Chapter 2
The Science of Implicit Bias and Implications for Policing

The Science of Bias

As previewed above, modern bias is most likely to manifest as "implicit bias." Through our implicit biases, we link individuals to the stereotypes associated with their group(s). This can impact our perceptions and behavior and can occur even in individuals who, at the conscious level, reject bias, prejudice, and stereotyping.

The Characteristics of Implicit Bias

The key characteristics of implicit bias are as follows:

- We categorize individuals and link them to the stereotypes associated with their groups
- This can occur outside of conscious awareness
- Implicit biases can impact actions producing discriminatory behavior
- This can occur even in individuals who, at the conscious level, reject prejudice and stereotyping.

Bias starts with our automatic tendency to categorize individuals. We categorize individuals and objects to make sense of the world, which includes categorizing people according to group membership (based on e.g., gender, weight, race). We then attribute to these individuals the stereotypes associated with their group. The researchers have determined that these processes do not occur for all situations and people, but instead are most likely when we are facing "ambiguous stimuli." With regard to people, this means that categorizing individuals and linking them to stereotypes is most likely when we encounter people we do not know. These people come into our sphere as "blank slates" and we try to "fill in" that blank slate with information. To do this, we link them to groups to which they belong and then to

the stereotypes associated with those groups. We are much less likely to "fill in" with stereotypes a person we already know; this person is already "filled in" with information.

One line of research has examined what categories, linked to personal characteristics, prompt implicit biases. These categories include ethnicity/race (e.g., Bertrand and Mullainathan 2004), gender (e.g., Axelson et al. 2010; Banaji and Greenwald 1995; Levinson and Young 2010), social class (e.g., Haider et al. 2011), sexual orientation (e.g., Hebl et al. 2013; Oberle et al. 2011), religion (e.g., Ahmed 2010; French et al. 2013; Park et al. 2009), body shape (e.g., Bessenoff and Sherman 2000; Schwartz et al. 2006; Teachman et al. 2003), and age (e.g., Gross and Hardin 2007; Levy 1996), to name a few. Another, broader categorization reflects our tendency to favor our own "in group" (see e.g., Brown and Zagefka 2005; Reskin 2005). According to Staats (2013, pp. 11–12): "As soon as we see someone, we automatically categorize him or her as either 'one of us', that is, a member of our ingroup, or different from ourselves, meaning a member of our outgroup…. By favoring ingroup members, we tend to grant them a measure of our trust and regard them in a positive light." What we perceive as an "in group" may vary by context; it may be based on race, profession, income, or other factors, depending on the situation (Allport 1954/1979).

Another line of research examines the types of stereotypes to which various groups (e.g., Asians, women, young people) are linked, such as insecurity (e.g., Bessenoff and Sherman 2000), kindness/compassion (Axelson et al. 2013; Bessenoff and Sherman 2000), selfishness (Bessenoff and Sherman 2000), musicality (Bessenoff and Sherman 2000), strength of memory (e.g., Levy 1996), enthusiasm (e.g., Axelson et al. 2013), speed of learning (Axelson et al. 2013), rebelliousness (e.g., Gross and Hardin 2007), moodiness (e.g., Gross and Hardin 2007), and danger or threat (e.g., Correll et al. 2007a; Correll et al. 2011).

As above, linking a group to a stereotype associated with that group does not require animus or hostility toward that group. In fact, scientists have determined that *mere knowledge* of the stereotype produces an implicit bias (Correll et al. 2002).

Our tendency to link individuals to the stereotypes associated with their group(s) is automatic and occurs outside of conscious awareness (see e.g., Devine 1989; Blair 2002; Dovidio et al. 2009; Rudman 2004). According to Devine's (1989) seminal article on the discovery of implicit bias,

> Automatic processes involve the unintentional or spontaneous activation of some well-learned set of associations or response that have been developed through repeated activation in memory. They do not require conscious effort and appear to be initiated by the presence of stimulus cues in the environment … A critical component of automatic processes is their inescapability; they occur despite deliberate attempts to bypass or ignore them (p. 6).

To adopt the language of author Malcolm Gladwell (2005), these are "blink responses"; they reflect our "thinking without thinking." Social scientist David R. Williams (as quoted in Wilkerson 2013, p. 134) refers to the automatic and

outside-awareness character of implicit bias as "frightening," because implicit bias is "an automatic and unconscious process, (and) people who engage in this unthinking discrimination are not aware of the fact that they do it." The automatic nature of implicit biases is highlighted by research that has documented *physiological* manifestations of bias. Susan Fiske at Princeton documented differential brain activity using magnetic resonance imaging (MRI) when she showed subjects pictures of people who do not look homeless and pictures of people who do. There is a certain part of the brain that is "activated" when people think about themselves or other people and indeed, it lit up in Fiske's subjects when they were shown pictures of individuals who did not look homeless. But when the subjects were shown pictures of individuals who appeared to be homeless, this area of the brain was not activated; instead "within a moment of seeing the photograph of an apparently homeless man… people's brains set off a sequence of reactions characteristic of disgust and avoidance" (Fiske 2008: p. 15).

Implicit biases can impact actions—producing discriminatory behavior (Dasgupta 2004; Kang et al. 2012; Rooth 2007). In laboratory studies, the behavior that has been impacted by implicit biases ranges from "non-verbal friendliness" (e.g., Dovidio et al. 2002) to shooting (Correll et al. 2002, 2007a, b). Biases have been shown to impact employment decisions (for an overview, see e.g., Fiske and Krieger 2013), jury verdicts and sentencing (see Mitchell et al. 2005 for a meta-analysis), and medical treatment (e.g., Schulman et al. 1999; Weisse et al. 2001).

Implicit biases can manifest even in people who, at the conscious level, reject prejudice and stereotyping. As reported above, categorizing someone and linking him/her to the stereotypes associated with his/her group does not require animus; it only requires knowledge of the stereotype. This fact is consistent with the finding that our implicit associations do not necessarily line up with our conscious beliefs (see e.g., Banaji and Greenwald 1995; Beattie et al. 2013; Devine 1989; Gilbert and Hixon 1991; Kang et al. 2012; Macrae et al. 1994). In her seminal 1989 article, Devine wrote, "It would appear that the automatically activated stereotype-congruent or prejudice-like responses have become independent of one's current attitudes or beliefs" (p. 15). Describing one of the three studies presented in that article, she explains that, even for subjects who have no conscious prejudices towards a particular group, "activation of stereotypes can have automatic effects that if not consciously monitored produce effects that resemble prejudiced responses" (Devine 1989, p. 12).

This means that implicit biases occur even in individuals who, at the conscious level, reject prejudices, bias and stereotyping and explains the findings that even individuals in groups *subject* to stereotypes can have those same implicit biases (Greenwald and Krieger 2006; Reskin 2005). As Staats (2014, p. 17) explains, "(Although) we generally tend to hold implicit biases that favor our own ingroup… research has shown that we *can still hold implicit biases against our ingroup"* (italics added). One example is the finding that a pro-White bias is found even

among non-Whites (see e.g., Dovidio et al. 2002) and, conversely, anti-Black biases are found among Blacks (see e.g., Correll et al. 2002; Nosek et al. 2002).[1] This latter finding is consistent with Jesse Jackson's statement, "There is nothing more painful to me … than to walk down the street and hear footsteps and start thinking about robbery, then look around and see somebody White and feel relieved."

