black suspects revealed an effect of PPC whereby officers that reported more PPC with Black people reported more positive beliefs about Black suspects than did those with less PPC, $F(1, 38) = 8.24$, $p < .008$ ($\beta = -.50$). Further, there was an effect of NWC such that officers with high levels of negative contact with Black people at work reported more negative expectations regarding Black criminal suspects than did officers with less negative work contact, $F(1, 38) = 8.53$, $p < .005$ ($\beta = .42$).

Analysis of Responses to Shooting Simulation

As reported in Plant and Peruche (2005), examination of the officers' errors on the shooting simulation revealed that, consistent with previous work using undergraduate samples (e.g., Correll et al., 2002; Plant et al., 2005), the officers were initially more likely to mistakenly shoot unarmed Black suspects compared to unarmed White suspects but were no more likely to mistakenly not shoot armed Black suspects than White armed suspects. However, on the later trials, after extensive exposure to the program, this racial bias was eliminated such that the officers responded similarly to the Black and White suspects.[2] Thus, although on the early trials the officers were biased toward mistakenly shooting unarmed Black suspects compared to unarmed White suspects, on the later trials this bias was eliminated.

Having established that the officers were initially racially biased in their responses to the program but were able to overcome these biases, we were interested in identifying who was more or less able to overcome biased responses on the shoot/don't shoot computer simulation. To examine this issue, we created an assessment of participants' degree of bias reduction on the shooting simulation. Specifically, we created a bias score for both the early and late trials of the shooting simulation using a procedure similar to that used in previous work (e.g., Correll et al., 2002). Responses by participants were considered biased if they made more errors when Black faces were paired with neutral objects than when White faces were paired with neutral objects and made more

[2]The findings for the error analysis of the shooting simulation for the current sample, which doesn't include 2 participants who did not complete the self-report measures, were almost identical to those reported by Plant and Peruche (2005). Most important, the analysis revealed the key Race of Suspect × Object by Trial interaction, $F(1, 45) = 4.93$, $p < .04$.

Specifically, the officers were more likely to mistakenly shoot at an unarmed suspect when the suspect was Black (M = 3.63, SD = 2.51) compared to when the suspect was White (M = 2.70, SD = 2.17), $t(1, 45) = -2.92$, $p < .007$. In contrast, when the suspect was armed, the officers were somewhat but not significantly more likely to mistakenly not shoot an armed suspect when he was White (M = 3.54, SD = 2.65) compared to Black (M = 3.04, SD = 2.18), $t(1, 45) = 1.50$, $p = .14$. On the later trials, the participants were no more likely to mistakenly shoot an unarmed Black suspect (M = 2.61, SD = 1.94) than an unarmed White suspect (M = 2.41, SD = 1.84), $t < 1$. In addition, they were equally likely to mistakenly not shoot armed White (M = 3.11, SD = 2.17) and Black suspects (M = 3.28, SD = 2.83), $t < 1$.

errors when White faces were paired with guns than when Black faces were paired with guns. Specifically, the number of errors for Black/gun trials was subtracted from the number of errors for Black/neutral trials. In addition, the number of errors for White/neutral trials was subtracted from the number of errors for White/gun trials. These two scores were added together for the early and late trials separately. To assess the amount that participants improved, that is, their degree of bias reduction, we created an overall improvement score that assessed the degree to which participants responded with less racial bias on the later trials than the early trials.[3]

We conducted multiple linear regression analyses on the officers'bias reduction score as well as on their early and late bias scores with the measures of attitudes, contact, diversity training, years on the force, and times a weapon was drawn all simultaneously included as predictors. Initial analyses revealed that the PPC measure was the only contact measure that was a significant predictor of the performance on the simulation. Therefore, to conserve degrees of freedom, it was the only contact measure included in the reported analyses.

The analysis of the bias reduction score revealed an effect of beliefs about the criminality of Black suspects such that participants with negative beliefs about the criminality of Black people exhibited a greater reduction in bias (

Having established that the officers with more negative attitudes toward Black suspects and more PPC with Black people showed a larger reduction in racial bias on the simulation, we were interested in understanding these effects. For example, it may have been that officers with more negative attitudes toward Black suspects compared to those with positive attitudes had larger bias reduction scores because they had more racial bias on the early trials to be eliminated. Alternatively, they may have responded with less racial bias on the later trials than those with more positive attitudes.

The analysis of the degree of bias in the early trials revealed an effect of beliefs about the criminality of Black suspects, such that participants with negative beliefs about Black criminal suspects exhibited more racial bias in their responses to the shooting simulation (i.e., erred toward shooting Black suspects and erred away from shooting White suspects) in the early trials compared to those with more positive beliefs about Black criminal suspects, $F(1, 39) = 12.36$, $p <$

[3]A reviewer of this article suggested creating an average bias score across the early and late trials to examine which variables increased or decreased the average bias. We created such a score and found that it was unrelated to all of the other variables.

.002 (β = .66). This finding indicates that the effect of negative attitudes toward Black suspects on the bias reduction score was likely due to the officers with negative attitudes toward Black suspects responding with more initial racial bias on the simulation.

In addition, analysis of bias on the early trials revealed an effect of attitudes toward Black people more generally, such that participants with more negative attitudes toward Black people were more likely to exhibit racial bias in their responses to the early trials of the shooting simulation than were those with less negative attitudes, $F(1, 39) = 7.14$, $p <$ .02 (β = .50). Further, a marginal main effect of years in the law enforcement profession was found such that the more years the participants had accumulated in the law enforcement profession, the less racial bias evident in their responses to the early trials of the shooting simulation, $F(1, 39) = 3.38$, $p < .08$ (β = –.26).

The analysis of the degree of bias on the late trials revealed a marginal main effect of PPC, $F(1, 39) = 3.16$, $p < .09$ (β = –.30). Specifically, high PPC participants'had less racial bias on the later trials of the shooting simulation compared to low PPC participants. This finding indicates that the reason why officers with higher levels of PPC had larger bias reduction scores was because they had less racial bias than the low PPC officers after training on the program. Together, these findings indicate that positive contact with Black people in their personal lives may have helped the officers to eliminate their racial bias on the shooting simulation.

DISCUSSION

The current work examined the factors that were related to police officers' explicit attitudestowardBlackpeopleandbeliefs about the criminality of Black suspects as well as the factors that predicted their automatic racial biases in response to a shooting simulation. Examination of the officers' explicit attitudes revealed strong relationships with the quality of their contact with Black people. It is interesting that officers who had positive experiences with Black people in their personal lives had more positive attitudes toward Black people as well as more positive beliefs about the criminality and violence of Black suspects. These findings suggest that positive experiences with Black people outside of work may be important for counteracting negative experiences at work. That is, if officers do not have positive contact with Black people outside of work, then their only contact with Black people would be in work-related settings, which may be predominantly negative. Consistent

with this idea, high levels of negative contact with Black people at work were related to negative expectations regarding Black suspects and marginally more negative attitudes toward Black people generally.

These findings suggest that the quality of contact that police officers have with Black people may have important implications for their attitudes and responses to Black people on

the job and in their personal lives. However, because of the methodological approach used in the current study, the causal relationships between contact and attitudes cannot be identified. Although officers who have negative contact with Black people at work may come to view Black suspects as more difficult than White suspects, it is also quite likely that officers who possess negative expectations about Black suspects may experience more negative interactions with Black people on the job. Similarly, although officers who have more positive experiences with Black people in their personal lives may have more positive expectations about Black suspects, it is also possible that officers with more positive beliefs about Black people may seek out and contribute to more positive experiences with Black people in their personal lives. Thus, attitudes and contact may influence and reinforce each other. To decrease negative responses to Black suspects and improve intergroup attitudes, it may be useful to create more opportunities for positive interactions between officers and citizens. For example, it may be helpful to expand opportunities where officers can take part and get involved in community events. In addition to providing more positive contact, this type of contact may help to improve the beliefs of officers about Black people generally and could have a positive impact on community attitudes about law enforcement officers. Indeed, mounting evidence indicates that intergroup contact is critical for improving responses to out group members (e.g., Tropp & Pettigrew, 2005).

The officers' beliefs about the criminality of Black suspects as well as the quality of their contact with Black people were important factors in determining their responses to the shooting simulation. These self-reported responses were related to both their degree of racial bias in responding to the program as well as their ability to overcome the racial bias with repeated exposure to the program. Upon initial exposure to the program, the officers who perceived Black criminal suspects as more dangerous than White suspects exhibited more of a racial bias in their split-second decisions to shoot than the officers with more positive beliefs about Black suspects. Specifically, the officers with negative attitudes toward Black criminal suspects tended toward shooting the Black suspects and tended to avoid shooting the White suspects compared to the officers with more positive attitudes toward Black criminal suspects. Similarly, the officers' with more negative attitudes toward Black people generally were more likely to exhibit bias in early trials than were those with less negative attitudes. These findings indicate that officers' beliefs about Black suspects as well as their attitudes toward Black people in general are both related to the degree of racial bias the officers initially exhibited when making split-second decisions whether to shoot Black and White suspects. These findings indicate that it may be critical to focus on changing police officers' attitudes and beliefs about Black people when attempting to reduce any racial bias in their decisions on the job.

On a more promising note, there was a marginally significant effect of years on the force in predicting the degree of racial bias on the shooting simulation. More years in the law enforcement profession was related to less racial bias on the early trials of the shooting simulation. This suggests that the experiences and training the officers receive in law enforcement may help to discourage racial bias. Over time the officers may learn that when making split-second decisions about whether a suspect is armed and dangerous it is critical to focus on the object that the suspect is holding as opposed to extraneous factors such as his or her race. As a result, they may be less influenced by race when making decisions on the shooting simulation.[4]

Further, on the later trials of the shooting simulation, the officers with more PPC with Black people in their personal lives responded with less racial bias compared to the officers with less PPC. In addition, examination of the improvement scores indicated that the officers with PPC with Black people were better able to eliminate their racial bias on the shooting simulation even after controlling for the officers 'attitudes toward Black people. These findings suggest that contact with Black people outside of the job facilitated the elimination of biased responses and that officers with this type of contact were better able to learn that race is not an effective diagnostic tool when attempting to ascertain whether a suspect is potentially dangerous. Because so much of police officers' contact with citizens is negative, positive contact with people in their personal lives may be critically important to counteract this negativity. The primarily White officers in the current study were likely to have ample positive contact with White people. However, if they did not have contact with Black people outside of the work setting, their only contact with Black people may have been at work and negative. PPC with Black people may help offset negative experiences on the job. Further, officers with positive contact with Black people in their personal lives are more likely to have positive Black exemplars to draw upon to help them remove the influence of the negative cultural stereotype of Black people in their decisions to shoot on the computer simulation.

It is worth noting that diversity training was not related to either explicit attitudes or responses to the computer simulation. The lack of relationship may be due to the way we measured the diversity training (i.e., number of hours). However, it would likely be beneficial for law enforcement training programs to explore the efficacy of their diversity training procedures and work to determine whether changes can be made to increase the effectiveness of their current

training.

[4]Of course, years on the force are also likely highly related to the officers' age (r = .76), which might seem to suggest that the relationship between years on the force and racial bias is a cohort effect, whereby officers from an older cohort are less likely to respond with this kind of racial bias. However, age was largely unrelated to the degree of bias on the early trials of the simulation (r = –.10).

CONCLUSIONS

Our hope is that the current work may provide some early insight into the factors that help reduce any influence of race on law enforcement personnel's explicit and automatic responses to suspects. The present study highlights the importance of police officers' contact and training for their explicit and more automatic responses to criminal suspects. Law enforcement officials may want to consider encouraging positive personal contact with citizens from a range of racial and ethnic groups. This may be accomplished by encouraging officers to volunteer for local charities, outreach programs, or community projects. This may help give officers the opportunity to discuss community issues with Black, White, Hispanic, and Asian community members in more informal settings. Such contact may also diminish negative attitudes regarding law enforcement officers that citizens may harbor.

The ultimate goal of the current work is to help us better understand how to eliminate any racial bias in people's real-life responses to others. In addition, we hope to contribute to the understanding of what factors may influence officers' split-second decisions as well as their more explicit and overt responses to suspects. With this work, we want to help officers make correct, individuated decisions about suspects under the arduous circumstances in which they sometimes find themselves. Specifically, we want to help train officers to protect themselves and others from harm and at the same time train officers to accurately assess the potential threat and criminality of the citizens they encounter.

