Stereotype Threat and Racial Differences in Citizens' Experiences of Police Encounters

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We conducted 2 studies to investigate how cultural stereotypes that depict Blacks as criminals affect the way Blacks experience encounters with police officers, expecting that such encounters induce Blacks to feel stereotype threat (i.e., concern about being judged and treated unfairly by police because of the stereotype). In Study 1, we asked Black and White participants to report how they feel when interacting with police officers in general. As predicted, Blacks, but not Whites, reported concern that police officers stereotype them as criminals simply because of their race. In addition, this effect was found for Black men but not Black women. In Study 2, we asked Black and White men to imagine a specific police encounter and assessed potential downstream consequences of stereotype threat. Consistent with Study 1, Black but not White men anticipated feeling stereotype threat in the hypothetical police encounter. Further, racial differences in anticipated threat translated into racial differences in anticipated anxiety, self-regulatory efforts, and behavior that is commonly perceived as suspicious by police officers. By demonstrating that Blacks might expect to be judged and treated unfairly by police because of the negative stereotype of Black criminality, this research extends stereotype threat theory to the new domain of criminal justice encounters. It also has practical implications for understanding how the stereotype could ironically contribute to bias-based policing and racial disparities in the justice system.

Keywords: stereotype threat, race, nonverbal behavior, police, racial profiling

There is an abundance of scientific research demonstrating harmful consequences of negative beliefs about Blacks. Particularly relevant for understanding the origins of racial disparities in criminal justice outcomes is the widely documented stereotype that depicts Blacks as violent and prone to crime (see, e.g., Oliver, 2003; Rome, 2004; Welch, 2007). Duru (2004) traced the roots of this stereotype to the 16th century, when European explorers first encountered and enslaved Black men. However, contemporary studies show that this stereotype continues to be a part of our culture. For instance, aggressiveness and a tendency toward violence are identified as stereotypical attributes of Blacks by both Whites and Blacks (Krueger, 1996; Madon et al., 2001) and

criminality and hostility are among the features most commonly endorsed as stereotypic of Blacks by both high-prejudiced and low-prejudiced Whites (Devine, 1989; Devine & Elliot, 1995).

A substantial body of psychological research has established that the cultural stereotype of Black criminality can have a subtle yet biasing influence on the way that people perceive individuals, process information, and form judgments, even absent any conscious bias on the part of the perceiver (e.g., Devine, 1989; Eberhardt, Goff, Purdie, & Davies, 2004). By causing the concepts of race and crime to be automatically and inextricably linked, with thoughts of one leading to thoughts of the other, the Black criminal stereotype can unconsciously and automatically influence what police officers see when they encounter Black citizens, how officers interpret what they see, and how they decide to act in response (Devine, 1989; Duncan, 1976; Eberhardt et al., 2004; Graham & Lowery, 2004; Hurwitz & Peffley, 1997; Payne, 2001), including determining whether to shoot a suspect (Correll, Park, Judd, & Wittenbrink, 2002, 2007; Correll, Park, Judd, Wittenbrink, Sadler, et al., 2007; Correll, Urland, & Ito, 2006).

However, for all the recent attention psychologists have paid to how negative stereotypes can influence perceptions and behaviors toward groups perceived as criminal, there has been relatively little attention paid to how the stereotypes might influence the attitudes and behaviors of the targets themselves. Notable exceptions include Najdowski (2011) and Davis and Leo (2012). Najdowski (2011) suggested that Blacks experience stereotype threat in police encounters, and that this threat can have meaningful deleterious

effects on encounters with law enforcement figures. Stereotype threat is the concern one experiences when at risk of being perceived in light of a negative stereotype that applies to one's group (Steele, 2010; Steele & Aronson, 1995; Steele, Spencer, & Aronson, 2002). Najdowski argued that, in light of the prevalence and power of stereotypes regarding Black criminality, Blacks are concerned they will be judged and treated unfairly by police, in line with those stereotypes. This is concerning because stereotype threat has been shown to have ironic effects on performance and behavior, which inadvertently increase an individual's likelihood of confirming the stereotype (e.g., Bosson, Haymovitz, & Pinel, 2004; Goff, Steele, & Davies, 2008; Steele & Aronson, 1995). As reviewed by Najdowski, stereotype threat might cause Blacks to feel anxious and engage in self-regulatory efforts (e.g., vigilance to threat-related cues, active monitoring efforts) when interacting with the police. As a consequence, Blacks may be more likely than Whites to behave in ways that police commonly perceive as indicative of deception, increasing the likelihood that innocent Blacks will be misclassified as guilty by police. Davis and Leo (2012) further suggested that self-regulatory efforts deplete cognitive capacities in ways that compromise threatened individuals' ability to resist pressure to confess in interrogations. Thus, criminal-justice-related stereotype threat could fundamentally shape Blacks' encounters with the criminal justice system and provoke racial disparities not explained by the intentions of police officers, lawyers, or judges.

Considering this theoretical avenue to racial disparities in adverse criminal justice consequences (e.g., wrongful accusations, arrests, convictions; false confessions; etc.), we sought to begin the critical work of understanding whether Blacks do, in fact, experience stereotype threat in criminal justice encounters. Specifically, in two studies, we investigated whether police encounters create stereotype threat and, thus, different psychological experiences of those encounters for Blacks as compared with Whites. In Study 1, we asked participants to report how they feel when interacting with police officers in general. We also explored whether racial differences in police-related stereotype threat might be moderated by participants' gender. In Study 2, we asked participants to imagine a specific hypothetical police encounter and assessed potential downstream consequences of stereotype threat. Our primary hypothesis was that Blacks, but not Whites, would report experiencing and being affected by stereotype threat in criminal justice encounters. To our knowledge, this research is the first to empirically evaluate how stereotype threat might affect Blacks in situations in which interpersonal interactions can influence justice-relevant outcomes.