This fact—that women can have biases against women, Blacks can have biases against Blacks, poor individuals can have biases against poor individuals, and so forth—is frequently lost in the conversation about bias in policing. For instance, in the wake of Ferguson—with an intensive focus on police use of force against Blacks—we seem to see increased emphasis placed on the race of the officer involved in such incidents. "The White officer and Black subject" is highlighted, seemingly to imply that the incident is linked to White biases against Blacks.[2] (Since the vast majority of police personnel in the country are White, we should not be surprised that any use-of-force incident involves a White officer.) Also, in the discussion of police bias, sometimes the call for agency diversity is seemingly touted as a way to hire people without biases. Again, this is misguided. There are, as discussed below, good reasons to have diversity within agencies, but the suggestion that "diverse individuals" are bias-free is contrary to the science.

Research on Implicit Biases Related to Crime and Aggressiveness

There are various methods that have been used to measure the activation of implicit biases in subjects (for a review, see Staats 2013). I will review these methodologies by providing examples from studies on the implicit biases that link demographic groups to crime and violence. Most of these studies have focused on the "Black-crime implicit bias" (or "Black-crime association") (see e.g., Fridell 2008); that is, these studies have examined the extent to which people associate Black people with street crime and violence.

One method that has been used to measure the Black-crime implicit bias— involves "priming." In such studies, the subject is exposed to an initial stimulus (the "prime") that is hypothesized to influence a subsequent response and thereby

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[1]For instance, Correll et al. (2002) found that in a "shoot, don't shoot" task (see coverage of this methodology below) both White and African American samples shot Black targets more quickly than White targets and were more likely to erroneously shoot unarmed Blacks (versus unarmed Whites).

[2]That the race of the subject as Black is also emphasized by the press, is indicated in the 2015 document entitled "Unarmed Civilians and the Police." Street Cred reviewed 125 incidents in the first 8 months of 2015 in which police killed an unarmed civilian. In examining the press coverage of these incidents, they report that their analyses of 420 examples of press coverage, "the media mentioned the race of the decedent and the officer four times more when the decedent was Black" p. 7.

confirm (or disconfirm) an implicit bias. Eberhardt et al. (2004), for instance, assessed whether "priming" the subjects subliminally with Black male faces or White male faces impacted on the subjects' subsequent ability to identify degraded images of crime-related objects. The researchers argued that, if the Black-crime association exists, exposure to Black male faces during the priming phase of the study would make crime images more accessible. During the first ("priming") phase, subjects sat at computer screens; one-third was exposed subliminally to Black male faces, one-third was exposed to White male faces, and the control group was exposed to lines (i.e., no faces). In the second phase of the study, subjects saw a series of degraded objects on the computer screen that would quickly become clearer in small increments (41 frames). The subjects were instructed to push a certain computer key when they could identify the object and then report what the object was. The objects were either crime-related objects (e.g., gun, knife) or crime-neutral objects (e.g., camera, book). The speed of identification was recorded.

The results supported a strong Black-crime association. The subjects who had been subliminally primed with Black male faces were quicker than the subjects in the other two conditions to identify the crime-related objects. Interestingly, the subjects who had been subliminally primed with White male faces were *slower* than even the control group (no face prime) to detect crime-related objects. In sum, the study showed that *Blacks* and *crime* are concepts that are closely linked in our heads and that the concepts of *Whites* and *crime* are not.

Another methodology involves response latency measures (see e.g., Dovidio et al. 2009; Greenwald et al. 1998; Kang and Lane 2010; Rudman 2004). Staats explains (2013, p. 24): "These measures rely on reaction times to specific tasks in order to uncover individual's biases …. The underlying premise of these reaction-time studies is that individuals are able to complete cognitively simple tasks relatively more quickly than those that are mentally challenging." An example of a latency measure is the popular Implicit Association Test (IAT) that is available on line.[3] In taking the IAT, respondents are timed as they sort concepts. Since we are faster at completing simple tasks than challenging ones, we will be faster "sorting" concepts that are *linked* in our heads than sorting concepts that are *not linked*. As such, if a person is faster at linking "women" and "childcare" than "men" and "childcare," the implication is that the person has an "association" in his/her head between women and childcare (but not men and childcare). One example is the Black/White IAT, in which the respondents are directed to categorize White and Black faces with positive and negative words. As Staats explains (2013: p. 27), "Faster reaction times when pairing White faces with positive words and Black faces with negative terms suggests the presence of implicit pro-White/anti-Black bias."

Correll et al. (2002) used response time as one of their measures in exploring the Black-crime implicit bias. In their study, college student subjects were required to

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[3]Go to https://implicit.harvard.edu/implicit/. An article evaluating the validity of the IAT is Jost et al. (2009).

determine very quickly (measured in milliseconds) whether the man pictured on the computer screen was a threat or not a threat. Some of the males were White and others were Black; they held either a gun or a "neutral" (i.e., nonthreatening) object. The subjects were instructed to push the "shoot" button if the person held a gun and the "don't shoot" button if he held a neutral object. Correll measured both time-to-decision (in milliseconds) and errors (shooting an unarmed person or failing to shoot an armed person) to see if the race of the target impacted perceptions of threat. Correll et al. (2002, p. 1325) hypothesized a Black-crime implicit bias; they expected participants to "respond with greater speed and accuracy to stereotype-consistent targets (armed African Americans and unarmed Whites) than to stereotype-inconsistent targets (armed Whites and unarmed African Americans)." The results supported a Black-crime implicit bias. The subjects shot an armed male more quickly if he was Black than if he was White. Conversely, they more quickly decided *not* to shoot an unarmed White than an unarmed Black. The most common *errors* were shooting an unarmed Black man and not shooting an armed White man (see also Plant and Peruche 2005).

Another line of studies takes advantage of the fact that our implicit biases are likely to manifest when a situation is ambiguous. In the classic "shove" study, subjects observed a video of two people interacting and then were asked questions about that interaction (Duncan 1976). In the video, subjects saw either a White or a Black person shove the other person; importantly, the shove was ambiguous—not clearly aggressive, but not clearly in jest. Indicating an implicit association between Blacks and aggression, the subjects labeled the ambiguous shove as more violent "when it was performed by a black than when the same act was perpetrated by a white" (Duncan 1976, p. 590). Other studies, too, have documented a widespread Black-crime implicit bias (Amodio et al. 2003; Amodio et al. 2004; Correll et al. 2006; Greenwald et al. 2003; Payne 2001; Payne et al. 2002).

It is important to acknowledge here (just as it is important to acknowledge this in the context of training police on this science) that stereotypes are based in part on fact. As an example, the Black-crime implicit bias or "blink response" is based in part on fact. As much as we shy away from saying it (at least in police-community circles), the truth is that people of color *are* overrepresented among the people who commit "street crimes" relative to their representation in the population.[4] Criminologists have conducted extensive studies regarding who commits crime and determined that socio-economic status is a key to the link between people of color and crime. They characterize the relationship as follows:

- Individuals of low socio-economic status are disproportionately represented among people who commit street crime (see e.g., Cullen and Gilbert 1982; Pratt and Cullen 2005; Sherman et al. 1989; Western 2002; Western et al. 2001).