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INTERPERSONAL RELATIONS AND GROUP PROCESSES

Across the Thin Blue Line: Police Officers and Racial Bias in the Decision to Shoot

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Police officers were compared with community members in terms of the speed and accuracy with which they made simulated decisions to shoot (or not shoot) Black and White targets. Both samples exhibited robust racial bias in response speed. Officers outperformed community members on a number of measures, including overall speed and accuracy. Moreover, although community respondents set the decision criterion lower for Black targets than for White targets (indicating bias), police officers did not. The authors suggest that training may not affect the speed with which stereotype-incongruent targets are processed but that it does affect the ultimate decision (particularly the placement of the decision criterion). Findings from a study in which a college sample received training support this conclusion.

Inspired in part by high-profile police shootings of unarmed Black men, a flurry of social psychological research has attempted to assess the influence of a suspect's race on the use of force, specifically in terms of the decision to shoot (Correll, Park, Judd, Joshua Correll, Department of Psychology, University of Chicago; Bernadette Park, Charles M. Judd, and Melody S. Sadler, Department of Psychology, University of Colorado at Boulder; Bernd Wittenbrink, Grad- uate School of Business, University of Chicago; Tracie Keesee, University of Denver.

Primary support for this work was provided by a grant from the Russell Sage Foundation. Support for this work also came from National Institute of Mental Health Grant F31-MH069017 to Joshua Correll and National Institute of Mental Health Grant R01-45049 to Bernadette Park and Charles M. Judd.

In the interest of disclosure, we note that Tracie Keesee also serves as a commander in the Denver Police Department. We thank Chief Gerald Whitman, the Denver Police Department, Calibre Press, the Denver De- partment of Motor Vehicles, and (especially) the many officers of the Denver Police Department and police departments around the country for their assistance, patience, and participation. We also thank Alinne Barrera, Heather Coulter, and David M. Deffenbacher for their invaluable assistance with this research and Myron Rothbart for his many helpful comments. & Wittenbrink, 2002; Greenwald, Oakes, & Hoffman, 2003; Payne, 2001). Although social psychologists have only recently addressed this question, the impact of suspect ethnicity on police shootings has long been the focus of researchers in other fields of study, particularly sociology, political science, and law enforce- ment. Investigators have consistently found evidence that police use greater force, including lethal force, with minority suspects than with White suspects (e.g., Inn, Wheeler, & Sparling, 1977; Smith, 2004; see Geller, 1982, for a review). Data from the Department of Justice (2001), itself, indicate that Black suspects are approximately five times more likely than White suspects, per capita, to die at the hands of a police officer.

One of the most detrimental consequences of police shootings is the upheaval they can provoke. Shootings of a minority suspect may engender a sense of mistrust and victimization among com- munity members and give rise to conflict between the community and police. Weitzer and Tuch (2004) present evidence that mem- bers of ethnic minorities often feel that they are mistreated by the police, even after statistically controlling for factors like personal and vicarious experiences with the law, exposure to the media, and neighborhood disadvantage (see also Sunshine & Tyler, 2003). The implication is that the police are racist and that officers use excessive force with minority suspects. In response, Black people may engage in more belligerent behavior, including “talking back” to police officers, and—in a vicious cycle—this belligerence may prompt more severe use of force by police (Reisig, McCluskey, 10.1037/0022-3514.92.6.1006 Mastrofski, & Terrill, 2004). It is equally important to note that, as a consequence of this tension, officers who see their job as pro- tecting the community may feel, and to some extent may actually *be*, thwarted in their efforts to perform their duty.

Officer-involved shootings, then, can have severe consequences, not just for the officers and suspects involved, but for the com- munity at large as well. It is of paramount importance to under- stand and explain why minority suspects are disproportionately likely to be shot. The sociological literature offers a number of explanations. Some research suggests that bias in police shootings stems, at least in part, from the officers’ role as protectors of the privileged (predominantly White) classes over the less fortunate (predominantly minority) members of society (Sorenson, Mar- quart, & Brock, 1993). Others argue that the racial discrepancy in officer-involved shootings stems from differential minority involvement in criminal activity (Department of Justice, 2001; Inn et al., 1977) or from the fact that minorities are disproportionately likely to live and work in low-income, high-crime communities (Terrill & Reisig, 2003).

A primary strength of the sociological approach is that it examines police use of force directly and in its true context. These researchers study real locations and real officers, and their depen- dent variable is the number of

suspects who are actually shot. They thus maintain the richness and complexity of the real world when analyzing relationships between officer-involved shootings and variables like race or community disadvantage. At the same time, the preexisting correlations among these variables confound ef- forts to assess their independent effects. For example, the relation- ship between the proportion of Black citizens in a community and perceptions of disorder (Sampson & Raudenbush, 2004) is inex- tricably tied to, and cannot be fully separated from, racial discrepancies in officer-involved shootings (Terrill & Reisig, 2003). For this reason, a social psychological analysis of the problem with experimental methods is useful not to replace but rather to supplement research of a more naturalistic sort.

Over the past several years, social psychological researchers have examined the effect of race on shoot/don't-shoot decisions using videogame-like simulations. In one paradigm, participants view a series of images (background scenes and people) and are instructed to respond to armed targets with a *shoot* response, and to unarmed targets with a *don't-shoot* response as quickly and as accurately as possible (Correll et al., 2002; Correll, Park, Judd, & Wittenbrink, 2007; Correll, Urland, & Ito, 2006). The results of some 20 studies with this task, with a variety of parameters and manipulations, consistently show racial bias in both the speed and accuracy with which such decisions can be made. Participants are faster and more accurate when shooting an armed Black man rather than an armed White man, and faster and more accurate when responding "don't shoot" to an unarmed White man rather than an unarmed Black man. The bulk of this research has been conducted with college students, but the effect has been replicated with community samples of both White and Black participants, and conceptually similar effects have been obtained by a number of other labs (Amodio et al., 2004; Greenwald et al., 2003; Payne, 2001; Payne, Lambert, & Jacoby, 2002; Plant, Peruche, & Butz,2005). These findings, along with reports from sociological and related literatures, clearly indicate that race can play an important role in decisions about the danger or threat posed by a particular person. But experimental data rarely speak directly to police behavior.

In our literature review, we discovered only two papers that examine officers in experimental studies of racial bias. Eberhardt, Goff, Purdie, and Davies (2004) found that priming the concept of crime served to orient attention to Black (more than White) faces. This pattern held for officers and civilians alike. Plant and Peruche (2005) examined training effects among officers on a task where images of White and Black men appeared with a gun or nongun object superimposed on the face. They found that officers showed racial bias in their errors during the first phase of the study (i.e., officers were more likely to mistakenly shoot Black targets who appeared with nongun objects, and to not shoot White targets who appeared with a gun in the first 80 trials of the task), but that bias fell to non-significant levels in the second phase (i.e., the last 80 trials of the task). These studies suggest that officers, like under- graduates, show racial biases in the processing of crime-related stimuli.

But there is reason to believe that police will differ from citizens in shoot/don't-shoot decisions. Most notably, officers receive extensive experience with firearms during their academy training (before they are sworn in) and throughout their careers. For ex- ample, the Denver Police Department requires that new recruits spend 72 hr in practical weapons training, and officers must recertify on a quarterly basis. At the firing range, officers and recruits make shoot/don't-shoot decisions for target silhouettes that appear suddenly, either armed or unarmed; in Firearms Train- ing System simulators (Firearms Training Systems, Inc., Atlanta, GA), they respond to an interactive

video simulation of a poten- tially hostile suspect; and in simulated searches, they confront live actors armed with weapons that fire painful but nonlethal ammunition (e.g., paintballs, Simunition, or Air Soft pellets).

An extensive body of research shows that training improves performance on tasks in which a peripheral cue interferes with a participant's response to a central or task-relevant cue. Through training, participants learn to ignore the irrelevant information and respond primarily on the basis of the central feature of the stimulus (e.g., MacLeod, 1998; MacLeod & Dunbar, 1988; Plant & Peruche, 2005). For example, in a Stroop (1935) task, participants classify the color in which a word is printed (e.g., red). Color is thus the central cue. This task becomes more difficult if the word (a peripheral cue) refers to a different color (e.g., the word "blue" printed in red). Initially, participants have difficulty with this task, responding slowly and inaccurately when the central and peripheral cues conflict. But with training, judgment improves. Responses occur more quickly and require less effort and less cognitive control. As a result, experts demonstrate reduced interference in both latencies and errors. Neuroimaging studies have even documented the shifting patterns of brain activity that correspond to the development of automatic task performance (Bush et al., 1998; Jansma, Ramsey, Slagter, & Kahn, 2001; for a review, see Kelly & Garavan, 2004). During initial performance on interference tasks, participants recruit brain regions related to conflict detection and response control (e.g., the anterior cingulate and medial prefrontal cortexes). With extensive practice, however, activation in these regions decreases, presumably because an automatic task requires less executive supervision.

But automatization may not characterize all learning on interference tasks. In some cases, training actually promotes *controlled processing*. For example, when participants are continuously challenged by variable task requirements or increasing demands, prac- tice can lead to more extensive recruitment of prefrontal brain regions (Olesen, Westerberg, & Klingberg, 2004; Weissman, Woldorff, Hazlett, & Mangun, 2002). Of particular relevance to shoot/don't-shoot decisions, this control involves the medial and middle frontal gyri areas related to the detection and resolution of conflicting information and to the maintenance of goal-relevant representations. In some cases, then, training leads participants to work harder, in cognitive terms, as they learn to marshal the attention and control necessary for optimal performance.

When will training promote automaticity in a judgment task, and when will it promote control? A probable moderator is task com- plexity (Birnboim, 2003; Green & Bavelier, 2003). On tasks with simple stimuli (e.g., the words presented in a Stroop task), practice allows participants to streamline the judgment process, performing it easily and automatically. Only when the task is difficult (e.g., involving visually complex stimuli or ever-changing task requirements) does practice seem to promote control. As Birnboim (2003) wrote, "automatic processing relies on a reduction of stimulus information to its perceptual and motor features" (p. 29). When complexity renders this kind of reduction impossible, controlled processing may be required to "extract more meaningful information" (p. 29). Consistent with this argument, Green and Bavelier (2003) have shown that practice on a visually complex video game (i.e., *Medal of Honor*; Electronic Arts, Redwood City, CA) im- proves performance on attention-demanding tasks, but practice on a visually simple video game (i.e., *Tetris*; Electronorgtechnica, Moscow, Russia) does not.

Task complexity has tremendous relevance for the officer en- gaged in a potentially hostile encounter. Faced with a range of irrelevant and confusing factors (e.g., darkness, noise, movement, bystanders), the officer must determine

whether or not a small and relatively inconspicuous weapon is present. On a reduced scale, our paradigm attempts to simulate this visual and cognitive chal- lenge. The task employs a variety of complex and realistic back- grounds (e.g., parking lots, train stations). By varying backgrounds and suspect poses (e.g., standing, crouching), as well as the timing of stimulus onset, we prevent participants from knowing when or where an object will appear. When the object does appear, it accounts for roughly 0.2% of the visual field. To respond correctly, participants must engage in a careful, controlled search for a small cue amid a complex stimulus array. In contrast to the visually simple tasks typically employed in research on training, training on this relatively complex task may not foster automaticity in the shoot/don't-shoot decision. In our task—as in a police encounter— even highly trained experts may need to fully engage executive control processes to identify the object and execute the appropriate response (Weissman et al., 2002).

If experts are better able than novices to engage control processes, it stands to reason that police officers, whose training and on-the-job experiences routinely force them to identify weapons in complex environments, should make fewer errors in our shoot/ don't-shoot task and should show reduced racial bias in those errors (i.e., their expertise should minimize stereotypic errors). This training-based reduction in bias, which we might call a "police as experts" pattern, serves as our primary hypothesis (H1).