Study 1

The majority of research on Blacks' experiences of stereotype threat has focused on understanding the consequences of negative stereotypes related to intelligence. In their seminal research on this phenomenon, Steele and Aronson (1995) showed that when the stereotype that Blacks are low in intelligence is salient, Black students underperform relative to White students on standardized tests. According to Steele and colleagues (2002), however, "All people have some group or social identity for which negative stereotypes exist. . . . And when they are doing things in situations where those stereotypes might apply, they can experience this

threat" (p. 390). Najdowski's (2011) hypothesis that police encounters serve as a setting for Blacks to experience stereotype threat is supported by research documenting a negative stereotype that depicts Blacks as prone to crime (Devine, 1989; Devine & Elliot, 1995). Most Blacks are aware of this stereotype. For example, Sigelman and Tuch (1997) found that 82% of Blacks think they are perceived as violent by Whites, and Cheryan and Monin (2005) found that 20% of Blacks reported being misperceived as criminals by strangers. Blacks are more likely than Whites to think that racial profiling is widespread (Carlson, 2004; Ludwig, 2003) and to think they are treated unfairly by police, both in general (Hagan & Albonetti, 1982; Hagan, Shedd, & Payne, 2005) and in actual criminal justice encounters (Ludwig, 2003). To our knowledge, however, that criminological and sociological research has not been connected to the literature on stereotype threat. This connection is important to make because it allows us to not only understand racial differences in attitudes toward the police and perceptions of criminal injustice, but to also take the next step and gain insights into how those attitudes and perceptions lead Blacks and Whites to have different psychological experiences of police encounters. In line with Najdowski (2011), we predicted that Blacks, but not Whites, experience stereotype threat in police encounters as concern about being perceived as guilty for crimes not committed. We tested this by surveying Blacks and Whites regarding the extent to which they worry about being perceived unfairly by police officers.

We also sought to test whether gender is associated with the level of stereotype threat individuals report experiencing in police encounters. The stereotype of criminality is associated more commonly not only with Blacks than Whites, but also with men rather than women and, in particular, Black men as compared with Black women (Navarrete, McDonald, Molina, & Sidanius, 2010; Plant, Goplen, & Kunstman, 2011; Quillian & Pager, 2001; Rome, 2004; Sidanius & Veniegas, 2000; Timberlake & Estes, 2007). Thus, we expected a gender-related difference in police-related stereotype threat to manifest among Black participants, but not White participants.

Method

Participants. Participants were 49 Black (37% men) and 184 White (52% men) undergraduate psychology students from the University of Illinois at Chicago. Participants were 19 years old on average ($SD = 3$ years, range $= 17$ to 38 years).

Measures.

Stereotype threat scale. Five items from a modified version of the Explicit Stereotype Threat Scale (Goff, Steele, & Davies, 2008; Marx & Goff, 2005; Marx, Stapel, & Muller, 2005) assessed stereotype threat specific to police encounters (e.g., "I worry that police officers might stereotype me as a criminal because of my race"). Responses were given on a 7-point scale ranging from -3 (*strongly disagree*) to 3 (*strongly agree*) and averaged. This scale has been reliable in past research (αs = .76–.85; Goff, Steele, & Davies, 2008; Marx & Goff, 2005; Marx et al., 2005) and it was also reliable in the current study (overall: $\alpha = .77$, M interitem correlation $= .42$; Blacks: $\alpha = .85$, M interitem correlation $= .53$; Whites: $\alpha = .69$, M interitem correlation $= .35$).

Demographic factors measures. Participants reported their sex (as a proxy for gender), age, and race/ethnicity.

Procedure. In exchange for course credit, undergraduate introduction to psychology students completed a self-report survey assessing their experiences of police-related stereotype threat and demographic factors in class, along with various unrelated questionnaires submitted by other researchers during a mass-testing session. All participants were treated according to the guidelines of the University of Illinois at Chicago Institutional Review Board (IRB).

Results

As hypothesized, a 2 (Race: Black, White) × 2 (Gender: Men, Women) between-subjects analysis of variance revealed a significant main effect of race on the stereotype threat scale, $F(1, 229) = 78.58$, $p < .001$, Cohen's $d = .57$, 95% confidence interval (CI; [.43, .70]). Specifically, Blacks were significantly more likely than Whites to agree that they experience stereotype threat in police encounters (see Figure 1).

Neither the main effect of gender, $F(1, 229) = 3.37$, $p = .07$, $d = .00$, 95% CI [−.08, .08], nor the Race × Gender interaction effect reached a significant level, $F(1, 229) = 2.68$, $p = .10$, partial $\eta^2 = .01$. Even so, t tests comparing each subsample's mean score on the stereotype threat scale to the scale midpoint revealed that, whereas both White men, $t(95) = −11.33$, $p < .001$, $d = −1.16$, 95% CI [−1.41, −.90], and White women, $t(87) = −11.77$, $p < .001$, $d = −1.25$, 95% CI [−1.53, −.97], significantly disagreed that they experienced stereotype threat in police encounters, Black women neither significantly disagreed nor agreed, $t(30) = .24$, $p = .81$, $d = .04$, 95% CI [−.31, .39], and Black men significantly agreed, $t(17) = 2.32$, $p = .03$, $d = .55$, 95% CI [.04, 1.04] (see Figure 1).

Discussion

Results of Study 1 revealed that Black participants were significantly more likely than White participants to report concerns about being racially stereotyped by police officers. Furthermore, in line with Najdowski's (2011) and our primary hypothesis, Black men, but not Black women, White men, nor White women, agreed that they feel concerned that police officers might judge them unfairly and stereotype them as criminals. This finding is interest-

ing in light of Goff, Thomas, and Jackson's (2008) intersectional research showing that, compared with White women, Black women are perceived as more masculine and are more often miscategorized as men. On the one hand, for Black women in the context of police encounters, stereotypes associating Black men with criminality may be more salient than those associating "Blackness" with masculinity. On the other hand, recent work by Thomas, Dovidio, and West (2014) suggests that Black women become socially invisible and are less likely than Black men to be categorized according to either race or gender. Although this "intersectional invisibility" (Purdie-Vaughns & Eibach, 2008) is associated with a host of unfavorable social and political consequences, it might confer the benefit of protecting Black women from the negative stereotype of Black criminality. Future research should explore these ideas.

A limitation of this study is that the questions about police encounters were very abstract. Participants might have had difficulty thinking about how they would feel in police encounters (see, e.g., Ayton, Pott, & Elwakili, 2007), particularly if they had not had much previous experience interacting with the police. It is possible that they envisioned different kinds of police encounters, and therefore, situations that varied in terms of how likely it would have been for the police officer to target them as suspects. If this method did not facilitate the feeling of a realistic encounter, our findings might underestimate the concerns of participants. Study 2 was conducted to address this limitation and expand our understanding of Blacks' anticipated experiences of police-related stereotype threat.