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[4]The phrase "street crime" is used here to encompass the behaviors with which municipal police usually deal–such as, robberies, prostitution, trespassing, and burglary, and to distinguish those from "crimes of the powerful" (e.g., tax fraud, insider trading, mortgage fraud).

- People of color are disproportionately represented among low-income individuals (see e.g., DeNavas-Walt and Proctor 2014; Lin and Harris 2009; Macartney et al. 2013).

Because of the above, it is not surprising, that researchers find that people of color are disproportionately represented among individuals who commit street crime (see e.g., Ellis 1988; Hipp 2011; Krivo and Peterson 1996; Kubrin and Weitzer 2003; McNulty and Bellair 2003; Ousey 1999; Sampson and Lauritsen 1997; Sampson et al. 2005; Vieraitis 2000).[5] But it is equally important to acknowledge that the actuality that stereotypes are based in part on fact does not justify the use of stereotypes in making policing decisions. Police err when they treat individuals as if they fit the group stereotype. Policing based on stereotypes can be ineffective, unsafe, as well as unjust.

The section above summarized research on the Black-crime implicit bias. And, indeed, in terms of stereotypes about *who commits crime*, it is the *Black-crime* implicit bias that has been the most studied. Some researchers, however, have started to extend the research to look at what *other* groups are stereotyped as criminal and thus reflected in implicit biases. Unkelbach et al. (2008) used the "shoot, don't shoot" methods described above to assess whether study subjects linked Muslims to threat. Subjects participated in a computer exercise wherein they were exposed to individuals who were either armed or unarmed and wearing Islamic headgear or not. The subjects were instructed to shoot at armed individuals, but not to shoot unarmed ones. The subjects had to respond very quickly, so that the experimenters were measuring their "blink" responses. As hypothesized, the subjects were more likely to shoot Muslim targets, even when the Muslim-looking targets were carrying nonthreatening objects—indicating a Muslim-threat implicit bias. These same researchers varied the targets by gender, too, and confirmed an implicit bias linking men to threat.[6]

Sadler et al. (2012) used the "shoot, don't shoot" methodology to see whether subjects responded differentially to Blacks, Latinos, Asians, and Caucasians. Their nonpolice subjects (their findings for the *police* subjects are provided below) evidenced a Black-crime implicit bias in their response times. The authors report (p. 295) that the "participants were especially likely to favor the 'shoot' response over the 'don't shoot' response when the target was Black rather than any other race."[7] These nonpolice subjects did not, however, react differently to Caucasians, Asians, or Latino targets.

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[5]For an exception, see American Civil Liberties Union (2013).

[6]Highlighting the predominance of "in-group" versus "out-group" biases (that are linked to cultural differences), Schofield et al. (2015) found that Saudi Arabian subjects were more likely to shoot the White target than the Middle Eastern target.

[7]James et al. (2013) also tested a Hispanic-crime implicit bias using a variation of the shooting paradigm methodology. This research is covered under the discussion of "controlled responses".

Does Neighborhood Context Matter?

Are the findings that individuals are over-vigilant with Blacks (as seen in the "shoot, don't shoot" studies) moderated by the level of dangerousness of the neighborhood? Correll et al. (2011) have tested the impact of neighborhood context on the activation of implicit biases using laboratory, shoot-don't-shoot methods. According to their hypotheses, based on the theory of implicit bias, the bias towards shooting Blacks should be reduced or even *disappear* in dangerous contexts. Citing the model produced by Cacioppo and Berntson (1994), Correll et al. (2011) conjecture that "initial negative information has a powerful impact on behavior …. The incremental effect of each additional piece of negative information becomes less potent" (p. 185). The first component of this model—that negative information is weighted more heavily than positive information—reflects the well documented "negativity bias" (for an overview, see Baumeister et al. 2001). Applied to shoot-don't-shoot situations, the dangerous environment—the "initial negative information"—will have the powerful impact that will increase the likelihood that research subjects will shoot opponents; the fact that a subject is Black, however—the "additional piece of negative information"—will be less potent. The result would be a greater tendency to shoot in dangerous neighborhoods, but an elimination of the tendency to shoot Blacks *more than* non-Blacks. Correll et al's research results supported their hypothesis; in their laboratory study, the bias against Blacks (reflected in the subjects' errors and speed of decision-making) disappeared in dangerous contexts. One study using actual police use-of-force data produced results that were at least "consistent" with the hypothesis and laboratory results of Correll et al.[8] Using data from 1846 use-of-force incidents from a single jurisdiction, Fridell and Lim (2016) found that the finding of higher levels of force used against Blacks (even when controlling for key variables including level of resistance) disappeared in high crime areas. Additional research—both in the lab and in the field—is needed to further explore the potential impact of context on biases pertaining to threat.

Evidence of Implicit Biases in Police Subjects

Some of the recent research on implicit bias has examined how bias might manifest in various professions. As examples, research has been conducted examining how biases might manifest in medical professionals (see e.g., Stone and Moskowitz 2011; Van Ryn and Saha 2011), legal professionals (e.g., Levinson and Young 2010;

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[8]This was not a "critical test" of the hypothesis.

Richardson and Goff 2013; Smith and Levinson 2012), and educators (e.g., Tenenbaum and Ruck 2007; Van den Bergh et al. 2010).[9]

Several teams of researchers have examined implicit biases in police subjects (e.g., Correll and Keesee 2009; Correll et al. 2007a, b; James et al. 2014; James et al. 2013, 2016; Sadler et al. 2012; for a review, see Correll et al. 2014). One line of research indicates that officers—like other people—have implicit biases that link racial/ethnic minorities to aggression, threat and violence. When the "shoot, don't shoot" methodology was implemented using police as subjects, Correll and colleagues found that police subjects (similar to non-police subjects) were quicker to shoot at armed Black targets than armed White targets, indicating "robust racial bias."

The findings of Sadler et al. (2012) for their *nonpolice* subjects were described above. Recall, they used the "shoot, don't shoot" methodology and included targets that were Black, Latino, Asian and Caucasian to determine which groups were and were not associated with threat. These researchers also included a subject pool comprised of *sworn law enforcement* personnel and, in their response times, the police manifested a Black-crime implicit bias when the response times to Black targets were compared to Latinos, Asians, and Whites. The police response times also indicated a Latino-crime implicit bias—when response times for Latinos were compared to those of Asians and Whites (not Blacks).[10] The results, in sum, indicated that Blacks were perceived as the most threatening of the four groups; Latinos were perceived as more threatening than both Caucasians and Asians, and Caucasians were perceived as more threatening than Asians. Regarding the police subjects, the researchers state, "our results suggest that Blacks and Latinos may be more stereotypically associated with violence than Whites and Asians" (p. 307). A Black-crime implicit bias in police subjects has also been documented by Eberhardt et al. (2004) and Plant and Peruche (2005).

The line of research presented in this section documents that police, like other humans, have implicit biases—such as the Black-crime and Latino-crime implicit bias. Further below, however, I will explore two other lines of research that add some important nuances to this set of findings. In the section on bias-reduction techniques, we will explore the "good news" research supporting state-of-the-art use-of-force training and the "bad news" research indicating that police may sometimes put themselves in danger out of fear of the consequences of using force against a racial/ethnic minority.

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[9]Overview chapters on "Implicit Bias in Education," "Implicit Bias in Criminal Justice," and "Implicit Bias in Health/Health Care" are contained in Staats (2013), and updates are provided in Staats (2014) and Staats et al. (2015).