But control may not entirely eliminate race-based processing. The necessity of a slow, effortful, and controlled search for the object leaves open the possibility that even experts will inadvertently process racial information. Research suggests that racial cues are often perceived quickly, whether or not the participant intends to do so (Cunningham et al., 2004; Ito & Urland, 2003), and accord- ingly, a slow visual search for the object should glean racial information. By activating stereotypes, these cues may interfere with the speed of the decision-making process. By virtue of en- hanced control, experts may rarely, if ever, shoot an unarmed Black individual; but because even experts must search (slowly) for the object, they are likely to perceive the target's skin color and facial features, triggering relevant stereotypes. Again, experts may effectively override this interference and make an unbiased re- sponse ("don't shoot"), but because the weapon judgment is not automatic, the controlled decision to stereotype incongruent targets may still take more time. This leads us to predict a dissociation, such that a target's race may affect the *speed* of the expert's decisions, even though it has no impact on their *accuracy*.

To examine this possibility, the present research extends past work in two critical ways. First, we examine bias in both response times and errors. In past research (e.g., Correll et al., 2002; Payne,

2001), results from these two measures mirrored one another and were characterized as more or less interchangeable. But the measures may capture partially distinct aspects of the decision process. *Latency*—the time necessary for a participant to respond correctly to a given target—should depend on the difficulty of processing the stimulus. The fact that stereotype-incongruent targets (unarmed Black targets and armed White targets) generally produce longer latencies suggests that participants have greater difficulty arriving at a correct decision for these stimuli. Processing difficulty may also influence *error rates*, but errors also reflect the participant's ultimate decision about which response to make. Particularly from an officer's perspective, the distinction between a slow-but- accurate response (e.g., hesitating and then deciding not to fire) and an incorrect response (e.g., shooting an unarmed suspect) assumes great importance.

This research also advances our understanding by comparing police officers with samples of laypeople drawn from the communities those officers serve. Community samples provide a crucial baseline against which we can compare the police. As we have already discussed, one of the most damaging consequences of officer-involved shootings in which a minority suspect is killed is the implication that police inappropriately use race when making the decision to fire. However, given the prevalence of bias in the decision to shoot (which has been documented in all types of people, from White college students to Black community members), how can we interpret the magnitude of any bias we might observe among the police? Inhabitants of the community served by a given police department provide a critical comparison. As members of a common culture, these individuals experience many of the same influences, whether very global (e.g., national broadcast media) or very local (e.g., racial and ethnic composition of the neighborhood, local levels of poverty and crime) in nature. To fully characterize the presence of any bias among police, it is therefore critical to examine bias in the communities they serve. No such comparison is available in existing research. Although we have elaborated the hypothesis that police will demonstrate less bias than the community, particularly with respect to their error rates (H1), we note that the comparison between police and community presents two other possibilities.

Of course, it is also possible that officers will show more pronounced bias than community members (H2) or that police and civilians will show relatively similar patterns of bias (H0). In line with the former hypothesis, Teahan (1975a, 1975b) presented evidence that police departments acculturate White officers into more prejudicial views during their first years on the job. Similarly, the Christopher Commission's investigation into the Los Angeles Police Department's 1991 beating of Rodney King re- ported that officers who adopted anti-Black attitudes were more likely to be promoted within the department (Christopher, 1998). This ostensible culture of bias may find expression in police officers' relatively high social dominance orientation (Sidanius & Pratto, 1999), reflecting support for the group-based (and race- based) hierarchical structure of society (see Sorenson et al., 1993, for similar conclusions on the basis of police use of force). Given these findings, we might reasonably expect a "police as profilers" pattern, with officers relying heavily on racial information when making their decisions to shoot.

Finally, police officers and community members may show equivalent levels of racial bias in decisions to shoot. Inasmuch as police and community members are subject to the same general cognitive heuristics (Hamilton & Trolier, 1986) and sociocultural influences (Devine & Elliot, 1995), the two groups may demon- strate similar patterns of behavior in the video game simulation. This prediction would yield a pattern we might call "police as citizens."

Our primary hypothesis derives from the possibility that practice enables police officers to more effectively exert control over their behavioral choices (relative to untrained civilians). That is, H1 suggests that officers may more extensively engage in controlled processing operations during the course of the shoot/don't-shoot task. Because of this difference in processing, we predict a divergence between measures of bias that are based on errors and

measures that are based on reaction times. By contrast, H2 and H0 offer no clear reason to predict differences between officers and civilians in terms of cognitive processing, and (accordingly) they offer no reason to expect a divergence between error-rate and reaction-time measures.

Study 1

Method

Overview. Three samples of participants completed a 100-trial video game simulation in which armed and unarmed White and Black men appeared in a variety of background images. Partici- pants were instructed that any armed target posed an imminent threat and should be shot as quickly as possible. Unarmed targets posed no threat and should be flagged accordingly by pushing the don't-shoot button, again as quickly as possible. The speed and accuracy with which these decisions were made served as our primary dependent variables, and performance was compared across three samples: officers from the Denver Police Department, civilians drawn from the communities those officers served, and a group of officers from across the country attending a 2-day police training seminar.

Participants. For the purposes of law enforcement, the city of Denver is divided into six districts. With the help of the command staff, officers were recruited for this study from four of these districts during roll call. Participation was completely voluntary, and officers were assured that there would be no way to identify individual performance on the task and that the command staff would not be informed of who did and did not participate. Officers were required to complete the simulation during off-duty hours. Our goal was to recruit primarily patrol officers, and, in this effort, we were successful: 84% of the sample listed patrol as their job category. Investigative officers accounted for 9% of the sample, administrative officers for 2% of the sample, with the remaining 5% of the officers from a mixture of other job categories. A total of 124 officers participated in the study (9 female, 114 male, 1 missing gender; 85 White, 16 Black, 19 Latina/o, 3 other, 1 missing ethnicity; mean age 37.9 years). Each received $50.

To obtain a companion civilian sample, we enlisted the Department of Motor Vehicles (DMV) office in each of the four districts, recruiting community members to perform the simulation on or around the same days as the police officers. Several of the DMVs were in areas with a high concentration of Spanish-speaking citizens. For these areas, a bilingual research assistant recruited and instructed the participants.1 A total of 135 civilians participated in the study. Eight participants were dropped from the analyses: 2 because of a computer malfunction and 6 because they had fewer than five correct trials for at least one of the four cells of the simulation design. Thus, the reported results for this sample are based on 127 civilians (51 female, 73 male, 3 missing gender; 39

White, 16 Black, 63 Latina/o, 9 other; mean age 35.5 years). Each received $20.

To collect the national police sample, we attended a training seminar for officers. This was one of several seminars that officers voluntarily attend to obtain additional training in some particular area of law enforcement. The seminars are specifically geared for patrol officers, rather than administrative personnel. The sample of officers obtained for this study came from 14 different states, and only 7% worked in some administrative capacity. The remaining job categories included patrol officers (58%), investigative officers (14%), traffic officers (7%), SWAT team members (3%), and a sprinkling of other categories (11%). Although this clearly is not a random national sample of officers, it offers a greater diversity of background than the Denver sample. An announcement regarding the study was made during the seminar, and officers were invited to participate on one of two evenings after the

conclusion of the seminar for that day. A total of 113 officers participated in the study (12 female, 100 male, 1 missing gender; 72 White, 10 Black,

15 Latina/o, 13 other, 3 missing ethnicity; mean age 38.4 years). Each received $50.

Video game simulation. Fifty men (25 Black, 25 White) were photographed in five poses holding one of a variety of objects, including four guns (a large black 9 mm, a small black revolver, a large silver revolver, and a small silver automatic) and four non- guns (a large black wallet, a small black cell phone, a large silver Coke can, and a small silver cell phone). For each individual, we selected two images, one with a gun and one with an innocuous object, resulting in 100 distinct images (25 of each type: armed White, armed Black, unarmed White, and unarmed Black), which served as the principal stimuli, or targets, in the game. Forty of these images were drawn from previous work (see Correll et al.,

2002, for example stimuli). The others were added in an effort to diversify the sample of targets. Using Photoshop, we embedded targets in 20 otherwise unpopulated background scenes, including images of the countryside, city parks, facades of apartment build- ings, and so on. Each target was randomly assigned to a particular background, with the restriction that each type of target should be represented with equal frequency in each background.

Design. The video game, developed in PsyScope (Cohen, MacWhinney, Flatt, & Provost, 1993), followed a 2 2 within- subjects design, with Target Race (Black vs. White) and Object Type (gun vs. nongun) as repeated factors (see Correll et al., 2002). On any given trial of the game, a random number (0 –3) of preliminary backgrounds appeared in slideshow fashion. These scenes were drawn from the set of 20 original unpopulated back- ground images. Each remained on the screen for a random period of time (500 ms– 800 ms). Subsequently, a final background ap- peared (e.g., an apartment building), again for a random duration. This background was replaced by an image of a target person embedded in that background (e.g., an armed White man standing in front of the building). From the player's perspective, the target simply seemed to appear in the scene. The player was instructed to respond as quickly as possible whenever a target appeared, press- ing a button labeled *shoot* if the target was armed and pressing a button labeled *don't shoot* if the target was unarmed. The game awarded points on the basis of performance. Correctly pressing *don't shoot* in response to an unarmed target earned 5 points, but shooting earned a penalty of 20 points; pressing *shoot* in response to an armed target earned 10 points, but pressing *don't shoot* earned a penalty of 40 points (the implication being that the hostile target shot the player). Failure to respond to a target within 850 ms of target onset resulted in a penalty of 10 points. Feedback, both visual and auditory, and point totals were presented at the conclu- sion of every trial. The game consisted of a 16-trial practice block and a 100-trial test block.

Procedure. Officers in the Denver sample were recruited roughly 1 week prior to the study. Volunteers selected a time and date to participate. At the scheduled time, each officer was seated at a small cubicle in a test room equipped with a laptop computer, button box, and headphones. They completed the simulation and questionnaire packet. The measures included in the questionnaire packet are summarized in Table 1. Community members were approached at one of the various DMV locations, and those who agreed to participate completed the simulation using the same equipment as the officers. Community members completed the same questionnaire as the officers

(excluding items specific to policing). For the national sample of officers, an announcement was made the first day of the training seminar inviting officers to participate in the study. Officers completed the simulation and questionnaire packet on one of two evenings in a room in the hotel where the conference was held. The equipment was identical to that used for the Denver officers and civilians. Upon completion, all participants were debriefed and thanked.

Results

Signal-detection analyses. We began by examining the accu- racy of responses as a function of trial type and sample. Overall, participants responded incorrectly on 4.7% of the trials and timed out on another 4.8% of the trials. Correct and incorrect responses (i.e., excluding timeouts) were used to conduct a signal-detection analysis. Applied to the shooter simulation, signal detection theory (SDT) assumes that armed and unarmed targets vary along some dimension relevant to the decision at hand (e.g., the threat they pose). SDT yields estimates of participants' ability to discriminate between the two types of target (i.e., sensitivity to the presence of a weapon, a statistic called *d*) and the point on that decision- relevant dimension at which they decide a stimulus is threatening enough to warrant shooting (i.e., the psychological criterion for the decision to shoot, a statistic called *c*). With SDT it is possible to test whether the race of a target affects discriminability and, separately, whether target race affects the decision to shoot. Cor- rell et al. (2002, Study 2) observed no race differences in *d* but found that *c* was lower for Black targets than for White targets. That is, participants were equally able to differentiate between armed and unarmed targets regardless of target race, but they used a more lenient threshold—indicating a greater willingness to shoot—when the target was Black rather than White.

We calculated *d* , or the ability to accurately discriminate armed from unarmed targets, once for the White targets and once for the Black targets. We also calculated *c*, or the criterion, assessing the threshold for making a *shoot* response separately for Black and White targets.2 The SDT estimates were submitted to separate 3 (Sample: national officers vs. Denver officers vs. Denver commu- nity) 2 (Target Race: Black vs. White) mixed-model analyses of variance (ANOVAs).