Study 2

In Study 2, following Archer, Foushee, Davis, and Aderman (1979) and Haegerich and Bottoms (2000), we asked participants to imagine that they were experiencing a very specific hypothetical police encounter in which it is clear that the officer is in close proximity to and sees the participant, which was not obvious in Study 1. Participants were asked to visualize how they would feel if they were in that situation, allowing us to conduct a better test of our primary hypothesis. We also added new implicit measures of stereotype threat to determine the extent to which thinking about the hypothetical police encounter automatically activated and increased cognitive accessibility of the stereotype of Black criminality. Because stereotypes are activated more in threatened than nonthreatened individuals (Goff, Steele, & Davies, 2008; Steele & Aronson, 1995), evidence of stereotype activation might be indicative of stereotype threat. We also assessed stereotype threat more explicitly by asking participants to report their expectations regarding the hypothetical police officer's next actions. We were interested in whether Blacks would be more likely than Whites to expect the officer to initiate investigatory contact with them. The inclusion of these additional measures facilitated a more thorough test of the predicted racial difference in experiences of police-related stereotype threat.

We also sought to explore some of the downstream effects of stereotype threat on Blacks' experiences in police encounters. As mentioned previously, ironically, stereotype threat can increase an individual's likelihood of performing or behaving in ways that confirm the stereotype (e.g., Steele & Aronson, 1995). How might this occur in the context of criminal justice settings? Could the
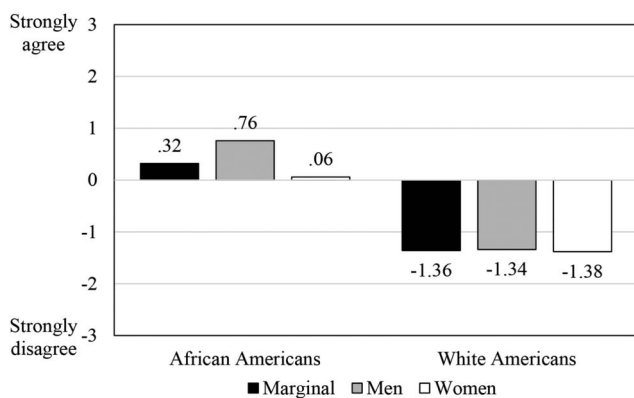

Figure 1. Study 1: Mean ratings of stereotype threat as a function of participant race and gender.

stereotype of Black criminality increase the likelihood that Blacks will be perceived as criminals? Najdowski (2011) hypothesized that, as a consequence of stereotype threat, Blacks are more likely than Whites to experience anxiety and engage in self-regulatory efforts and, in turn, more likely to engage in nonverbal behaviors that police commonly perceive as deceptive or suspicious.

Indeed, researchers agree that anxiety and self-regulatory efforts are integral components of the psychological process by which threat negatively affects performance and behavior (Major & O'Brien, 2005; Richeson & Shelton, 2007, 2012; Schmader, Johns, & Forbes, 2008). On the one hand, compared with nonthreatened individuals, those under stereotype threat experience more anxiety-related physiological arousal, including increased blood pressure (Blascovich, Spencer, Quinn, & Steele, 2001; Lehman & Conley, 2010) and cardiovascular reactivity (Mendes, Blascovich, Lickel, & Hunter, 2002; Mendes, Major, McCoy, & Blascovich, 2008). Further, anxiety translates into behavior. For instance, Harrigan and O'Connell (1996) found that the more uncomfortable, nervous, and apprehensive participants reported feeling while describing the most anxious event they had ever experienced, the more they blinked their eyes, displayed fearful facial expressions, and had movements across their entire faces (see also Gregersen, 2005; Waxer, 1977).

On the other hand, individuals who experience stereotype threat have been shown to self-regulate by becoming vigilant to cues to determine whether they are (a) at risk of being stereotyped and (b) behaving in ways that confirm the stereotype. Such vigilance can disrupt automatic behaviors by bringing them to the forefront of consciousness (Beilock, Jellison, Rydell, McConnell, & Carr, 2006; Schmader et al., 2008). For example, compared with nonthreatened women, women who are faced with the stereotype that men are better at math are more cognitively vigilant to details about the setting in which threat is induced (Murphy, Steele, & Gross, 2007) and devote more of their thoughts to worrying about and monitoring their performance on math problems (Beilock, Rydell, & McConnell, 2007). Furthermore, an extensive literature shows that individuals who think that others have negative beliefs or expectations about them take measures to try to disprove those negative expectations (e.g., Cook, Arrow, & Malle, 2011; Hilton & Darley, 1985; Smith, Neuberg, Judice, & Biesanz, 1997; for review, see Miller & Myers, 1998). Staples (2007) described one such attempt. As a Black man walking through city streets at night, he recognized that others perceived him as a danger—"a mugger, rapist, or worse" (p. 186). To appear less threatening, Staples began whistling classical music during his walks.

The research reviewed suggests that in the context of police encounters, compared with nonthreatened Whites, threatened Blacks might be more anxious, more vigilant to cues from police officers about whether they will be accused of crime, and more likely to try to reduce this risk by overcontrolling or engaging in counterstereotypical behaviors. However, these psychological effects might manifest in ways that lead police officers to misclassify innocent individuals who are Black as guilty more often than those who are White. In support, individuals under stereotype threat have been shown to display some of the same behaviors that police commonly perceive as suspicious. For example, Vorauer and Turpie's (2004) research on prejudice concerns in interracial interactions revealed that White Canadians who were concerned about how they would be appraised by First Nations Canadian interaction partners engaged in less eye contact than nonthreatened White Canadians (see also Shelton, 2003). Furthermore, Bosson and colleagues (2004) found that, compared with nonthreatened gay men, gay men who were primed to think of the stereotype that depicts gay men as child molesters were perceived by observers as more anxious during interactions with children. Such findings are concerning because, in general, police erroneously believe that lying or guilty individuals are more likely than truthful or innocent individuals to, for example, avoid eye contact and avert their gaze (Akehurst, Köhnken, Vrij, & Bull, 1996; Mann, Vrij, & Bull, 2004; Strömwall & Granhag, 2003; Vrij, Akehurst, & Knight, 2006; Vrij & Mann, 2001; Vrij & Taylor, 2003); appear anxious, tense, or nervous (Akehurst et al., 1996; Vrij et al., 2006; Vrij & Winkel, 1992); smile (Vrij & Semin, 1996), or try to control their behavior and speech (Mann & Vrij, 2006; Vrij et al., 2006). The correspondence of nonverbal behaviors caused by stereotype threat, anxiety, and self-regulatory efforts and those that the police associate with deception might put innocent Blacks at greater risk than Whites of being perceived as suspicious or guilty by police.

We explored this possibility in Study 2 by comparing Black and White men's anticipated anxiety, self-regulatory efforts, and behavior in the hypothetical police encounter. Following Najdowski (2011), we predicted that Black men, but not White men, would expect to experience stereotype threat in the police encounter, and, in turn, Black men would anticipate feeling more anxiety and engaging in more self-regulatory efforts than White men. Ultimately, we expected this sequence to increase the likelihood that, relative to White men, Black men would imagine engaging in more nonverbal behaviors that police commonly perceive as deceptive.