[10]With regard to *errors*, "the police officers were better able to distinguish weapons from non-threatening objects, when held by Black and Latino targets than by Asian and White targets" (pp. 306–307).

Implicit Bias and the Police Profession

So what are the potential costs of implicit biases that manifest in police professionals? Policing based on implicit biases and stereotypes can be, not just unjust, but ineffective and unsafe. It can lead officers to be over-vigilant with certain groups and under-vigilant with others. It can lead them to focus on one demographic group and therefore miss the individuals of other demographics who are committing crime. It can lead to poor tactics and investigations.

Several of the researchers have commented on how, for instance, the *Black-crime* association might manifest in the work of police. Peruche and Plant (2005) suggest that officers' implicit biases might increase the scrutiny of Blacks compared to others; it might lead to more searches of Blacks than others. According to Plant et al. (2005, p. 142):

> If a police officer possesses an expectation (i.e., stereotype) that Black people are more likely to be violent criminals than are White people, then split-second decisions about whether or not a suspect is an imminent threat could be biased and lead to more aggressive responses to Black compared to White suspects. For example, when deciding whether or not to fire on a suspect, if police officers expect that Black people are more likely to be an imminent threat than White people, then this may influence how they interpret and respond to situations involving Black suspects with tragic consequences.

Payne (2001), too, commented on the implications of the findings of his "shoot, don't shoot" study for the real world of policing:

> If the officer is like the average participant in our experiments, he or she will experience some degree of automatic bias when interacting with a Black suspect. That is, the officer will be more prone to respond as if a Black suspect is armed, compared to a White suspect (pp. 190–191).

This comment by Payne is consistent with analyses of officer-involved shootings by the Philadelphia Police Department (PPD). Fachner and Carter (2015) found that the shooting of unarmed Black individuals was more likely to be due to Threat Perception Failure (TPF) than was the case for shooting unarmed individuals of other races.[11] They defined TPF as "mistake of fact" shootings. In these situations, the officer perceives (reasonably or not) that the subject is armed when, in fact, s/he is not. This perception might be due to a misperception of an object (e.g., cell phone vs. gun) or actions (e.g., furtive movements). This finding is consistent with a Black-crime implicit bias. Also consistent with the science is their finding that the manifestation of TPF in incidents with Black subjects is unrelated to race of the officer.[12]

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[11]To be precise, the researchers actually found the highest TPF with Asian subjects, but noted that the percentage was likely unreliable because of the small number of Asians that were subject to officer-involved shootings.

[12]The researchers found some differences across officer races (more Black and Hispanic officers experienced TPF), but these differences were not statistically significant.

All of the above examples point to the consequence of over-vigilance with Blacks compared to Whites, but the "shoot, don't shoot" studies (e.g., Correll et al. 2002, 2007b) also point to another potential consequence, under-vigilance. For instance, Correll et al., in both of the studies, found that police and nonpolice subjects alike were slower to identify a gun in the White man's hand. Groups that might be linked to "non-dangerous" stereotypes include Asians, well-dressed individuals, and the elderly. That those "non-dangerous" stereotypes might lead to under-vigilance is highlighted in a story shared by an officer with the Las Vegas Metropolitan Police Department (LVMPD).[13] The officer telling the story had responded to the scene near where two fellow officers, in 2014, had just been ambushed while eating lunch. The responding officers knew very little about who had killed their colleagues and where the killer(s) had gone, but civilians directed them to a nearby Walmart store. The officer telling the story was moving down an aisle toward a White male that he had identified as the active shooter when he saw a White female. He reports, "I thought that this woman wasn't going to be a threat and so I let her remain as she was a little bit longer than I should have." Once he realized that she "wants to be exactly where she is right now," he exchanged gunfire with the woman who, along with her male partner, had killed his colleagues. (She was injured, he was not hit.) This officer implies that his (very understandable, very human) stereotypes about who is dangerous slowed down his response—almost adding to the already tragic loss of the LVMPD.

Two back-to-back role plays that are part of the science-based Fair and Impartial Policing (FIP) Training Program highlight the potential danger to officers when they police based on stereotypes about groups.[14] In the first role play, "Woman with a Gun," two of the recruits get a dispatch telling them that a credible witness reports that there is a woman at a bus stop on the corner of Maple and 1st Street brandishing a firearm.[15] When the recruits enter the scene, there is a woman on the bus bench at the corner of Maple and 1st who matches the description (although no gun is apparent). As they start to interact with this woman, another female role player enters. She is talking in a very animated/agitated fashion, telling the first woman that a car that looks similar to the one belonging to the first woman's husband has been involved in a serious accident. She is insistent that they must go to the scene of the accident immediately. This woman is not threatening, but she is a significant distractor. The trainers let the recruits respond as they see fit and then they stop the role play.

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[13]The story was shared during a segment entitled "Cops see it differently, Part 2" on "This American Life" broadcast February 13, 2015. Found on 9/15/2015 at http://www.thisamericanlife.org/radio-archives/episode/548/cops-see-it-differently-part-two?act=2#play. Relevant segment starts at 37:40; the officer's story starts at 54:00.

[14]The Fair and Impartial Policing Training Program will be covered in more depth in Chap. 3.

[15]This dispatch, by necessity, varies from location to location, depending on state gun laws. Whatever the wording, the dispatch will give the officers reasonable suspicion to detain and to frisk.

With no debrief, the second role play, "Man with a Gun," is implemented, which is identical to the first, except that it is a *man* with a gun and a man who serves as the distractor. In the overwhelming majority of the implementations, the recruits handle the woman with the gun differently from the man with a gun. The team dealing with the woman does not find the gun. (To reduce the concerns of a male police officer frisking a female suspect, the first team is mixed gender.) The second team of recruits is aggressive with the man and finds the gun through detention and frisk. It appears that the recruits handle this scene based on stereotypes/ generalizations about women; specifically, that women are not dangerous. As suggested above, we can recognize that stereotypes are based in part on fact; we can recognize that, generally, fewer women have guns than men. But, by treating this woman as if she matched the stereotype, the recruits show that *policing based on stereotypes/biases is unsafe.*[16]

Another role play as part of the FIP training makes the point that policing based on stereotypes can be ineffective. A pair of recruits in the class respond to a domestic violence call and are told the perpetrator is still on the scene. The dispatched trainees find the sobbing victim with a man on one side and a woman on the other; they are both patting the back of the victim saying, "I'm so sorry this happened. It will never happen again." Consistently, the recruits approach the man and ask to speak with him off to the side, and leave the lesbian partner—the abuser—with the victim.

The stereotypes that might impact police do not all have to do with perceived criminality or danger. Stereotypes might impact whether an officer, for instance, thinks a person is smart or not, or truthful or not, based on that person's visible characteristics. An officer might assume a Hispanic is undocumented or that a person with poor English speaking abilities is unintelligent. An officer might, at a two car crash where each driver has a different story, believe the man in the tie and BMW over the low income, young kid in a beat-up truck. Indeed, there are a vast array of police operational decisions at the line level[17] that might be impacted by biases—ranging from the relatively low level, low impact decisions such as with whom to engage in a consensual encounter to high-level, high-impact decisions, such as the decision to use deadly force. Some believe (and some department policies are written as if to imply) that we are only to be concerned about bias as pertains to decisions/actions that implicate the Fourth Amendment. As with the examples above, this is not the case. Biases could impact any of the infinite number of decisions (even "micro-decisions") that line-level officers make—some that implicate the Fourth Amendment and some that do not. Examples include

- Whom to watch, investigate as a "suspicious person" (whom to ignore)
- Of whom to determine immigration status prior to custodial arrest

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[16]Police report that male gang members often give the guns to the females when they are together on the streets, presumably because they believe the police will be less vigilant with the females.