Placement of the criterion for the decision to shoot (*c*) at zero indicates no greater tendency to make a *shoot* response than a *don't-shoot* response. Deviations from zero in a positive direction indicate a bias favoring the *don't-shoot* response, and deviations in a negative direction indicate a bias to shoot. On average (i.e., for both officers and civilians and both Black and White targets), participants demonstrated a bias in favor of the *shoot* response, $F(1, 361)$ 4.68, p .03, but the extent to which this was true depended on sample, $F(2, 361)$ 4.97, p .008. Pairwise comparisons indicated that the community set significantly lower criteria than either officer sample, both Fs(1, 361) 4.12, ps .05. (All pairwise comparisons were tested with the error term from the full sample.) Indeed, although the mean threshold was significantly below zero for the community sample, $F(1, 126)$ 10.05, p .002, it did not differ from zero for either of the two officer samples, both Fs 1, and the two officer samples did not differ from each other, $F(1, 361)$ 1.22, p .27.It is important to note that the main effect of target race in the placement of the decision criterion was significant, $F(1, 361)$ 5.17, p .03, such that *c* was lower when responding to Black2 *c* 0.5 (*z*FA *z*H); *d* *z*H *z*FA, where FA is the proportion of false alarms (relative to correct rejections) and H represents the propor- tion of hits (relative to misses). The *z* operator is the translation of

these proportions to *z*-scores. Both FA and H were assigned a minimum value of 1/2*n* (where *n* the total number of no-gun and gun trials, respectively) and a maximum of 1 (1/2*n*), to eliminate infinite *z*-scores.

Table 1

Demographic and Psychological Variables Included in Questionnaire Packet and Their Correlations With Bias in Latencies in Study 1

Correlation with bias in latencies

Variable

National officers Denver officers Denver community

Violent crime in community served	.20**	.09	.05
% African Americans in community served	.21**	.01	.01
% all ethnic minority groups in community served	.22**	.02	.05
Classroom firearms training	.01	—	—
Firing-range firearms training	.03	—	—

Video firearms training	.02	—	-
Live firearms training	.02	—	-
Total years on the force	.09	.17*	-
Gender (1 female; 1 male)	.13	.13	.21**
Ethnicity (1 non-White; 1 White)	.09	.14	.08
Education	.02	.10	.12
Self-rated liberalism (1)–conservatism (13)	.04	.21**	.06
Thermometer rating (warmth toward White people–warmth	.00	.0	.03

		2	

Population of city in which officer serves	.31***	—	—
Population of county in which officer serves	.31***	—	—toward

Black people)

Thermometer rating (warmth toward White people–warmth toward members of all ethnic minority groups)

Personal stereotype of Black people as dangerous, violent, and aggressive

Contact with Black people	.05	.02	.11
Internal motivation to control prejudice	.04	.05	.11
External motivation to control prejudice	.16	.12	.20**
Discrimination scale	.13	.04	.08

Cultural stereotype of Black people as dangerous, violent, and aggressive

.00	.00	.04
.02	.01	.20**

.02 .05 .09

Note. City and county population have no variance for the Denver police and community samples, and hence no correlation can be computed. Firearms training data were not collected for the Denver officers, nor for the community. *N*s vary slightly across entries because of missing observations. In the national sample, *n*s vary from 97–113; in the Denver police sample, they vary from 118 –123; and in the Denver community sample, they vary from 120 –127. Dashes indicate that data were not collected. *p .10. **p .05. ***p .01. rather than White targets (see the top half of Figure 1 and the means in Table 2). This discrepancy constitutes bias. Although the omnibus test of the interaction between target race and sample was not significant, $F(2, 361)$ 1.87, p .16, pairwise comparisons indicated a larger target race difference for the Denver community compared with the national officer sample, $F(1, 361)$ 3.67, p .056, other *F*s 1.49, *p*s .22. Racial bias in *c* was significant among the Denver community sample, $F(1, 126)$ 5.71, p .02, marginally significant among the Denver officer sample, $F(1,123)$ 3.28, p .07, and nonsignificant among the national officer sample, F 1.It is informative to examine sample differences in *c* separately for the White and Black targets. As is clear from Figure 2, placement of the criterion for the White targets changed very little across the three samples, and in fact neither the omnibus test of sample differences, F 1, nor any of the pairwise comparisons, all *F*s(1, 361) 1.54, *p*s .22, revealed a significant difference on this measure. Moreover, the criterion for White targets was not significantly different from zero for any of the three samples, all *F*s 1.49, *p*s .23. That is, neither officers nor community members showed a tendency to favor one response over the other when the target was White. In contrast, the threshold for Black targets changed substantially and significantly across the three samples, $F(2, 361)$ 7.03, p .001. The criterion was set lowest by the Denver community sample, whose mean *c* was both significantly lower than zero, $F(1, 126)$ 15.05, p .001, and significantly lower than either of the two officer samples, both *F*s(1, 361) 4.42, *p*s .04. The Denver officers' mean *c* value was also significantly below zero, $F(1, 123)$ 4.04, p .05, and approached a significant difference when compared to the national officer sample, $F(1, 361)$ 2.79, p .10. The national officers' criteria for Black targets did not differ from zero, F 1.33 In each of the three samples, we tested for moderation of bias in latencies, *d* , and *c* by participant ethnicity and gender. Because of the relatively small number of non-White participants, particularly in the officer samples, these analyses compared all non-White participants with White participants. Bias was not moderated by participant ethnicity for any of the samples (*p*s ranged from .76 to .11). The only effect of gender was moderation of bias in response times for the community sample. Bias was significantly greater for male than for female community members, $F(1, 122)$ 5.66, p .02, but it is important to note that bias was significant within each sample, $F(1, 50)$ 11.16, p .002 for female participants, and $F(1, 72)$ 61.00, p .001 for male participants.

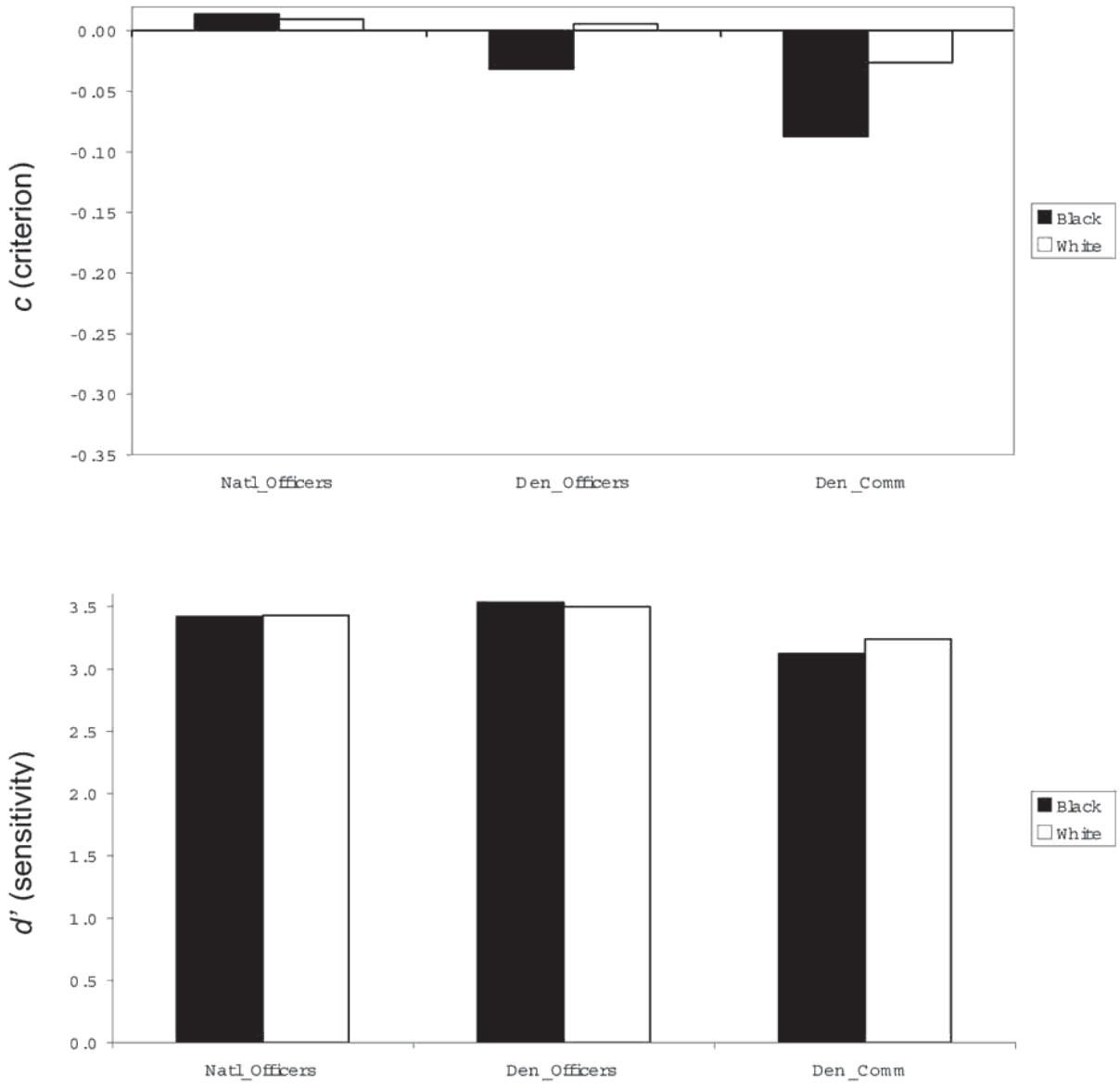

Figure 1. Decision criterion placement (*c*) and sensitivity (*d*) for Black and White targets as a function of sample (Study 1).

With respect to the analysis of *d* , these data largely replicated previous work, such that target race did not affect participants' ability to discriminate armed from unarmed targets. In other words, the main effect of target race

was not significant in the *d* analysis, *F*(1, 361) 1.12, *p* .29 (see the bottom panel of Figure 1 and Table 2 for all means and standard deviations). However, the main effect of sample was significant, *F*(2, 361)

11.69, *p* .001. Pairwise comparisons indicated that both officer samples showed higher discriminability than the community, indicating a greater ability to differentiate armed from unarmed targets, both *F*s(1, 361) 11.01, *p*s .001. The two officer samples did not differ from one another, *F*(1, 361) 1.55, *p*

.21. The interaction between sample and race of target was marginally significant, *F*(2, 361) 2.49, *p* .085. Pairwise comparisons indicated a significant difference only between the Denver officers and the Denver community, *F*(1, 361) 4.63, *p* .04. The officers showed slightly (but nonsignificant, *F* 1) greater sensitivity to weapon detection for Black rather than White targets. Among the community, *d* was significantly higher for White targets than for Black targets, *F*(1, 126) 4.84, *p* .03.

Reaction-time analyses. We next examined reaction times. For each participant, latencies from correct responses were log trans- formed and averaged separately for each type of target (see Table 2 for means and standard deviations). Averages were analyzed as a function of sample (national officers vs. Denver officers vs. Denver community), target race (Black vs. White), and object type (gun vs. nongun) using a 3 2 2 mixed-model ANOVA with repeated measures on the latter two factors. Consistent with past research, we obtained a main effect of object type, *F*(1, 361) 2,171.27, *p* .001, such that participants shot armed targets more

Table 2

Response Time, Sensitivity, and Decision Criterion Means and Standard Deviations for Studies 1 and 2

Sample													
National officers				Denver officers				Denver community					
Black		White		Black		White		Black		White			
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Study 1													
ms		5		5		5		5		5			
		6		6		7		6		7			
log		0		0		2		8		8			
tran		b		a		b		a		b			
sfor													
me		0		0		0		0		0			
d		.		.		.		.		.			
mea		0		0		0		0		0			
n		7		7		8		7		9			

		6.33	6.33	6.35	6.34	6.36	
No gun							
ms		635a	653a	637b	663a	649b	
log transformed mean		0.06 6.45	0.06 6.48	0.05 6.46	0.06 6.50	0.07 6.48	
Sensitivity (*d*)		0.59 3.43	0.50 3.54	0.52 3.50	0.59 3.12	0.78a 3.24	
Threshold (*c*)		0.19.	0.21.	0.18.	0.21.	0.25a.	