Method

Participants. Participants were 79 Black and 100 White men from two samples: (a) undergraduate psychology students from the University of Illinois at Chicago and (b) from contexts where students were likely to be (e.g., on campus). See the procedure section for more details about the samples and their recruitment. The first sample was predominantly White (94%) whereas the second sample was predominantly Black (96%), and this difference in racial composition was significant, $\chi^2(1, N = 179) = 144.40$, $p < .001$, $\varphi = .90$, 95% CI [.80, .95]. On average, participants were 21 years old ($SD = 5$ years), although men in the first sample were significantly younger than men from the second sample ($M = 19$, $SD = 3$, and range = 17 to 52 years old vs. $M = 24$, $SD = 6$, and range = 15 to 43 years old), $t(330) = -9.39$, $p < .001$, $d = -1.42$, 95% CI [-1.73, -1.10]. Most participants were U.S. citizens in both the first (95%) and second (97%) samples, $\chi^2(1, N = 176) = .54$, $p = .46$, $\varphi = .06$, 95% CI [$-.11$, .15].

Materials.

Demographic factors measures. Participants reported their sex (as a proxy for gender), age, race/ethnicity, and U.S. citizenship status.

Thought-induction task. Instructions modified from Archer and colleagues (1979) and Haegerich and Bottoms (2000) were used to engage participants in active imagery concerning the hypothetical police encounter. Specifically, participants were told to:

> Take a few minutes to read the next paragraph slowly and carefully. Imagine what it would be like if you were in the situation described

below. Try hard to put yourself in the situation and really think hard about how you would be feeling in the situation. Think long and hard about how you would react. Try to reflect upon the way you would feel if you were in these circumstances.

Next, participants read this description of a hypothetical police encounter:

It's about 10:00 p.m. and you're on your way home for the night. You just got off the bus and you're walking down the street carrying a backpack filled with various things you needed throughout the day. Only two more blocks and you'll be home. Before you cross the street to get to your building, a police officer walks out of the corner convenience store, a little ways in front of you. When he sees you, he stops and stands there. The officer is obviously watching you as you approach.

Participants received two prompts to reinforce the thought induction. Specifically, before completing any measures, participants read, "In your mind's eye, perhaps you can visualize how it would feel for you to be in this situation." Before beginning the word-stem completion task, participants were reminded, "Please continue to imagine how you would feel in this situation as you complete this questionnaire."

Stereotype threat measures. Stereotype threat was measured implicitly as stereotype activation via spontaneous reactions to the thought-induction task and a word-stem completion performance. It was measured explicitly via general expectations regarding the hypothetical police officer's actions, expectations about being accused of wrongdoing, and the expected stereotype threat scale.

Spontaneous reactions. Stereotype activation was coded as *yes* or *no* based on participants' spontaneous reactions to the questions "How would you feel? What would you be thinking? How would you react?" The stereotype was considered to be activated when participants made spontaneous references to either (a) the stereotype of Black criminality or (b) concern about being perceived as a criminal because of a stereotype about a group to which they belonged. Two independent raters coded a random sample of responses (20%) and achieved interrater agreement of 99%. Disagreements were resolved by discussion. One rater coded the remaining data.

Word-stem completion performance. A word-stem completion task also assessed stereotype activation, following Goff, Steele, and Davies (2008) and Steele and Aronson (1995). In pretesting, 49 students and community members (10% Black, 47% White, 16% Asian American, 18% Hispanic/Latino, 2% other, and 6% multiracial; 53% men; *M* age = 24, *SD* = 7, range = 18 to 50 years old) listed words associated with the stereotype that Blacks are criminals. The 20 most common words were then selected and given to 25 other students and community members (28% Black, 68% White, and 4% Hispanic/Latino; 52% men; *M* age = 31, *SD* = 15, range = 18 to 66 years old), who rated each word for how strongly related it is to the target stereotype. The eight highest rated words were selected for use as stereotype-related stems in the word-stem completion task.

For each of the eight stereotype-related words (i.e., criminal, guns, drugs, poor, gangs, ghetto, thugs, and violent), two or three letter spaces were omitted so that the word stem could be completed with other, nonstereotype-related words (e.g., _R_ _INAL). These target word stems were intermixed randomly with 13 filler

word stems that cannot be completed as words that would fit the stereotype (i.e., product, lunch, sheet, glove, blowing, sharing, reason, eraser, mover, funny, house, and stick). Participants were instructed to complete all 20 word stems with the first real words that came to their minds and to work quickly as they completed this task.

Stereotype activation was calculated as the ratio of target word stems the participant filled out in a stereotype-relevant manner (e.g., *CRIMI*NAL as opposed to *ORIGI*NAL) divided by the total number of target word stems the participant completed. Thus, higher scores on this measure reflect greater activation of the Black criminal stereotype.

Expectations about the officer's actions. Participants' open-ended responses to the question, "What do you imagine the police officer would do next?" were coded as 1 (*positive*), 2 (*neutral*), or 3 (*negative*). Expectations about the officer's actions were considered positive when participants' responses reflected beliefs that the officer would initiate a positive or beneficial interaction or outcome (e.g., "I would imagine the officer will protect me"); neutral when participants believed he would engage in a neutral interaction or outcome (e.g., "Say 'hello' as I walked past"); and negative when participants thought he would watch the participant with suspicion, stop or question the participant, or actively accuse the participant of wrongdoing (e.g., "Try to figure out if I was a criminal," "Approach me and maybe frisk me"). Two independent raters coded a random sample of responses (20%) and achieved interrater agreement of 92%. Disagreements were resolved by discussion. One rater coded the remaining data.

Expectations about being accused. Participants' expectations that they would be accused of wrongdoing by the officer were assessed by the question, "How concerned would you be that the police officer might accuse you of doing something wrong?" Responses were given on a 5-point scale ranging from 1 (*not at all concerned*) to 5 (*extremely concerned*), such that higher scores on this measure reflect greater anticipated concern about being accused of wrongdoing.

Expected stereotype threat scale. The 5 items from the modified version of the Explicit Stereotype Threat Scale (Goff, Steele, & Davies, 2008; Marx & Goff, 2005; Marx et al., 2005) used in Study 1 were further adapted to assess anticipated stereotype threat in the police encounter described (e.g., "I would worry that the police officer might stereotype me as a criminal because of my race). As in Study 1, responses were given on a 7-point scale ranging from −3 (*strongly disagree*) to 3 (*strongly agree*) and averaged to create the expected stereotype threat scale (overall: α = .92, *M* interitem correlation = .68; Blacks: α = .90, *M* interitem correlation = .64; Whites: α = .83, *M* interitem correlation = .59). Higher scores on this scale reflect greater expected stereotype threat in the hypothetical police encounter.