[17]In a subsequent section, I discuss how bias might manifest in the decisions of individuals at the higher levels of an agency. These include both operational and managerial decisions.

- What questions to ask ("Do you own this car?" "Are you on probation or parole?" "Where are you coming from?")
- Whether to search or from whom to request consent to search
- Against whom to use force or higher levels of force
- Whom to treat with dignity and respect.

As we learned above, the influence of bias on actions/decisions might be automatic and wholly outside conscious awareness. This is a critically important point, because some law enforcement personnel have assumed that they would *know* if bias was impacting them; and, based on this assumption, they have determined that they do not engage in biased policing.[18] How bias might be covert, rather than overt, was conveyed well in the California Commission on Police Officer Standards and Training (POST) training video on "Racial Profiling." The spokesperson (Anthony West of the Office of the California Attorney General) said:

> You'll never hear someone say 'I'm going to stop that person because they are Black or I'm going to stop that person because they've got an accent.' No one is going to say that. We don't think of ourselves in those terms. But you will find people who will say 'I'm going to stop those people because they seem like they're up to no good or they are up to something.' Or 'I'm going to stop that person because I know this part of town and I know how these people think.' 'These people' and 'up to no good' – these are all proxies for why we might act in a certain way around a particular group of people. (CA Commission on POST).

Biases might impact what officers refer to as their "gut reactions." It is true that officers see things that others do not and draw conclusions that others would not, based on their experience and training, but officers should consider that those "gut reactions" could *also* reflect, at least in part, their implicit biases. Why does that person seem suspicious to the officer? Is the officer picking up on behavioral cues and contextual elements that nonpolice would miss, or is she being impacted by the biases that we all have? Howard Ross, the author of *Everyday Bias: Identifying and Navigating Unconscious Judgments in our Daily Lives* cautions (2014, p. 147): "It is fine to listen to your 'gut,' but don't trust it without question!"

Several factors can facilitate the manifestation of bias. Increasing the likelihood of bias are situations that (1) involve discretionary activities, (2) are ambiguous, and/or (3) are fast moving. It is the discretionary activities on the part of police that are susceptible to bias; or, in other words, decisions for which officers have no discretion will not be impacted by their biases. An example of a non-discretionary activity is a search incident to a lawful arrest. While it is possible that the selection of the person for arrest was based on biases, once the arrest is made, the person *will be searched*. This search is non-discretionary and thus cannot be impacted by officer biases. In the same vein, if an agency has a 0 % or 100 % enforcement policy for certain situations, the implementation of the police activity at the line level (assuming adherence to the policy) will not be biased. If the agency has decided never to enforce possession laws for small amounts of marijuana or has

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[18]In fact, research indicates that individuals who perceive themselves to be objective make more biased decisions than those who do not (Kang et al. 2012).

decided that every student on a campus with a knife (regardless of the nature of the person or knife) will be taken into custody, then, assuming that the police personnel abide by these policies, their action not to arrest a person with a small amount of marijuana or their act of taking into custody a knife-carrying student will be bias-free.

In contrast, the potential risk of bias manifesting in *highly discretionary* activities might be inferred from the experience of a municipal agency that was aggressive in its use of field interrogation cards. The agency leaders directed their personnel to engage in frequent consensual encounters and to collect and record information such as the person's name and location. The line personnel were told that this information could be valuable in preventing and solving crimes in the relevant areas, but they were given no formal guidance as to whom to engage for this purpose and under what circumstances. Some community members were very critical of this practice and accused the agency of targeting people of color, particularly, Blacks for these frequent encounters; and, indeed data showed that Blacks were disproportionately represented among the stops made by police. Asked in this context what direction the agency gave personnel about whom to stop, the response from agency leadership was, "we certainly don't tell them to target Blacks." The science implies, however, that, *barring any direction to the contrary,* officers told to engage in some high-discretion activity geared toward preventing or solving crimes will default to the group(s) they most link to crime and violence. In most humans, this will be males of color between 18 and 25.[19] This requires no animus towards those groups; it does not require conscious intention to target those groups. It requires only a human with the best of intentions—wanting to serve the community members by reducing crime in the area.

Bertrand et al. (2005) describe two other conditions that might increase the risk of implicit bias activation in a situation: ambiguity (see also Gaertner and Dovidio 2000) and time pressures (see e.g., Macrae et al. 1998; Payne 2006). The concept of ambiguity was raised above, in the context of "filling in" with stereotypes individuals who are "ambiguous stimuli." Similarly, implicit biases are activated when a person is facing ambiguous situations, and police face *many* ambiguous situations as a part of their work.

An NYPD court case and a New York state report both reference the possibility of police being impacted by biases in ambiguous situations. The first example of the potential for bias in ambiguous situations comes from the August 12, 2013 opinion of District Court Judge Shira A. Scheindlin, who held that the stop and frisk practices of the New York City Police Department (NYPD) violated Constitutional rights (*Floyd vs. City of New York).* In reflecting on a key concern in the case—the targeting of racial/ethnic minorities—Judge Scheindlin wrote, "Unconscious bias could help explain the otherwise puzzling fact that NYPD officers check 'Furtive Movements' in 48 % of the stops of blacks and 45 % of the stops of Hispanics, but

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[19]As an important reminder here: Even if stereotypes are based in part on fact, police err when they treat the individual as if s/he fits the stereotype.

only 40 % of the stops of whites. There is no evidence that black people's movements are objectively more furtive than the movements of white people" (p. 45).

The second example comes out of a 2010 report that was produced by the New York State Task Force on Police-on-Police shootings. One pattern that the task force found (for both New York State and the nation) is that the off-duty, plain clothed officers who are killed by friendly fire are disproportionately individuals of color. In discussing this finding, the task force writes (2010, p. 3):

> Our conclusion from the review is clear: inherent or unconscious racial bias plays a role in shoot/don't-shoot decisions made by officers of all races and ethnicities. The role may be small and subtle, measured during simulations only in milliseconds of action or hesitation, but the patterns … are clear and consistent.

How might the concepts of bias and ambiguity apply to these tragic friendly fire encounters? As above, the argument is that ambiguous situations are more likely to activate implicit biases; the converse then, is that *unambiguous situations* should be *less likely* to activate implicit biases. The Task Force authors described a number of these tragic incidents, including the large number that involved police of color as the victims. In many of these events, the situation had ambiguous elements that could have produced implicit biases. But let me argue the converse for one of them to highlight the role of ambiguity. Officer Omar Edwards was killed by fellow officers in Harlem in May of 2009. Edwards, an African American, was off-duty and in plain clothes when he started chasing down the person whom he had found leaning into the broken window of his (Edward's) parked car. Edwards had his service revolver out as he ran. A car with three plainclothes officers turned down a street and found the escaping car burglar running toward them, followed by this African American with his gun out. Officer Dunton stopped the car, exited, and took cover behind the passenger side door and yelled toward the person with a gun, "Police! Stop! Drop the gun. Drop the gun." Reportedly, Edwards turned toward the voices with his gun in his hand "with his elbow 'locked'" (NYS Task Force Report 2010, page 17). Dunton, facing a firearm that was pointed at him, fired his own weapon and killed Edwards.