		0 0 9	0 3 2 *	0 0 6	0 8 7 *	. 0 2 6	

Study 2

Sensitivity (*d*) 2.39 0.80 2.17 0.73 1.39 0.84 1.47 1.03

Threshold (*c*) .072 0.30 .122* 0.31 .302* 0.33a .185* 0.39b

Note. Different row subscripts within each sample indicate a significant Black–White difference at *p* .05. For the decision criterion, means significantly different from zero at *p* .05 are indicated with an asterisk. quickly than they decided to not shoot unarmed targets. The target race main effect was also significant, *F*(1, 361) 4.90, *p* .03, such that, overall, responses were very slightly faster to White (*M* 605 ms) than to Black targets (*M* 608 ms). Moreover, the sample main effect was significant, *F*(2, 361) 5.36, *p* .006. Contrasts among the samples indicated that both officer groups responded significantly faster overall than the civilian group, *F*s(1,361) 3.68, *p*s .056, and the two officer samples did not differ from each other, *F* 1.86, *p* .18 (*M*national officers 597 ms, *M*Denver officers 604 ms, *M*Denver community 613 ms). It is important to note that we obtained the Target Race Object Type interaction, *F*(1, 361) 239.37, *p* .001. This effect reflects racial bias in decisions to shoot (see Figure 2). Notably, the interaction did not depend on sample, *F*(2, 361) 1.74, *p* .18. Bias was significant for all three samples: for the national sample of officers, *F*(1, 112) 68.89, *p* .001, for the Denver officers, *F*(1, 123) 117.29, *p* .001, and for the Denver community sample, *F*(1, 126) 65.29, *p* .001. Pairwise comparisons among the samples revealed no differences in the magnitude of bias between the community sample and either of the officers samples, *F*s 1.17, *p*s .28, and marginally greater bias among the Denver than national officer sample, *F*(1, 361) 3.44, *p* .065.

We further examined the simple effects of target race for each type of object. Again, consistent with previous findings, partici- pants shot armed targets more quickly when they were Black, rather than White, *F*(1, 361) 74.04, *p* .001, and they indicated *don't shoot* in response to unarmed targets more quickly when they

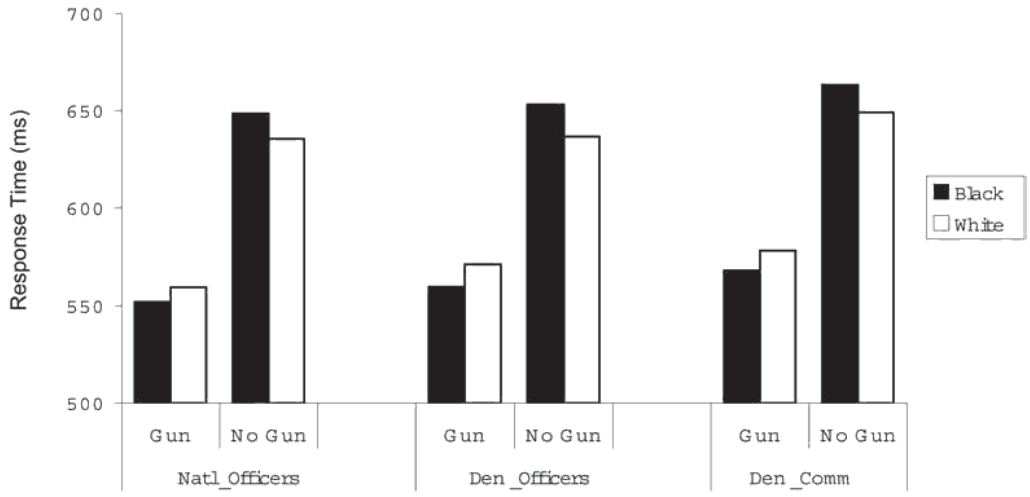

Figure 2. Response times to Black and White armed and unarmed targets as a function of sample (Study 1).were White, rather than Black, *F*(1, 361) 177.27, *p* .001. These simple effects did not depend on sample, both *F*s 1, *p*s .39, and both of the simple target race effects within object type were significant for each of the three samples, all *F*s 15.00, all *p*s .001. Pairwise comparisons for the simple effects among the three samples revealed no significant differences, all *F*s 1.85, all *p*s .17.

Summarizing the results thus far, we see that officers and community members differ in the criteria they employ for Black targets. Community members set a lower, more lenient criterion for shooting Black targets than either of the two officer samples. At the same time, officers and community members show similar levels of bias in terms of the speed with which they can correctly respond to targets. We have suggested that, by virtue of their training or expertise, officers may exert control over their behavior, possibly overriding the influence of racial stereotypes. Consistent with the possibility of enhanced control, officers also showed greater sensitivity than did community members to the presence of a weapon, regardless of target race. However, we do not suggest that officers are completely immune to stereotypes. To the extent that a Black target evokes the concept of danger, behavioral control should be difficult. Reactions to targets that violate stereotypic expectancies (i.e., unarmed Black targets and armed White targets) should be slower than reactions to stereotype-congruent targets. If officers' response latencies reflect the magnitude of racial stereotypes, we might expect greater la- tency bias for officers exposed to stronger environmental associations between Black people and crime. Community characteristics, such as crime rates and the proportion of minority residents, might predict the magnitude of bias among officers in the latencies. It is important to note, however, that if officers can exert control over their behavior, stereotypic associations should not produce greater bias in the SDT criteria they employ. We used the questionnaire data to explore this issue. Because there is very little variance among the Denver officers on these community characteristics (that is, the population of the city and county served by all officers in Denver is the same, and racial makeup across communities varies minimally), the national officer sample affords a more effective test of these possibilities.

Correlational analyses. We computed indices of racial bias on the basis of both response times ([RT unarmed Black target RT unarmed White target] [RT armed White target RT armed Black target]), and criteria (*c*White

*c*Black). Higher numbers indicate greater racial bias. We also calculated the effect of target race on discriminability (*d* White *d* Black), with higher numbers representing greater sensitivity for White targets than for Black targets.

We then conducted exploratory analyses of the relationships between each of these indices and the questionnaire measures obtained. We report correlations for all three samples (see Table1), but again, because the national sample offers greater variability in terms of community demographics, we focus our discussion on that sample. Bias in the response times was positively related to the size (i.e., population) of the city, *r*(97) .31, *p* .003, and county, *r*(103) .31, *p* .002, in which the officer served (population variables were log transformed to normalize their distributions). This effect suggests that officers in larger communities showed greater bias in the latency measure. In addition, that increases in violent crime were associated with greater racial bias. Officers rated violent crime levels with respect to FBI sta- tistics for the average national violent crime rate (500 offenses per100,000 persons) on a 5-point scale with the endpoints anchored at *much lower than average* and *much higher than average*. Officers were also asked to estimate the ethnic makeup of the communities in which they served. The estimated percentage of both African Americans, *r*(108) .21, *p* .03, and ethnic minorities more generally, *r*(108) .22, *p* .03, living in the community posi- tively predicted racial bias in the latencies. None of the remaining correlations for the national sample of officers was significant.

Officers serving in districts characterized by a large population, a high rate of violent crime, and a greater concentration of Black people and other minorities showed increased bias in their reaction times. We tentatively suggest that these environments may rein- force cultural stereotypes, linking Black people to the concept of violence. The fact that officers from these urban, violent areas show more pronounced bias in their latencies suggests that stereo- typic associations may indeed influence police on some level. But if training enables officers to effectively control their behavior, such stereotypes should not influence their final shoot/don't-shoot decisions. It is interesting that these community demographics, which systematically predicted latency bias, were completely un- related to bias in the SDT estimates of decision criteria (*r*s ranged from .14 to .13, smallest *p* value .19). In other words, environmental variables that increased bias in officers' latencies had no effect on the degree of bias in their ultimate decisions.

We also asked participants (community members and officers alike) to complete several measures of stereotyping and prejudice. In the past, we have obtained relationships between bias in re- sponse times and an individual's awareness of cultural stereotypes about Black people (Correll et al., 2002, Study 3; Correll, et al.,2007). In the present study, measures of personally endorsed stereotypes did correlate with latency bias for the community members, *r*(123) .21, *p* .05, but cultural stereotypes did not. Moreover, in the officers' data, neither of these relationships emerged. It is possible that this difference reflects something special about the relationship between stereotypes and bias among officers, but we suspect that the reason has more to do with the officers' concerns about going "on the record" with regard to their attitudes about race. Despite our assurances of anonymity, several officers were unwilling to complete the measures, and others told us, rather bluntly, that they would not respond honestly to these sensitive questions. We therefore view these items with suspicion, at least for the officer samples.

The effects of target race on the SDT estimates were not related to any of the demographic variables. As null effects, these results are difficult to interpret. They may reflect a true lack of correspondence between demographics and performance, but they may also stem from the relatively low error rates in this task (which likely reduce the reliability of the SDT estimates).4 Although Black–White differences were unrelated to the questionnaire measures, we did find that the *average* values of both *d* and *c* (independent of target race) were correlated with training in simulated building searches. In this type of training, officers interact with actors, some of whom attack the trainee using weapons officers' reports of the level of violent crime in their districts predicted bias in response latencies, *r*(111) .20, *p* .03, such We thank an anonymous reviewer for this insight. Equipped with nonlethal ammunition. Police with more extensive training in these encounters were better able to discriminate be- tween armed and unarmed targets, regardless of the race of the target, *r*(113) .20, *p* .04, and they tended to set a higher overall criterion in the task, *r*(113) .17, *p* .07, reflecting greater reluctance to shoot. It is interesting that no other type of training (e.g., classroom training, firing range, interactive video training) predicted performance in the game. Future researchers should attempt to replicate these correlations, but the results tentatively suggest that live, interactive training provides officers with a chance to hone their skills in a manner that improves performance.

Discussion

Analyses of the behavioral data showed that the officers' overall performance on the video game simulation exceeded that of the civilians in several ways. First, their response times were faster. On average, officers were simply quicker to make correct shoot/ don't-shoot decisions than were civilians. Second, they were better able to differentiate armed targets from unarmed targets. On average (i.e., across White and Black targets), *d* was greater for the officers than for the community sample. Third, whereas the criterion *c* for the community was significantly below zero (reflecting a tendency to favor the "shoot" response), officers adopted a more balanced criterion. In fact, not only was the officers' criterion significantly higher than the community's, but the officers' thresh- old also did not differ significantly from zero. This placement suggests equal use of the "shoot" and "don't shoot" responses.

In terms of bias, the SDT results suggest that officers may show less bias than civilians in their final decisions. Among the com- munity sample, these data revealed a clear tendency to set a lower (i.e., more lenient or "trigger-happy") criterion for Black, rather than White, targets. But this bias was weaker, or even nonexistent, for the officers. The reduction in bias seemed to reflect the fact that, compared with the community members, officers set a higher, more stringent threshold for the decision to shoot Black targets. Placement of the criterion for White targets varied minimally across the three samples.

The response-time data show clear evidence of racial bias for all samples in this study, the 237 police officers and the community members alike. Like college students in previous studies, these individuals seemed to have greater difficulty (indexed by longer latencies) responding to stereotype-incongruent targets (unarmed Black targets and armed White targets), rather than to stereotype- congruent targets. The magnitude of this bias did not differ across the three samples. It is interesting to note that this equivalence emerged in spite of the fact that the civilian sample contained many more ethnic minority members than did the predominantly White police samples. Although any

evidence of racial bias among police may be cause for concern, there is certainly nothing in the present data to suggest that officers show greater bias than the people who live in the communities they serve.

We used correlational analyses to examine officers in the national sample, and, of all the variables examined, three predicted bias in reaction times (no variables related to bias in the decision criteria). Each of the relevant variables reflected some aspect of the community the officer served. Bias increased as a function of the community's size, crime rate, and the proportion of Black residents and other ethnic minority residents. Police in larger, more dangerous and more racially diverse environments are presumably much more likely to encounter Black criminals, reinforcing the stereotypic association between race and crime. By contrast, officers with little exposure to Black people may be less likely to rehearse this association. As a consequence, these officers may experience less stereotypic interference during the video game task.

The results from the signal-detection analysis are particularly provocative. Although police may have difficulty processing stereotype-inconsistent targets (as evidenced by bias in their response times), the SDT results suggest that police do not show bias in their ultimate decisions. That is, the expertise that police bring to a shoot/don't-shoot situation may not eliminate the difficulty of interpreting a stereotype-inconsistent target, but it does seem to minimize the otherwise robust impact of target race on the decision to shoot. Inasmuch as it is the actual decision to shoot (and not the delay in making that decision) that carries life-and-death consequences for the suspect, bias in the criterion may be considered the variable of greatest interest to both the police and the community. However, because of the profound implications of these conclusions, we felt it necessary to replicate these effects. The video game used in Study 1 imposed an 850-ms timeout window. Al- though this restriction certainly exerts some pressure on participants, it offers them sufficient time to respond correctly on the vast majority of trials. In Study 1, errors and timeouts, together, ac- counted for only 9.5% of trials. When the total number of errors is so low, idiosyncratic responses to particular targets may dramatically affect the SDT estimates. In Study 2, therefore, we reduced the time window in an effort to increase errors and obtain more stable SDT estimates.