Anticipated anxiety scale. Seven items were created to assess anticipated anxiety in the hypothetical police encounter. Specifically, participants indicated the likelihood that they would feel anxiety when they encountered the police officer in the situation described (e.g., "I would feel anxious," "I would feel nervous," and "I would feel stressed"). Responses were given on a 5-point scale ranging from 1 (*not at all likely*) to 5 (*extremely likely*) and averaged to create the anticipated anxiety scale (overall: α = .89, *M* interitem correlation = .54; Blacks: α = .86, *M* interitem correlation = .46; Whites: α = .91, *M* interitem correlation = .60).

Higher scores on this scale reflect greater likelihood of feeling anxious in the hypothetical encounter.

Anticipated self-regulatory efforts scale. Eight items were created to assess the extent to which participants thought it was likely they would think self-regulatory thoughts (i.e., thoughts directed at being vigilant to threat-related cues or self-monitoring efforts) in the hypothetical police encounter (e.g., "I would deliberately pay attention to how I was acting," "I would wonder what the police officer thought of me," and "I would be self-conscious about how I looked"). Responses were given on a 5-point scale ranging from 1 (*not at all likely*) to 5 (*extremely likely*) and averaged to create the anticipated self-regulatory efforts scale (overall: $\alpha = .81$, *M* interitem correlation = .34; Blacks: $\alpha = .79$, *M* interitem correlation = .31; Whites: $\alpha = .83$, *M* interitem correlation = .37). Higher scores on this scale reflect greater likelihood of engaging in self-regulatory efforts in the hypothetical encounter.

Anticipated suspicious behavior scale. Anticipated suspicious behavior was assessed by asking participants to think about how they would act in the hypothetical police encounter and to rate the likelihood that they would "look nervous," "try to avoid looking nervous," "smile" (reverse-scored), "avoid making eye contact," or "freeze up," behaviors that police commonly perceive as deceptive (e.g., Akehurst et al., 1996; Vrij et al., 2006; Vrij & Semin, 1996). Responses were given on a 5-point scale ranging from 1 (*not at all likely*) to 5 (*extremely likely*) and averaged to create the anticipated suspicious behavior scale. The internal reliability of the scale was poor initially (overall: $\alpha = .57$, *M* interitem correlation = .25; Blacks: $\alpha = .56$, *M* interitem correlation = .23; Whites: $\alpha = .55$, *M* interitem correlation = .25), but dropping the "smile" item increased internal reliability to an acceptable level across all participants (overall: $\alpha = .66$, *M* interitem correlation = .36) and in each subsample (Blacks: $\alpha = .61$, *M* interitem correlation = .30; Whites: $\alpha = .69$, *M* interitem correlation = .40). Higher scores on this scale reflect greater likelihood of behaving in ways that police commonly perceive as suspicious during the hypothetical encounter.

Procedure. Based on Study 1 results showing that stereotype threat is experienced to a greater degree by Black men than Black women and our expectation that this difference would be magnified in more realistic conditions, we recruited only men participants. As in Study 1, undergraduate introduction to psychology students completed the materials in class during a mass-testing session in exchange for course credit. This sample included only six Black men, however, so additional recruitment was necessary.

Thus, participants were also recruited from contexts where students were likely to be, including around campus and various public settings in the university area (i.e., cafeterias, train stations, etc.). The additional recruitment was aimed specifically at increasing the number of Black men enrolled in the study. These participants received a candy bar for participating.

The thought-induction task and all measures were presented in a single questionnaire. Participants completed demographic factors measures first, because describing one's race was expected to prime participants' racial identity, which past research suggests facilitates the induction of stereotype threat in Black participants (Steele & Aronson, 1995). Next, participants completed the thought-induction task. Participants then completed the spontaneous reactions measure, the word-stem completion task, the anticipated anxiety and self-regulatory efforts scales (these 15 items were intermixed), the expectations about the officer's actions measure, the expectations about being accused measure, the anticipated suspicious behavior scale, and, finally, the expected stereotype threat scale. Measures were presented in the order listed to avoid introducing bias into participants' responses. All participants were treated according to the University of Illinois at Chicago IRB guidelines.

Results

First, we present results from correlation analyses examining associations between measures of stereotype activation and expected stereotype threat, anxiety, self-regulatory efforts, and suspicious behavior. Results from these analyses are presented in Table 1. Second, we show results from the main analyses, a χ^2 analysis and a multivariate analysis of variance (MANOVA) that examined effects of participants' race on dichotomous and continuous dependent measures, respectively. Means, *SD*s, and univariate test statistics, effect sizes, and CIs are presented in Table 2. Third, we present results from observed variables path analyses that explored the ability of stereotype activation and expected stereotype threat to explain significant racial differences in anticipated anxiety, self-regulatory efforts, and suspicious behavior in the hypothetical police encounter. To preview, analyses revealed significant effects of race in the direction expected across most measures and supported the hypothesis that stereotype threat would lead Black men, but not White men, to expect to engage in more self-regulatory efforts, and, in turn, behave more suspiciously.

Table 1

Correlations Among Stereotype Activation and Expected Stereotype Threat, Anxiety, Self-Regulatory Efforts, and Suspicious Behavior

	1	2	3	4	5	6	7	8
1. Spontaneous reactions	—	.04	.21**	.28***	.46***	.21**	.12	.07
2. Word-stem completion performance		—	.06	−.01	.04	.05	−.07	.11
3. Expectations about officer's actions			—	.39***	.35***	.32***	.20**	.22**
4. Expectations about being accused				—	.57***	.67***	.52***	.54***
5. Expected stereotype threat scale					—	.44***	.43***	.37***
6. Anticipated anxiety						—	.69***	.63***
7. Anticipated self-regulatory efforts							—	.61***
8. Anticipated suspicious behavior								—

** $p \leq .01$.   *** $p < .001$.

Table 2

Main Effects of Race on Stereotype Activation and Expected Stereotype Threat, Anxiety, Self-Regulatory Efforts, and Suspicious Behavior