Did Edwards' race impact this tragedy? Maybe, but the concept of ambiguity implies that, with an unambiguous, immediate threat, biases based on demographics might have no impact. The threat Dunton faced lacked ambiguity—a gun was pointing at him and his colleagues. Would Dunton have shot a White individual who had turned toward him with a weapon trained on him? Arguably yes.

Time pressures can increase the risk of implicit bias activation (Bertrand et al. 2005). Fast-moving events can be more prone to implicit biases and police are certainly exposed to these. And, indeed, the two factors—ambiguity and fast moving—can easily coexist. If an officer enters into an ambiguous situation that requires quick action, that means s/he cannot gather more information to understand the situation at hand. Similarly, in a quick-moving situation, the officer has less time to reflect on his/her first-impression interpretations of the situation and to make

corrections. As will be discussed below, *having time* to reflect on the possibility of a bias-produced misinterpretation of a situation and deciding to override those biases, is helpful for producing bias-free behavior (Lambert et al. 2003; Payne 2001).

Reducing and Managing Biases

The bad news from the science, reported above, is that even well-intentioned individuals have biases that can impact their perceptions and behavior. The good news from the science on implicit bias is that individuals can reduce and manage their biases. Indeed, some mechanisms for effectively addressing our implicit biases are different from those that might be used to address explicit ones: According to Dovidio and Gaertner (1999, p. 101.): "Whereas the traditional form of prejudice may be reduced by direct educational and attitude-change techniques, contemporary forms may require alternative strategies oriented toward the individual or involving intergroup contact." The answer is *not* trying to suppress our biases. Some individuals might claim they are color blind or gender blind or whatever-blind; others may aspire to be so. But both this claim and aspiration are highly improbable and, in fact, attempts to repress our biases can have unintended negative effects (Blair et al. 2001; Galinsky and Moskowitz 2000; Macrae et al. 1994; Monteith et al. 1998; Payne et al. 2001).[20]

Interventions start with educating individuals on implicit biases. This knowledge can help a person recognize when his/her own implicit biases manifest. That is, even though implicit biases can activate *outside of conscious awareness*, once educated, a person can become *cognizant* of them. The point was made earlier that our implicit biases do not necessarily line up with our conscious beliefs. In individuals who, at the conscious level, reject biases, stereotypes and prejudice, this recognition of their own implicit biases can motivate them to implement various mechanisms that the science shows can be used to reduce and manage biases (see Kang et al. 2012; Bennett 2010; Hernandez et al. 2013; for an overview, see Staats 2013). According to Devine et al. (2012, p. 1268): "First, people must be aware of their biases and, second, they must be concerned about the consequences of their biases before they will be motivated to exert effort to eliminate them."

Reducing and managing are linked to the concepts of "activation" of biases and "application" of biases, respectively (Gilbert and Hixon 1991; Kawakami et al. 2000). To reduce biases means that we are reducing the *activation* of stereotypes and biases in our thinking. This is neither simple, quick, nor 100 % effective, because it took us a lifetime to develop our biases. So, to the extent that biases are not eliminated, the person can still *manage* them; that is s/he can recognize activation and ensure that the biases are not "*applied*" to behavior.

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[20]Attempts to suppress stereotypes can actually make the stereotype more accessible (Galinsky and Moskowitz 2000).

Reducing Biases

As above, it took us a lifetime to develop and reinforce our biases and so it is not simple to undo them. But science has shown that biases are not fixed; they are malleable (see e.g., Blair et al. 2001; Dasgupta and Asgari 2004; Dasgupta and Greenwald 2001; Karpinski and Hilton 2001; Kawakami et al. 2000; Rudman et al. 2001). This fact opens the door to several mechanisms that can serve to reduce biases—that is thwart their *activation* (for reviews, see Blair 2002; Devine 2001; Paluck 2012; Paluck and Green 2009). Two key concepts are the "contact theory" and "exposure to counterstereotypes."

Contact Theory

Pursuant to the contact theory, an individual's biases can be reduced through positive contact with members of other groups (e.g., stereotyped groups, "out-groups"). In describing the contact theory Tausch and Hewstone (2010, p. 544) write, "The notion that contact between members of different groups can, under certain conditions, reduce prejudice is one of the most prominent ideas underlying approaches to improve intergroup relations." Allport (1954) was key in the formulation of the "contact theory" (sometimes referred to as the "contact hypotheses") and he specified "favorable conditions" for producing the desired outcome from contact with others. As above, the contact or interaction must be of a *positive nature* and, according to Allport, is most powerful when (1) the two parties are interacting with equal status; (2) the individuals have a common goal; (3) the interaction is cooperative, not competitive; and (4) the contact is externally supported (for instance, by authorities). These four conditions are not *essential* to the success of the contact theory, but rather are conditions that can facilitate its positive impact (Pettigrew and Tropp 2006).

There is considerable empirical support for the contact theory generally, and of the greater impact of it when the conditions are met (see e.g., Pettigrew and Tropp 2006, who conducted a meta-analysis of 515 studies on the contact theory). Peruche and Plant (2006) tested the power of the contact theory using 50 police officers as subjects. As part of a multi-faceted study examining implicit bias in their police subjects, the researchers measured each subject's level of Black-crime implicit bias using the "shoot, don't shoot" methodology (measuring errors) and also used a survey to assess the quantity and quality of the subject's interactions with Blacks—both on and off the job. The findings provided affirmation of the contact theory. The officers who reported more positive personal contact with Blacks manifested less racial bias in the "shoot, don't shoot" computer simulator. The implications for policing are several and will be discussed in Chap. 3 of this book.

Exposure to Counterstereotypes

Another mechanism for reducing the activation of stereotypes is "exposure to counterstereotypes." This concept is easy to assimilate. If a person has an association between a group and a negative stereotype, exposure to members of that group who reflect the *opposite* of that negative stereotype can reduce the strength of the bias. Thus, for instance, if a person believes that the long-term unemployed are lazy people who do not want to work, this stereotype will be weakened if the person is exposed to individuals who are experiencing long-term unemployment but working diligently every day to get a job. This mechanism has received significant empirical support (see e.g., Blair and Banaji 1996; Blair et al. 2001; Correll et al. 2007a; Dasgupta and Greenwald 2001; Dasgupta and Rivera 2008; Karpinski and Hilton 2001).[21] As one example, Dasgupta and Greenwald (2001) found that exposing subjects to admired Black and disliked White exemplars reduced implicit racial bias.

The concept of counterstereotypes has been linked to high quality use-of-force training. Several of the "shoot, don't shoot" studies (e.g., Correll et al. 2007b; Sadler et al. 2012 described above) found different results for their police subjects, compared to their nonpolice subjects, for one but not both of the outcome measures. Recall that Correll et al. (2007b) compared police subjects and nonpolice subjects and looked at both speed of decision-making and errors. For the speed outcome, both groups (police and nonpolice) evidenced bias; but when the researchers examined errors, they found that police were much less likely than their nonpolice counterparts to make errors and, importantly, their errors were much less likely to reflect bias. The study by Correll et al. (2007b) was summarized in an article in *The Police Chief*, wherein the authors (Correll and Keesee 2009) report:

> …the officers in these studies did show pronounced racial bias in their reaction times. Even with extensive training and experience, police still seem to call stereotypes to mind when they see a black target on the computer screen; however, the officers were ultimately able to override those associations and respond in an unbiased fashion.