Study 2

Method

Participants. We returned to one police district in Denver and recruited an additional 33 officers, as well as 52 community members from a nearby DMV, each of whom completed a version of the video game simulation with a more restrictive time window. Several participants experienced great difficulty responding within this limit, producing few errors and a very high number of time- outs. Two officers and 7 civilians had an excessive ratio of timeouts to incorrect trials (more than four timeouts for every error) and were excluded from the analyses. The results do not change substantially if they are included. The final sample included 31 officers (3 female, 26 male, 2 missing gender; 16 White,

6 Black, 4 Latina/o, 3 other, 2 missing ethnicity; mean age 35.6 years) and 45 community members (20 female, 23 male, 2 missing gender; 14 White, 18 Black, 10 Latina/o, 3 other; mean age 36.8 years). Officers completed the study while off duty and were paid $50 in compensation. Community members were paid $20.

Video game simulation and procedure. The video game was identical to that in Study 1, with the exception that the timeout window was set to 630 ms. Participants were instructed to respond as quickly and as accurately as possible, and response latencies longer than 630 ms were penalized with a loss of 20 points. Otherwise, the procedures were identical to those in Study 1.

Results

Our goal in reducing the timeout window was to induce a greater number of errors. Our analysis therefore focused on the parameters derived from the signal-detection analysis. Errors were substantially greater in this version of the simulation. Overall, participants made incorrect responses on 16% of the 100 trials and timed out on 17%. We computed sensitivity (*d*) and the decision criterion (*c*) as in Study 1, using only the correct and incorrect trials (i.e., excluding timeouts). The estimates were analyzed in a Sample (officer vs. civilian) Target Race (Black vs. White) 2

2 mixed-model ANOVA, with repeated measures on the latter factor (see Table 2 for means and standard deviations; see also Figure 3).

Signal-detection analyses. With respect to the criteria or estimates of *c*, we observed that the average criterion was significantly below zero, *F*(1, 74) 27.06, *p* .001. In fact, the criteria in Study 2 were lower than those in the first study. Presumably because of the increase in time pressure, participants showed a greater propensity to shoot (compare Figures 1 and 3). More interesting, the location of the criterion depended on sample, *F*(1, 74) 4.95, *p* .03 (i.e., there was a main effect of sample). Although the mean value of *c* was significantly below zero for both the officers, *F*(1, 30) 4.84, *p* .04 (*M* .10), and the community, *F*(1, 44) 29.38, *p* .001, (*M* .24), it was significantly lower for the latter. Unlike in previous work, the main effect of target race in *c* was not

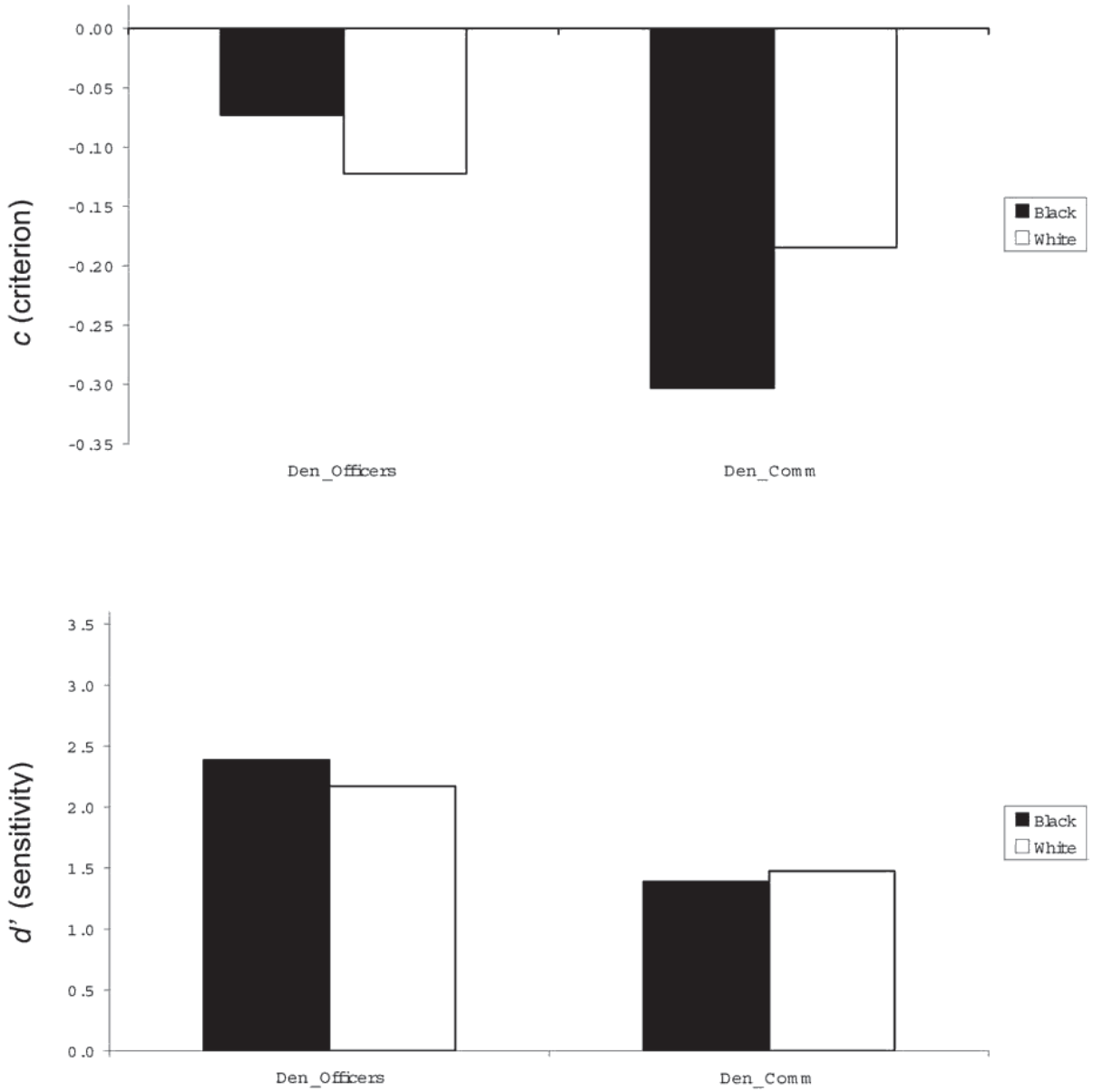

Figure 3. Decision criterion placement (*c*) and sensitivity (*d*) for Black and White targets as a function of sample (Study 2). significant, *F* 1, but the Sample Target Race interaction was, *F*(1, 74) 3.69, *p* .059 (see Figure 3). As in Study 1, the community sample set a lower threshold to shoot Black targets than to shoot White targets, *F*(1, 44) 4.24, *p* .05. Officers, on the other hand, demonstrated no racial bias, *F* 1. Again replicating Study 1, this interaction seems to reflect the fact that the community set a lower threshold for Black targets than did the officers, *F*(1, 74) 9.74, *p* .003. The two samples did not differ in the placement of their criteria for White targets, *F* 1. It is also interesting to note that all four of the mean *c* values in Figure 3 were significantly below zero, all *t*s 2.17, *p*s .04, with the exception of the officers' criterion for Black targets, *t*(30) 1.36, *p* .18.

Turning to sensitivity, we found that *d* was generally lower in Study 2 than in Study 1, particularly for the community members, suggesting that time pressure impaired discriminability (see Payne,

2001). The main effect of sample was significant, *F*(1, 74) 21.59, *p* .001. As in Study 1, police officers more effectively discriminated between armed and unarmed targets (*M* 2.27) than did the community members (*M* 1.43). The police advantage was evident both for Black targets, *F*(1, 74) 26.93, *p* .001, and for White targets, *F*(1, 74) 10.54, *p* .002. There was no overall effect of target race on *d* , *F* 1, suggesting that partici- pants, in general, were equally able to discriminate White and Black targets. However, target race did interact marginally with sample, *F*(1, 74) 2.81, *p* .10. Community members were equally sensitive to both White and Black targets, *F* 1, but officers showed marginally greater sensitivity for Black, rather than White, targets, *F*(1, 31) 3.53, *p* .07 (see Figure 3). The results from Study 1 similarly indicated better sensitivity among officers than civilians, particularly for the Black targets.

Reaction-time analyses. Previous work has consistently found that reducing the time window eliminates the race-bias effect in response times, presumably because it reduces variance in the latencies (see Correll et al., 2002). Consistent with those findings, bias in response times was not significant on average in Study 2, *F* 1, nor did the magnitude of bias depend on sample, *F* 1.

Discussion

Like Study 1, Study 2 revealed critical differences between the performance of police officers and that of civilians. These differences emerged both in the participants' ability to discriminate armed from unarmed targets and in the criterion for the decision to shoot. Civilians consistently set a lower threshold for the decision to shoot (*c*) than did the officers, and this difference was particularly evident for Black targets. In both studies, officers showed greater sensitivity (*d*), and again this tended to be particularly true with Black targets. In sum, then, Study 2 replicated the signal- detection findings of Study 1, and it did so using a paradigm that forced participants to respond very quickly, resulting in a greater number of errors and, so, more stable SDT estimates.

Taken together, the response-time results from Study 1 and the signal-detection results from both Studies 1 and 2 reveal intriguing differences between trained police officers and civilians who live in the communities those officers serve. The latencies suggest that officers and community members both experienced difficulty processing stereotype-incongruent targets. Like community members, police were slower to make correct decisions when faced with an unarmed Black man or an armed White man. It is important to note, however, that the officers differed dramatically from the civilians in terms of the decisions they ultimately made. Community members showed a clear tendency to favor the *shoot* response for Black targets (relative to both White targets and relative to a neutral or balanced criterion of zero). Police, however, showed no bias in their criteria. Moreover, they showed greater discriminability and a less trigger-happy orientation in general (i.e., for both Black and White targets). These results seem to suggest that expertise improves the outcome of the decision process (increasing sensitivity and reducing the unwarranted tendency to shoot, particularly for Black targets), even though it may not eliminate processing difficulties associated with stereotype-inconsistent tar- gets.

We have suggested that this reduction in bias may reflect the impact of training. In Study 3 we attempted to examine this possibility more systematically by providing practice on the video game task to a sample of undergraduates. On the basis of the results of Studies 1 and 2, we expected that repeated play would improve sensitivity (facilitating discrimination between armed and unarmed targets) and reduce racial bias in the placement of the decision criterion (Plant et al., 2005). But we expected that practice would not reduce bias in response times. Like the officers, participants with more practice on the task should demonstrate improvements in their ultimate decisions in spite of persistent difficulty with the processing of stereotype-incongruent targets.

Study 3

Method

Participants. Fifty-eight students (29 female, 22 male, 7 miss- ing gender; 40 White, 1 Black, 3 Asian, 3 Latina/o, 1 Native American, 2 Other, 8 missing ethnicity) participated in Study 3 either in partial completion of a course requirement or for $15 pay. Four additional students were included in the original sample but failed to return for Day 2 and thus are excluded from all analyses. *Video game simulation and procedure.* In Study 3, partici- pants played the video game twice on each of 2 days separated by 48 hr. At each round of play, they completed an 80-trial shoot/ don't-shoot video game, which was essentially the same as the task performed in Study 1. This game again used a timeout window of 850 ms. Thus, the design included four factors: 2 (Day) 2 (Round of Play) 2 (Race) 2 (Object), with repeated measures on all four variables. This design allowed us to examine the effects of repeated play within a day and also to assess whether any improvement in performance would carry over from Day 1 to Day 2.

Results

We computed SDT estimates and average reaction times for correct responses as in Studies 1 and 2.