	Black men M (SD)	White men M (SD)	F (1, 149)	p	β	95% CI
Word-stem completion performance[a]	.23 (.25)	.19 (.24)	.75	.39	.04	−.05–.12
Expectations about officer's actions[b]	2.50 (.57)	2.33 (.51)	3.48	.06	.17	−.01–.35
Expectations about being accused[c]	2.65 (1.31)	2.01 (1.16)	9.59	.002	.64	.23–1.04
Expected stereotype threat scale[d]	.77 (1.67)	−1.91 (1.16)	133.30	<.001	2.68	2.22–3.14
Anticipated anxiety scale[e]	2.78 (1.10)	2.35 (1.00)	5.89	.02	.43	.08–.78
Anticipated self-regulatory efforts scale[e]	2.84 (.89)	2.52 (.86)	4.71	.03	.32	.03–.61
Anticipated suspicious behavior scale[e]	2.36 (.79)	2.03 (.79)	6.28	.01	.34	.07–.60

[a] Ratio of target word stems completed with stereotype-relevant words out of total target word stems completed. [b] Measured on a 3-point scale ranging from 1 (*positive*) to 3 (*negative*). [c] Measured on a 5-point scale ranging from 1 (*not at all concerned*) to 5 (*extremely concerned*). [d] Measured on a 7-point scale ranging from −3 (*strongly disagree*) to 3 (*strongly agree*). [e] Measured on 5-point scales ranging from 1 (*not at all likely*) to 5 (*extremely likely*).

Correlation analyses. We first conducted correlational analyses among our five stereotype-threat-related measures (i.e., the implicit measures of spontaneous reactions and word-stem completion performance, and the explicit measures of expectations about the officer's actions, expectations about being accused, and the expected stereotype threat scale) and the proposed downstream consequences of anticipated anxiety, self-regulatory efforts, and suspicious behavior (see Table 1 for results). Of interest, stereotype activation was significantly and positively related to the explicit measures of expected stereotype threat and anticipated anxiety when assessed with spontaneous reactions to the thought-induction task but not via word-stem completion performance. Thus, participants who spontaneously mentioned the stereotype of Black criminality after imagining the hypothetical police encounter were significantly more likely than others to think the officer would regard them as suspects and accuse them of wrongdoing and expect to experience stereotype threat and anxiety. Neither implicit measure of threat significantly related to anticipated self-regulatory efforts or suspicious behavior, however.

In contrast, as expected, all three explicit measures of stereotype threat were significantly and positively correlated with each other and also with anticipated anxiety, self-regulatory efforts, and suspicious behavior: The more participants had negative expectations about the officer's actions, expected to be accused of wrongdoing, and expected to feel stereotype threat, the more they anticipated feeling anxious, engaging in self-regulatory efforts, and behaving suspiciously in the imagined police encounter.

Main analyses. A χ^2 analysis revealed that, as hypothesized, the stereotype of Black criminality was activated and cognitively accessible for significantly more Black men (27%) than White men (3%), as reflected by participants' spontaneous reactions to the thought-induction task, $\chi^2(1, N = 169) = 21.06, p < .001, \varphi = .35, 95\%$ CI [.19, .43]. Examples of responses that reflected Black men's stereotype activation include "I would feel like he suspects me of doing something because I'm Black"; "I would think that the officer is racially profiling me and is probably thinking that I stole one of the items in my bookbag"; "I would think 'typical cop. They always suspect the tall Black man'"; and "Not surprised, because being Black people notice me at night, as if I'm a criminal."

The MANOVA revealed a significant multivariate effect of race on the measures of stereotype activation and expected stereotype threat, anxiety, self-regulatory efforts, and suspicious behavior, $F(7, 143) = 21.57, p < .001$, Wilk's $\lambda = .49$, partial $\eta^2 = .51$. As displayed in Table 2, univariate tests revealed that performance on the word-stem completion task reflected similar levels of stereotype activation for Black and White men, and Black and White men reported statistically similar expectations about the officer's actions in the imagined encounter. In contrast, however, Black men were significantly more likely to expect that they would be accused of wrongdoing by the officer and anticipated feeling significantly more stereotype threat in the encounter. As in Study 1, supplementary t tests comparing mean scores on the expected stereotype threat scale to the scale midpoint revealed that, whereas White men significantly disagreed that they would experience stereotype threat in the hypothetical police encounter, $t(98) = -16.21, p < .001, d = -1.63, 95\%$ CI $[-1.93, -1.33]$, Black men significantly agreed that they would, $t(76) = 3.61, p = .001, d = .41, 95\%$ CI $[.18, .64]$. Also as predicted, Black men were significantly more likely than White men to anticipate feeling anxious, engaging in self-regulatory efforts, and behaving suspiciously in the imagined encounter.

Mediational analyses. Next, we tested (a) whether the five stereotype threat measures would predict anticipated anxiety and self-regulatory efforts and, in turn, anticipated suspicious behavior and (b) whether this model adequately explained the data for both Black and White men. We first tested for measurement invariance across groups using a structural equation modeling framework (AMOS 18; Arbuckle, 2009). Factor loadings for each scale were compared across Blacks and Whites with the most face valid item serving as the marker in all analyses (i.e., the variable for which the regression weight was set to 1). Pairwise comparisons revealed no significant differences among parameter estimates for the expected stereotype threat scale, $zs = -.01–.43, ps \geq .33$; anticipated anxiety scale, $zs = -.06–.13, ps \geq .45$; anticipated self-regulatory efforts scale, $zs = -.05–.08, ps \geq .47$; or anticipated suspicious behavior scale, $zs = -.06–.09, ps \geq .46$. Based on these results and the fact that all scales were sufficiently reliable for both racial groups, the scales were entered into subsequent path analyses as observed variables.

Second, we sought to identify the best fitting baseline model. Multiple imputation based on 100 iterations was used to generate
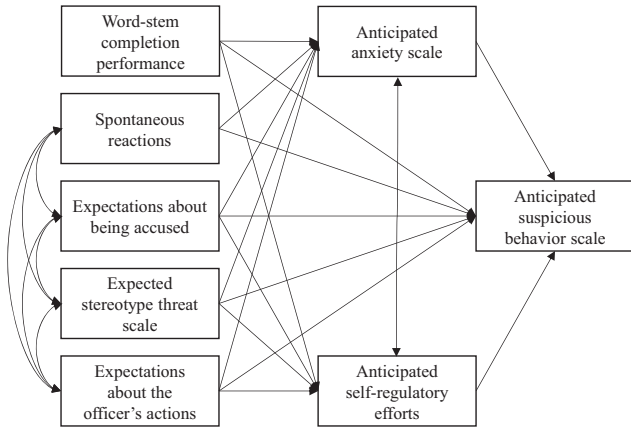
Figure 2. Originally specified model of the effect of stereotype activation and expected stereotype threat on anticipated suspicious behavior.