The authors suggested that high quality use-of-force training might have produced this result, and the potential value of use-of-force simulator training has been linked theoretically and empirically to the concept of counterstereotypes. In theory, use-of-force role play training (such as that provided with video-simulator, judgment training) wherein the trainees are exposed to counterstereotypes (for instance, an elderly White woman who turns out to be a threat) could serve to reduce manifestation of biases in those often split-second use-of-force decisions. Several studies have assessed this empirically. Plant et al. (2005) and Plant and Peruche (2005) used "shoot, don't shoot" methods with both police and nonpolice subjects

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[21]While there is a large body of literature finding support for the effectiveness of counterstereotypes for reducing bias, there are also some recent studies that raise questions about effectiveness (see e.g., Lybarger and Monteith 2011; Schmidt and Nosek 2010). More research is needed to identify the circumstances in which exposure to counterstereotypes has, or does not have, an effect. (For more, see Staats et al. 2015.)

to see if repeated exposure to counterstereotypes would reduce the manifestation of bias. In their study with nonpolice subjects, they conducted baseline testing of bias with the "shoot, don't shoot" methods. Related to the counterstereotypes theory, the subjects saw pictures ("stimuli") that were consistent with stereotypes: a Black man with a gun or a White man without a gun; but they were just as likely to see counterstereotypes, such as a White man with a gun or a Black man without a gun. The researchers confirmed their hypothesis that repeated exposure to "shoot, don't shoot" stimuli that included counterstereotypes reduced the biased application of force and this impact persisted on retests 24 h later.[22] In essence, through this repeated exposure, the subjects learned that race was non-diagnostic of threat. The researchers report:

> …extensive practice with the program where race of face was unrelated to possession of a weapon led to the inhibition of racial concepts. Because race was non-diagnostic and paying attention to race only impaired performance on the shoot/don't shoot task, extensive exposure to the program encouraged the inhibition of the participants' racial categories (p. 152).

Plant and Peruche (2005) using police professionals as participants similarly found that repeated exposure to a ("shoot, don't shoot"-like) program, where the race of the person in the scene was unrelated to the presence of weapon, eliminated officers' bias (at least in the context of the study) in their application of force.

The unanswered question that is raised by the research of Plant and Peruche is whether the effects of the "training" will last beyond 24 h. Blair et al. (2001), based on their own research, speculate about the potential long-term impact of such exposures. Their common sense suggestion is that a single exposure would likely not produce long-term gains, but that repeated exposures over time "ought to effect more stable and long-lasting changes" (p. 838).

Below, scenario-based judgment training will be visited again and linked to an additional psychology-of-bias concept—"controlled responses"—through the studies of Correll et al. (2007a, b) and James et al. (2013, 2014, 2016).

Stereotype-Disconfirming Information and Cultural Sensitivity Training

The section above reports that biases can be reduced when a person is exposed to counterstereotypes. What if the person is not exposed to a counterstereotypical

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[22]Importantly, Correll et al. (2007b) confirmed that it was, in fact, the exposure to the opposite of the stereotype that produced this positive benefit (versus some other mechanism, such as practice). These researchers conducted a similarly study wherein in one group of subjects performed a counterstereotype version and another group of participants perform a "pro-stereotypic version"— where unarmed Whites and armed Blacks were overrepresented. Biased use of force was reduced in the subjects exposed to the counterstereotype version, but not with the group exposed to the pro-stereotypic version.

person or group, but rather exposed to *information* about the group that reflects counterstereotypes? The research indicates that exposure to counterstereotype *information* can reduce biases. According to Hall, Crisp and Suen: "…exposure to outgroup stereotype-disconfirming information related to outgroups and outgroup members can lead to a reduction in implicit prejudice" (2009, p. 245; see also Park et al. 2007; Stone and Moskowitz 2011).

This finding is directly linked to "cultural sensitivity" training that many agencies provide to their employees. The nature and quality of the courses using this label vary greatly, but the science indicates that the courses that share factual, stereotype-disconfirming information about groups can reduce biases and stereotypes.

Blurring the Lines and Perspective Taking

Two additional mechanisms overlap with the *contact theory* and *exposure to counterstereotypes* concepts. They are "blurring the lines" and "perspective taking." Regarding the first, processes/activities that help reduce the distinction between "we" and "they" can reduce both explicit and implicit biases. Or said another way, processes that facilitate "they" becoming part of "us" can reduce biases (Hall et al. 2009; Woodcock and Monteith 2012). According to Hall et al. (2009, p. 246): "Reducing the distinction between 'us' and 'them' means that 'they' cannot be evaluated less positively than 'us'." In their study, these researchers found that the subjects who engaged in a task that required them to list characteristics that were common to both the ingroup and outgroup, manifested less implicit bias against the outgroup than their control group counterparts.

"Perspective taking" can also reduce biases (Galinsky and Moskowitz 2000). As reported by Staats (2014, p. 21), "taking the perspective of others has shown promise as a debiasing strategy, because considering contrasting viewpoints and recognizing multiple perspectives can reduce automatic biases." According to researchers, perspective taking "inspires empathy arousal" (Vescio et al. 2003, p. 456). For instance, Vescio et al. (2003) found that subjects who were encouraged to adopt the perspective of an African American who spoke about the challenges he faced by being part of a negatively stereotyped group reported more favorable attitudes toward African Americans. Similarly, Shih et al. (2013) demonstrated that perspective taking and empathy reduced implicit biases against Asian Americans.

Both of these concepts—blurring the lines and perspective taking—can be linked to the contact theory and exposure to counterstereotypes. Regarding contact theory, having positive contact can reduce the extent to which a person differentiates him/herself from others; getting to know people who are different from ourselves in a positive interaction can help us understand that we are more similar than different (blurring the lines). According to Hall et al., "… reduced differentiation is the key cognitive component of contact strategies" (2009, p. 250).

Similarly, the positive interactions may produce opportunities for perspective taking which would enhance the power of the contact to reduce biases.

Managing Biases Through Self-regulation

The processes described above can be used to reduce the *activation* of a stereotype or bias. No one imagines, however, that we can totally rid ourselves of our biases, so it is important that there is another mechanism to impact the *application* of stereotypes to behavior. If we recognize our implicit biases and are motivated to be fair and impartial, we can "self regulate" (Monteith 1993; Monteith et al. 2002; Monteith et al. 2010); we can choose to override our biases and implement bias-free behavior. The social scientists refer to these bias-free behaviors as "controlled responses" or "controlled processes" (Devine 1989).

Self-regulation is based on three components: (1) awareness, (2) motivation, and (3) controlling behavior (see Devine 1989; Devine et al. 2012). Above, I discussed the importance of awareness—that is, awareness of our implicit biases—and how it can produce motivation in people who want to be fair and impartial. Managing or regulating our biases—if we are aware and motivated—is as simple as choosing to implement bias-free behavior. If we are unaware of our biases or unconcerned about them, the default behavior will be biased. But, according to Devine, a motivated individual can displace those default biased behaviors with behaviors that are bias-free; a strong body of research indicates that motivated individuals can "exert control over their prejudiced responses" (Devine et al. 1991; Monteith et al. 2010; Monteith 1993; Monteith 1996; Monteith et al. 1993; Monteith et al. 1998).