Signal-detection analyses. We analyzed the SDT estimates as a function of day (1 vs. 2), round of play (1 vs. 2), and target race (Black vs. White) using 2 2 2 repeated-measures ANOVAs for both *c* and *d* . Analyses of *c* revealed that, on average, participants set a lower criterion to shoot for Black targets than to shoot White targets, $F(1, 57)$ 10.76, p .002. It is critical, however, that the effect of race depended on round, $F(1, 57)$ 5.08, p .03, such that bias decreased in the latter round each day. That is, the race difference in the criterion (i.e., bias) was significant at Round 1 on both Day 1, $t(57)$ 2.41, p .02, and on Day 2, $t(57)$ 2.53, p .02. But bias fell to no significant levels at Round 2 on both days: for Day 1, $t(57)$ 0.17, p .86; for Day 2, $t(55)$ 0.06, p .95 (see Figure 4). Moreover, the Round Race interaction did not depend on day, $F(1, 57)$ 0.04, p .84. No other effects in this analysis were statistically significant, all Fs(1, 57) 1.04, ps .31. As predicted then, practice reduced bias in the decision to shoot, and it did so on each of the two days. It is interesting that there appeared to be no carry over in bias reduction from Day 1 to Day 2. We return to this issue in the Discussion section. The analysis of sensitivity, or *d* , revealed only a main effect of round, $F(1, 57)$ 7.09, p .01, reflecting greater discriminability during the second game each day. No other effects in this analysis were statistically significant, all Fs(1, 57) 1.06, ps .30 (see Figure 4). As predicted, practice enhanced sensitivity and seemed to have equivalent effects for both

Black and White targets. More- over, the increase in sensitivity occurred each day, and there was no evidence that the increase carried over from Day 1 to Day 2. *Reaction-time analyses.* Latencies were analyzed as a function of day (1 vs. 2), round of play (1 vs. 2), target race (Black vs. White), and object type (gun vs. nongun) using a 2 2 2 2 repeated-measures ANOVA. As usual, we observed a main effect of object, $F(1, 57)$ 409.19, p .001, such that participants

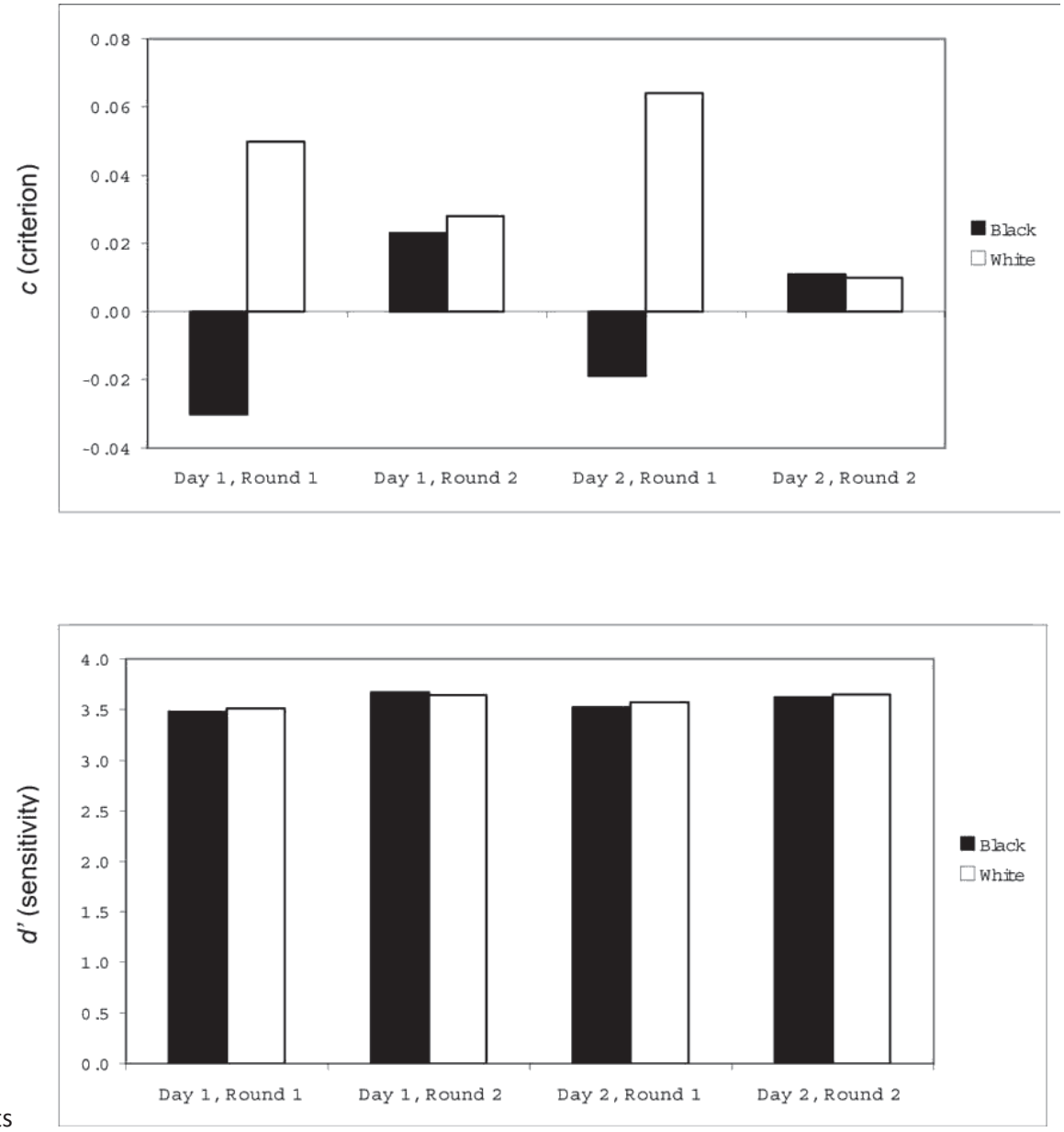

Figure 4. Decision criterion placement (*c*) and sensitivity (*d*) for Black and White targets as a function of day and round of play (Study 3).

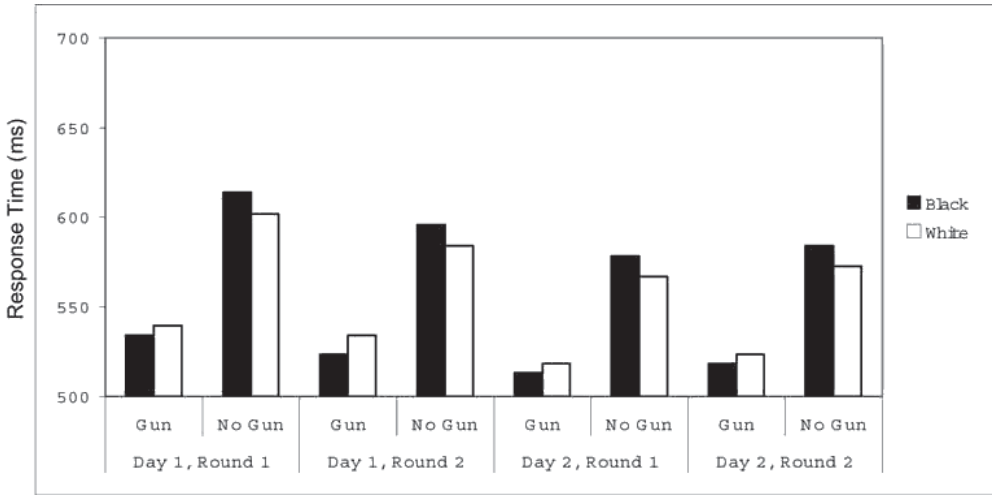

Figure 5. Response times to Black and White armed and unarmed targets as a function of day and round of play (Study 3).responded more quickly on gun trials than on non gun trials. This effect was qualified by an interaction between target race and object type, *F*(1, 57) 95.65, *p* .001, representing significant racial bias. Our primary concern, however, involved the degree to which this pattern changed as participants gained experience with the task. Most interesting, from our perspective, was the question of whether repeated play altered the magnitude of racial bias in the speed with which participants could make shoot/don't-shoot decisions. In stark contrast to the SDT results, bias in reaction times did not change as a function of round: The three-way interaction was not significant, *F*(1, 57) 0.01, *p* .93. Similarly, neither the Day Race Object three-way interaction, *F*(1, 57) 0.01, *p* .92, nor the Round Day Race Object four-way interaction was significant, *F*(1, 57) 0.00, *p* .95. In essence, the magnitude of this bias did not change over the course of the study. Further, latency bias was significant in both Round 1, *F*(1, 57) 33.76, *p* .001, and Round 2, *F*(1, 57) 28.52, *p* .001,

On Day 1, as well as Round 1, *F*(1, 57) 27.04, *p* .001, and Round 2, *F*(1, 57) 17.14, *p* .001, on Day 2 (see Figure 5).5 So although practice decreased racial bias in the decision criteria and improved overall discriminability (as shown by the SDT analyses), practice did not attenuate racial bias in reaction times.

Discussion

Participants in Study 3 showed a number of changes as a function of practice. Most important, practice with the task reduced SDT bias and increased sensitivity to the presence or absence of a weapon. Practice did not, however, affect the magnitude of racial bias in latencies. Across repeated plays of the video game simulation, these developing "experts" continued to struggle with the stereotype-incongruent targets, responding more slowly on incongruent (compared with congruent) trials.

The effects of training observed in this study with a sample of undergraduates largely replicate the differences observed between police officers and civilians in Studies 1 and 2. Undergraduates in the initial round of Study 3, like members of the Denver community, showed bias both in latencies and in their criteria for the decision to shoot. These effects were evident on both Day 1 and Day 2. After receiving practice on the shoot/don't-shoot simulation task, however, bias in the placement of the criterion diminished, but bias in reaction times did not change. As a consequence of this shift, our "expert" participants began to look less like community members and more like police officers.

However, a single round of practice with our video game task (which takes roughly 12 min–15 min) differs dramatically from the training that police receive. As noted above, Denver police recruits spend approximately 72 hr in weapons training during their time at the academy. This extended in-depth practice likely results in much greater consolidation of the skills necessary to exert control over their behavior than did the minimal practice afforded to participants in Study 3. Consistent with this, participants in Study 3 showed pronounced within-day improvements (reductions in bias and increases in discriminability), but they showed no evidence that this training carried over from Day 1 to Day 2. Upon entering the lab on Day 2 (48 hr after the Day 1 session), partic-5 A number of less theoretically interesting effects that did not involve race and object were present in this analysis. Overall, participants were faster on Day 2 than Day 1, $F(1, 57)$ 46.94, p .001, marginally faster at Round 2 than Round 1, $F(1, 57)$ 3.40, p .07, and the Day Round interaction was significant, $F(1, 57)$ 11.76, p .002, such that the Round 1 to Round 2 decrease in mean latencies was really only present on Day 1. (It is interesting that this increase in speed again mirrors sample differences between the police and community participants in Studies 1 and 2.) The object main effect (faster times to gun trials) was qualified by a number of interactions. The difference in gun versus no-gun trials was greater on Day 1 than Day 2, $F(1, 57)$ 15.69, p .001, for the Day Object interaction, greater at Round 1 than Round 2, $F(1, 57)$ 6.64, p .02, for the Round Object interaction, and the shift from Round 1 to Round 2 was really only present on Day 1, $F(1, 57)$ 4.16, p .05, for the Day Round Object interaction. All of these effects reflect accelerations in classification speed (for all responses or for the particularly slow no-gun responses). This acceleration is most pronounced at early stages of the study and weakens over time, presumably because of a floor effect. Participants behaved like novices. On Round 1 of their second day, they demonstrated racial bias in both response times and SDT criteria. With additional training on Day 2, this bias dropped once again. But the reemergence of bias in Round 1 of Day 2 suggests more extensive training is necessary if participants are to more permanently overcome bias in behavioral responses. The fact that police officers in Studies 1 and 2 showed no SDT bias during their initial performance on the video game task may be a testament to their training and expertise.

General Discussion

We began this research with two primary goals: examining police officers in a first-person shoot/don't-shoot task and com- paring their performance with that of a community sample. This investigation assessed overall proficiency and the role that a target's race plays in the decision-making process. Police differed from the community members in terms of several critical variables. On average (ignoring target race), the officers clearly outperformed the community sample. They were faster to make correct responses; they were better able to detect the presence of a

weapon (as measured by *d*); and they set a significantly higher criterion (*c*) for the decision to shoot, indicating a less "trigger-happy" orientation.