estimated values for missing data so analyses could be run on the full sample of 179 men. Analyses were based on the percentile bootstrap method with 1,000 samples, which is the recommended approach for assessing indirect effects (i.e., mediation; Shrout & Bolger, 2002; Taylor, MacKinnon, & Tein, 2008). As shown in Figure 2, the first model tested included all direct and indirect paths between the stereotype threat measures and anticipated anxiety, self-regulatory efforts, and suspicious behavior. Based on correlations (see Table 1), spontaneous reactions, expectations about the officer's actions, expectations about being accused, and the expected stereotype threat scale were allowed to covary, as were anticipated anxiety and self-regulatory efforts. Results indicated that the model was a mediocre fit to the data, $\chi^2(20, N = 179) = 50.06, p < .001$, TLI = .81, RMSEA = .09, PCLOSE = .02. Thus, eight paths that were nonsignificant ($p > .10$) for both Blacks and Whites were dropped to produce a more parsimonious model. Specifically, we eliminated nonsignificant paths from (a) word-stem completion performance to the anticipated anxiety and self-regulatory efforts scales, (b) spontaneous reactions to the anticipated self-regulatory efforts scale, (c) the expected stereotype threat scale and expectations about the officer's actions to the anticipated anxiety and anticipated suspicious behavior scales, and (d) the anticipated anxiety scale to the anticipated suspicious behavior scale. These modifications produced a good, close-fitting model, $\chi^2(24, N = 179) = 28.78, p = .23$, TLI = .98, RMSEA = .03, PCLOSE = .71.

In the previous models, paths were unconstrained and allowed to vary freely across groups. To test for multigroup invariance, we next constrained the parameters and covariances to be equal for Blacks and Whites. This significantly reduced model fit, $\chi^2(40, N = 179) = 80.12, p < .001$, TLI = .88, RMSEA = .08, PCLOSE = .04, and $\chi^2_{diff}(13) = 51.34, p < .001$, showing that the estimates were significantly different across groups. Thus, results are discussed separately for Blacks and Whites. Direct effects, CIs, and significance levels are presented in Table 3 for covariances and in Table 4 for regression weights. Indirect effects, CIs, and significance levels are displayed in Table 5.

Explaining anticipated suspicious behavior among Black men. As depicted in Figure 3, there were significant positive associations among Black men's spontaneous reactions to the thought-induction task, expectations about the officer's actions, expectations about being accused, and expected stereotype threat in the imagined police encounter. The more the Black criminal stereotype was activated for Black men, the more negative they expected the officer's next actions to be, the more likely they thought it was that they would be accused of wrongdoing, and the more concerned they anticipated feeling about being perceived as a criminal on the basis of their race.

Neither word-stem completion performance nor spontaneous reactions to the imagined encounter related significantly to Black men's anticipated suspicious behavior. Spontaneous reactions were also not significantly associated with anticipated anxiety, but expectations about being accused were significantly and positively related to the degree to which Black men expected to experience anxiety in the hypothetical police encounter. Even so, anticipated anxiety did not translate into anticipated suspicious behavior. Anticipated anxiety and self-regulatory efforts were significantly related, but expecting to be accused did not predict greater anticipated self-regulatory efforts. Expecting to be accused did, however, lead Black men to be significantly more likely to anticipate behaving suspiciously in the encounter.

In contrast, both expected stereotype threat and expectations about the officer's actions had significant indirect effects on anticipated suspicious behavior, although the effects were not in the same direction. As predicted, Black men who expected to experience more stereotype threat in the encounter reported being significantly more likely to engage in self-regulatory efforts and, in turn, more likely to anticipate behaving suspiciously. Unexpectedly, however, Black men who had negative expectations about the officer's next actions reported being significantly less likely to

Table 3

Covariance Estimates, 95% Confidence Intervals, and Significance Levels From Unconstrained Path Model

	Black men				White men			
Parameter	Estimate	Lower bound	Upper bound	p	Estimate	Lower bound	Upper bound	p
Spontaneous reactions ↔ Expected stereotype threat scale	.35	.21	.48	.002	−.00	−.02	.01	.59
Spontaneous reactions ↔ Expectations about officer's actions	.10	.05	.15	.002	−.01	−.02	.00	.06
Spontaneous reactions ↔ Expectations about being accused	.22	.09	.33	.002	−.02	−.05	.00	.06
Expectations about officer's actions ↔ Expectations about being accused	.20	.05	.35	.007	.23	.11	.35	.002
Expectations about officer's actions ↔ Expected stereotype threat scale	.38	.20	.56	.002	.12	−.02	.25	.10
Expectations about being accused ↔ Expected stereotype threat scale	1.28	.82	1.73	.002	.74	.45	1.12	.002
Anticipated anxiety ↔ Anticipated self-regulatory efforts	.29	.14	.46	.002	.27	.17	.37	.002

Table 4

Direct Effects, 95% Confidence Intervals, and Significance Levels From Unconstrained Path Model

	Black men				White men			
	Estimate	Lower bound	Upper bound	p	Estimate	Lower bound	Upper bound	p
Effects on anticipated anxiety								
Spontaneous reactions	.38	−.07	.78	.08	−.27	−.49	7.65	.09
Expectations about being accused	.40	.24	.55	.002	.59	.42	.75	.002
Effects on anticipated self-regulatory efforts								
Expected stereotype threat scale	.19	.05	.31	.01	.13	−.05	.27	.15
Expectations about being accused	.10	−.11	.29	.34	.41	.22	.60	.002
Expectations about officer's actions	−.19	−.42	−.02	.04	−.10	−.33	.10	.31
Effects on anticipated suspicious behavior								
Anticipated self-regulatory efforts	.37	.17	.57	.002	.58	.41	.75	.002
Word-stem completion performance	.26	−.64	1.12	.56	.38	−.01	.83	.06
Spontaneous reactions	−.13	−.57	.32	.59	−.24	−48.13	−.05	.03
Expectations about being accused	.16	.02	.31	.03	.15	.01	.27	.04

engage in self-regulatory efforts and, in turn, less likely to anticipate behaving suspiciously.

Explaining anticipated suspicious behavior among White men. Figure 4 shows that associations among stereotype activation and anticipated stereotype threat measures were less consistent among White than Black men. As with Black men, the word-stem completion performance did not have a significant effect on anticipated suspicious behavior. Unexpectedly, however, the implicit measure of spontaneous reactions was also not significantly related to the explicit measures of expectations about the officer's actions, expectations about being accused of wrongdoing, or expected stereotype threat in the imagined police encounter. Thus, White men who spontaneously thought of the Black criminal stereotype in reaction to the thought-induction task were no more or less likely than others to have negative expectations about what the officer would do next, expect to be accused of wrongdoing, or anticipate feeling concerned about being stereotyped as a criminal because of their race. Further, spontaneous reactions were not significantly related to anticipated anxiety, and a significant negative association between spontaneous reactions and anticipated behavior revealed that White men who spontaneously thought of the Black criminal stereotype were significantly *less* likely to anticipate that they would behave suspiciously in the hypothetical encounter.