There are, however, threats to our ability to manage biases (see review in Staats 2013). As previewed above, time pressures can thwart efforts at control (see Bertrand et al. 2005; Correll et al. 2007b; Payne 2006) as can "cognitive busyness" (see e.g., Correll et al. 2015). Both of these have great relevance to policing decisions. Regarding the cognitive busyness, Gilbert and Hixon (1991) found that, when individuals are facing "multiple demands, complex tasks, time pressures" (Reskin 2005, p. 34), there is an increased chance that they will act on an activated stereotype.[23]

The time factor is relevant to a study discussed above that was conducted by Correll et al. (2007b), which put both police subjects and nonpolice subjects through the "shoot, don't shoot" methods. This study provided good news regarding the benefits of high quality use-of-force training, but also how implementing controlled responses can take some time—even if only a fraction of a second. Recall, that the results regarding *speed of decision-making* evidenced

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[23]Gilbert and Hixon (1991) reported that the cognitive busyness made it less likely that a stereotype would activate, but more likely, if activated, to produce a biased response.

"robust racial bias" on the part of both police and nonpolice subjects. The officer subjects were slower to act when the race and armed status were inconsistent with stereotypes (e.g., they faced an unarmed Black or an armed White). But, importantly, in terms of *errors* (shooting the unarmed person or not shooting the armed person), the police subjects were much less likely to manifest bias in their actions compared to the nonpolice subjects. From these results, Correll and his colleagues suggested that the combined results regarding speed and errors indicated that the officers were taking time (even if just a split-second) to implement *controlled responses* to thwart their natural biases (see Correll et al. 2014; Sim et al. 2013).

Fatigue may also reduce a person's ability to implement controlled responses, although the research is mixed. Two studies (Govorun and Payne 2006; Ma et al. 2013) showed that fatigue increased the manifestation of bias in weapon recognition and "shoot, don't shoot" studies, but James et al. (2015) showed no impact of fatigue on subject's performance on the IAT or in shooting simulation tasks.

Some very interesting and concerning research indicates that these police "controlled responses" can go too far—potentially putting officers in danger. Lois James, in her dissertation research (subsequently published in James et al. 2013, 2014) and subsequent research (James et al. 2016), examined implicit biases linking race/ethnicity to threat using more advanced "shoot, don't shoot" methods. Previous researchers had shown research subjects still photos portraying individuals with weapons or neutral objects in their hands or superimposed on their heads, and required the subjects to very quickly indicate by pressing keys whether the person was a threat ("shoot") or not a threat ("don't shoot"). Advancing these methods, James and colleagues developed scenarios like those used in police video training— wherein the officer "interacts" with an unfolding situation and ultimately has to decide whether the person in the scene is a threat or not, requiring force or not. The scenarios were developed to capture the complexity and tension of force encounters. Subject race varied in the scenarios—using Black, White or Hispanic individuals; all other variables were controlled so that the researchers could determine whether and how subject race/ethnicity impacted on the officers' decisions to shoot. As with the more traditional "shoot, don't shoot" studies, the study participants were supposed to shoot the people in the videos who posed a danger and not shoot those who were not. Outcome measures were errors and reaction time and the study participants included police officers.

The biases that James found in her police subjects were *opposite* of those found in prior studies. The police participants took *longer* to shoot Black subjects compared to Hispanic and White subjects and were less likely to shoot unarmed Black individuals than unarmed White or Hispanic individuals. In fact, officers were slightly more than three times less likely to shoot an unarmed Black person than an unarmed White person (James et al. 2016; see also Cox et al. 2014).

James et al. (2016) did not argue that the Black-crime implicit bias did not exist in these police subjects and in fact, a component of the research included a confirmation of a Black-crime implicit bias in the subjects. Instead, the researchers suggested several possibilities that are consistent with the implementation of controlled responses. James et al., conjectured that, because of the controversy

surrounding the disproportionate shooting of Blacks, the study participants, although not told that racial bias was being studied, may have made an effort to be unbiased. Another possibility, the one they thought the most likely, is that the subjects manifested a "behavioral 'counter-bias' due to real-world concern over discipline, liability, or public disapproval" (p. 206). According to James et al, "This behavioral 'counter-bias' might be rooted in people's concerns about the social and legal consequences of shooting a member of a historically oppressed racial or ethnic group" (2014, p. 336). These studies were conducted *before* the events in Ferguson in 2014 reignited the national debate over race and police use of force, however even before August 2014 many officers may have been concerned about the consequences of using force, especially deadly force, against a Black person. They might have been concerned about departmental sanctions, prosecution, media attention, or even the safety of their families.[24] The consequences of a counter-bias phenomenon could be great. It may be that the controversy surrounding police racial bias could lead officers to hesitate when dealing with racial/ethnic minority subjects and put their own lives—or the lives of others—in danger.

James and I (James et al. 2016) summarize the three lines of research that identify factors that might impact officers' split-second decisions to shoot: (1) their human race-crime implicit biases, (2) the nature and quality of their use-of-force training, and (3) "counter bias" that might be precipitated by concerns about the consequences of using force against a racial/ethnic minority. As we explain (2016): "The strength of each of these forces will vary across officers, jurisdictions, and time periods—depending on personal characteristics, the nature and frequency of training, and the local and national (socio-political atmosphere)." The policy and training implications for these three lines of study are discussed elsewhere in this book.

Conclusion

The bad news from the science is that even well-intentioned individuals have biases that can impact their perceptions and behavior—producing discriminatory behavior. The good news from the science is that individuals, once educated on the science of implicit bias, can impact those biases. As above, individuals can both reduce and manage their biases—that is, they can impact the *activation* of the biases, and when that does not fully work, they can still negate the *application* of their biases to behaviors. Motivation was introduced as a key concept. Knowledge of our biases can induce motivated individuals to utilize the mechanisms described in this section. But even unmotivated individuals can be impacted by these processes. That is, there are ways that law enforcement agency leaders could harness these

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[24]Evidence of this concern on the part of officers can be found among the anecdotes in David Klinger's 2004 book, *The Kill Zone: A Cop's Eye View of Deadly Force*.

mechanisms and impact even unmotivated individuals. They could manage their personnel in such a way as to enhance positive contact with diverse groups, blur the lines, expose their officers to stereotype disconfirming information, and enhance perspective taking. For instance, as discussed more fully below, an agency could implement street strategies wherein officers—motivated or otherwise—have positive contact with diverse individuals—reducing biases. But the greatest power of these mechanisms is in the context of individuals who *want* to be fair and impartial. Because of that limitation, we cannot rely on individual patrol officers and first-line supervisors within police agencies to ensure agency-wide fair and impartial policing on the streets of the jurisdiction. That is, we are not done if we raise consciousness and give motivated officers tools to be fair and impartial. More is required. We need agency leaders to implement various strategies that promote bias-free policing. Chapter 3 provides agency leaders with the tools they need to promote fair and impartial policing—based on the science of bias.

Producing Bias-Free Policing
A Science-Based Approach
Fridell, L.
2017, IX, 117 p. 1 illus., Softcover