Most important for our hypothesis, the officers also differed from the community sample in the role that a target's race played in the placement of SDT criteria for the decision to shoot. This difference primarily affected Black targets. When the target was White, all of the samples (Denver community, Denver police, and national police) set a relatively high criterion, and none of the samples differed from one another. But when the target was Black, the community set a significantly lower (more trigger-happy) criterion than the officers. This was true both in Study 1, which used a relatively long timeout window, and in Study 2, in which the timeout window was substantially reduced (yielding much higher error rates).

In spite of the fact that police showed minimal bias in the SDT analysis, the officers were similar to the community sample (and to literally hundreds of past participants in this paradigm) in the manifestation of robust racial bias in the speed with which they made shoot/don't-shoot decisions. Accurate responses to targets congruent with culturally prevalent stereotypes (i.e., armed Black targets and unarmed White targets) required less time than did responses to stereotype-incongruent targets (i.e., unarmed Black targets and armed White targets). Evidence of bias in response latencies was consistent and robust across all of the samples examined in Study 1: the national sample and the Denver sample of police officers, as well as the Denver community sample, drawn from the neighborhoods that the Denver officers serve.

The results from Study 3, in which we trained novice college students on the task, revealed similar effects. Across two rounds of play, student participants showed a significant decrease in racial bias, as measured by the decision criterion, accompanied by an increase in sensitivity. But they showed no change in the magnitude of bias as measured by response latencies. An identical pattern was obtained when students returned for a second day, during which they again completed two rounds of the video game task. In the first round of play, student performance mirrored that of the community; By Round 2, it mirrored that of the police officers.

The performance of the officers and the expert students in these studies raises an important set of questions about the processes that differentiate bias in response times from bias in the threshold to shoot. Typically, errors and latencies follow a similar pattern, such that greater difficulty on a given trial increases both response time and the likelihood of a mistake, as observed in the performance of community members and novice college students. The officers and experts, by contrast, showed clear bias in latencies, but target race had no impact on their ultimate decisions.

To the extent that longer latencies reflect difficulty, the persistent bias in reaction times suggests that even experts have some trouble processing stereotype-incongruent targets. The visual complexity of the stimuli may essentially require participants to engage in an effortful, serial search for relevant information about the object (Shiffrin & Schneider, 1977). At the same time, the salience and automaticity that generally characterize psychological processing of racial cues (Cunningham et al., 2004; Ito & Urland, 2003) suggest that— during the course of that search—participants are likely to encode target race. In combination with tenacious racial stereotypes (e.g., Devine & Elliot, 1995), race-based processing may impede responses to counter stereotypic targets. In line with this

possibility, Study 1 showed that officers from urban, high-crime, predominantly minority districts (environments likely to reinforce stereotypes about Black people) showed greater racial bias in their latencies.

For officers (and, temporarily, for trained undergraduates), how- ever, the stereotypic interference ended with reaction times. The bias evident in their latencies did not translate to the decisions they ultimately made. This separation of effects may reflect the officers' ability to override automatic associations (Kunda & Spencer,2003), perhaps as a function of their training and expertise. Police (with extensive training) and "expert" undergraduates (with minimal training) were able to reduce bias in the SDT criteria for Black and White targets. Were these individuals able to avoid snap judgments on ambiguous trials, such as those posed by counter- stereotypic targets, and wait for a more complete understanding? Such a delay when responding to difficult-to-process counter stereotypic targets would presumably yield bias in reaction times (consistent with the data). At the same time, it would minimize bias in the decision criteria and increase overall accuracy. Anecdotally, this explanation matches officers' intuitions about the process. In a conversation about the effects reported here, one officer stated that the findings "make sense" because police are trained to hold their fire if they are uncertain – to wait for greater clarity.

The possibility that expertise and practice enhance control resonates with research beyond the realm of racial stereotyping. Green and Bavelier (2003) have shown that practice with visually complex video games enhances visual attention (but practice with visually simple games does not). And, although practice on a simple decision task generally promotes automaticity (Bush et al.,

1998; Shiffrin & Schneider, 1977), practice on more complicated interference tasks or on challenging working-memory tasks can actually increase control (Olesen et al., 2004; Weissman et al.,2002). On the basis of functional magnetic resonance imaging, these studies show that extended practice on difficult tasks leads to increased activation of the medial and middle frontal gyri—areas associated with control-based conflict resolution and top-down, rule-based processing. We suggest, then, that police training and on-the-job experience in complex encounters may allow officers to more effectively exert executive control in the shoot/don't-shoot task, essentially overriding response tendencies that stem from racial stereotypes. As noted above, the correlational analyses from Study 1 identified several environmental factors that were associ- ated with increases in *latency* bias for the officers (i.e., serving in urban, high-crime, and predominantly minority districts). It is interesting to note that these same variables had no impact on the SDT criteria the officers used.

We do not want to suggest that the minimal training provided in Study 3 parallels the sort of training that police officers receive. However, the possibility that police function as highly trained subjects is intriguing. In the current research, evidence for this possibility relies on cross-sectional comparisons (Studies 1 and 2) and on parallels between samples that differ in numerous ways (i.e., the "expert" students in Study 3 and the police officers). It would be informative to follow police recruits as they enter the academy, as they receive training, and as they cope with their first years of patrol duty. We have begun data collection on such a project. At present, we have data from 39 recruits in the first weeks of training at the police academy (prior to any weapons training). It is striking that these recruits show statistically significant racial bias in both reaction times and in the decision criteria. Upon entering the academy, then, recruits behave very much like the community samples (Studies 1 and 2) and the novice student sample (Study 3): They set a lower criterion for Black targets than for White targets. These data are

entirely consistent with the possibility that the reduction in SDT bias among police officers represents an expertise effect. These data also argue against the suggestion that police academies or departments indoctrinate their members into a culture of anti-Black sentiment (Teahan, 1975a), at least with respect to the sort of judgments studied here.

We must note that our results are only partially consistent with prior work. Consistent with Eberhardt et al. (2004), we found that officers orient more quickly to Black people when processing danger-related stimuli. With respect to reaction times, our results (like theirs) suggest a bias in attentional focus and processing. But our data are not consistent with those of Plant and Peruche (2005), who found that officers showed racial bias in the SDT criteria for the decision to shoot. Although these officers learned to eliminate bias over the course of the study, the presence of the initial bias is inconsistent with our results. Officers in the current studies never showed significant evidence of bias.6

This partial correspondence may stem from a variety of factors. We explore two. First, Plant and Peruche (2005) sampled 50 officers from Florida; in Study 1, we sampled 237 officers from Colorado and 14 other states. It is possible that the differences between our findings reflect regional differences between Florida and other areas of the country. Second, it is possible that the results reflect differences between the paradigms employed. Plant and Peruche's stimuli are, arguably, further removed from the training and experience of police officers than are the stimuli presented in our simulation. Plant and Peruche presented Black and White male faces on which objects (e.g., a gun or wallet) had been superimposed. Our stimuli involve full-body images of men holding guns and other objects. These images are embedded in scenes, such as parks or cityscapes. To the extent that our stimuli more closely mirror police training (e.g., Firearms Training System or firing range encounters) and on-the-job experiences, an officer's expertise should be more likely to generalize to our task. To the extent that Plant and Peruche's paradigm is less similar to the officers' previous experiences, their participants may have had to learn what was, in essence, a novel task.

As we discussed in the introduction, sociologists have studied the question of racial bias in police shootings for many years. The sociological literature provides a rich, if complicated, context in which to view the results of the current studies. One account that has received substantial attention is that police shoot Black suspects more often than White suspects, per capita, because Black people are disproportionately likely to be involved in crime (particularly violent crime). The Department of Justice (2001) report shows that, just as Black suspects are five times more likely than White suspects to die at the hands of police, police officers are five times more likely to die at the hands of a Black suspect than a White suspect. In a similar vein, Reisig et al. (2004) found that the use of nonlethal force (which seems to depend on suspect race) may actually reflect race-based differences in the suspect's propensity to resist arrest or engage in belligerent behavior toward officers. It is the suspect's hostility, they argue—not race—that prompts a hostile response from the officer. And Inn et al. (1977) report that the number of Black suspects shot by police is proportionate to the number of Black suspects arrested. They tentatively conclude that it is the prevalence of criminal activity among Black people that drives the differential shooting rates. (The authors note, however, that arrest rates themselves may reflect biases held by the police and thus do not provide a perfect standard of comparison.) In line with this reasoning, in Study 1, officers from the national sample

who reported working in communities with (a) high levels of violent crime and (b) high proportions of minority residents showed particularly strong patterns of bias in their latencies. Did their experiences with minority suspects foster associations that made counter stereotypic trials particularly difficult to process?

The situation is almost certainly more complex. It is clear from the analysis of Study 1 that officers serving in heavily (more densely) populated communities also showed greater anti-Black bias in their reaction times. In combination, these variables seem to suggest that racial bias in the decision to shoot may reflect the disproportionate representation of Black people (and perhaps other ethnic minority groups) in low-income, poverty-stricken, and high- crime areas. Geller (1982) and Smith (2004) presented evidence that a greater number of police shootings occur in disadvantaged neighborhoods and that members of ethnic minorities are more likely to be killed in these incidents. Using regression models to predict officer-involved shootings, Terrill and Reisig (2003) showed that, once neighborhood risk is taken into account, the 6 In light of Plant and Peruche's (2005) findings, we explored the possibility that police officers in the current studies showed a decrease in bias over the course of the shooter task. To examine this possibility, we reanalyzed the data from Studies 1 and 2, separating the 100 trials into two

50-trial blocks and analyzing SDT estimates (both *c* and *d*) as a function of sample, target race, and block (first half vs. second half). Neither three-way interaction was significant, nor controlling for block did not alter the findings reported in the text. These data provide no evidence that police showed less bias than community members because they were better able to improve their performance over the course of the task. The effect of suspect race or ethnicity is no longer statistically reliable. This research builds on the *ecological contamination hypothesis*, first advanced by Werthman and Piliavin (1967), which suggests that the reputation of a neighborhood distorts perceptions of its inhabitants. To the extent that a community is seen as a "bad area," police may perceive the individuals who live there (or anyone they happen to encounter there) as a potential threat. If members of minorities are more likely to live and spend time in disadvantaged neighborhoods (Sidanius & Pratto, 1999), they may also be more likely to fall victim to this context-based contamination. As a consequence, police may be more likely to shoot a Black suspect because of the context in which the encounter occurs, not because of racial bias, per se (Fyfe, 1981). In an interesting wrinkle of this argument, Sampson and Raudenbush (2004) conducted an extensive investigation of the factors that predict perceived community disorder—the causal variable proposed by ecological contamination. They found that the mere presence of Black people in a community is sufficient to evoke the perception of disadvantage. That is, controlling for objective factors (e.g., prevalence of graffiti, broken windows, and abandoned buildings), the greater the number of Black people living in an area, the greater the disorder perceived by both Black and non-Black citizens. If Black people evoke the perception of neighborhood disadvantage, they may experience harsher treatment by police—not because the police are biased to treat Black people in a hostile fashion, but because Black neighborhoods seem more threatening.

The data presented here suggest that, although police officers may be affected by culturally shared racial stereotypes (i.e., showing bias in their response times), they are no more liable to this bias than are the people who live and work in their communities. Further, at least on the simulation used here, the officers' ultimate decisions about whether or not to shoot are less susceptible to racial bias than are the decisions of community members. The data suggest that the officers' training and/or expertise may improve their overall performance (yielding faster

responses, greater sensitivity and reduced tendencies to shoot) and decrease racial bias in decision outcomes. We feel that this research represents a valuable melding of basic social psychological processes with an issue of great importance to our society. By examining the influence of race in the automatic processing of danger-related stimuli, and the capacity of expertise to moderate this effect, these findings touch on a topic of great interest to social psychologists, sociologists, police, and community groups, alike. The investigation of racial bias in police use of force presents a unique opportunity to apply experimental social psychological methods to an issue that is vital to the members of increasingly diverse neighborhoods and com- munities.

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Received May 1, 2006