Expecting to be accused of wrongdoing was significantly and positively related to both expectations about the officer's actions and anticipated stereotype threat, but the latter two measures were not significantly related to each other. Further, neither expecting

more negative actions from the officer nor expecting to feel stereotype threat in the encounter were significantly associated with anticipated self-regulatory efforts. In contrast, White men who were more concerned about being accused of wrongdoing were significantly more likely to expect they would feel anxious and engage in self-regulatory efforts in the imagined situation, and only expectations of being accused had a significant indirect effect on anticipated suspicious behavior through anticipated self-regulatory efforts. Specifically, the more White men expected to be accused of wrongdoing in the hypothetical encounter, the more they anticipated they would engage in self-regulatory efforts and, in turn, the more likely they thought it was that they would behave in ways that police common perceive as suspicious. Even so, the relations between expectations about being accused and anticipated suspicious behavior were not accounted for entirely by self-regulatory efforts—the direct effect remained significant.

Discussion

Results provided further evidence that Black men, but not White men, experience stereotype threat in police encounters. Further, this study demonstrated that the racial difference in stereotype threat appears even when all participants envision the same kind of police encounter in terms of how likely it would have been for the police officer to confront them or target them as suspects. In addition, we found racial differences in anticipated anxiety, self-regulatory efforts, and suspicious behavior, such that Black men were significantly more likely than White men to think they would

Table 5

Indirect Effects of Expected Stereotype Threat Measures on Anticipated Suspicious Behavior, 95% Confidence Intervals, and Significance Levels

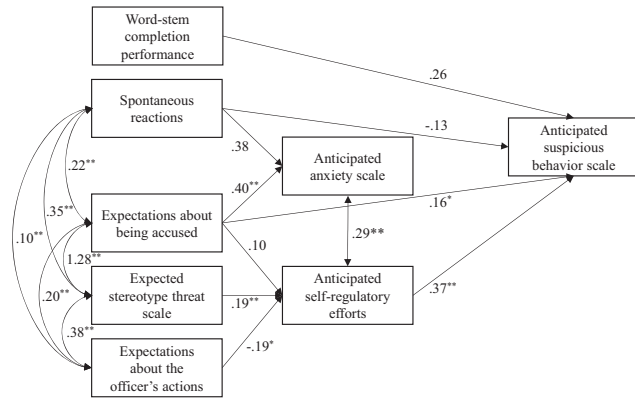|	Black men				White men			
Indirect effect on anticipated suspicious behavior	Estimate	Lower bound	Upper bound	p	Estimate	Lower bound	Upper bound	p
Expectations about officer's actions	−.07	−.17	−.01	.04	−.06	−.19	.06	.31
Expectations about being accused	.04	−.04	.12	.34	.24	.11	.39	.002
Expected stereotype threat scale	.07	.02	.13	.01	.08	−.03	.16	.15

Figure 3. Trimmed model of the effect of stereotype activation and expected stereotype threat on anticipated suspicious behavior among Black men.

feel anxious, anticipate they would monitor the situation and their behavior for risk of being stereotyped, and, ironically, behave in ways that police have been shown to perceive as deceptive or suspicious (e.g., Akehurst et al., 1996).

Results provided mixed support for the proposed psychological process by which stereotype threat might affect behavior. To begin with, expecting to be accused of wrongdoing led both Black and White men to anticipate feeling more anxious in the hypothetical police encounter. However, contrary to our predictions and past research (e.g., Murphy et al., 2007), anticipated anxiety did not translate into anticipated behavior for either Black or White men. The sample size resulted in low power, however, so this and other important mediating processes might not have been detected by our analyses. Future research with larger samples should both explore that possibility and replicate the findings in more ecologically valid circumstances, as discussed later in greater detail.

As predicted and consistent with past research (Richeson & Shelton, 2007), however, Black men who anticipated feeling stereotype threat in the imagined police encounter also anticipated that they would use self-regulatory efforts to avoid being stereotyped and, in turn, engage in suspicious-looking behavior. However, the more Black men thought the officer would watch them with suspicion, stop or question them, or actively accuse them of wrongdoing, the less likely they thought it was they would engage in self-regulatory efforts and, in turn, engage in suspicious-looking behavior. The latter finding can be considered in light of learned helplessness theory, which posits that individuals become motivationally, cognitively, and emotionally impaired in situations in which they believe their individual responses have no impact on uncontrollable outcomes (Abramson, Seligman, & Teasdale, 1978). As a result of past personal or vicarious experiences of police discrimination, Black men might develop learned helplessness in police encounters, and come to believe that attempting to avoid being stereotyped as a criminal is a futile endeavor. Ironically, however, to the extent that such beliefs reduce the likelihood that Black men engage in certain suspicious-looking behaviors, it could actually lessen their risk of being subjected to investigatory contacts. It will be important for future research to take learned helplessness into account to better understand the impacts of Black men's police-related stereotype threat. In addition, the indirect

effects of expected stereotype threat and expectations about the officer's next actions on anticipated suspicious behavior were opposite in direction but similar in strength, suggesting the effects might cancel each other out, but research is needed to determine if this is actually the case. This is especially important considering that Black men were significantly more likely than White men to anticipate behaving suspiciously in the hypothetical police encounter. If such racial differences cannot be explained entirely by effects of stereotype threat on anxiety or self-regulatory efforts, then other mediating processes must be identified and studied.

Although nonrace-specific expectations about being accused of wrongdoing had significant direct effects on anticipated anxiety and suspicious behavior in a police encounter for both Black and White men, they related to self-regulatory efforts for only White men. This is important because anticipating engaging in self-regulatory efforts was the largest predictor of anticipated suspicious behavior in both racial groups. These findings further support our hypothesis that, because Black men are uniquely concerned about being evaluated in light of the Black criminal stereotype, Black men and White men have different psychological experiences of police encounters. These racial differences in psychological experiences might manifest in behaviors that lead Black men to be perceived as more suspicious than White men by police.

Of importance, stereotype activation actually inoculated White men from expecting to behave suspiciously. This unexpected effect may be the result of stereotype lift, which Walton and Cohen (2003, p. 456) originally defined as "the performance boost caused by the awareness that an outgroup is negatively stereotyped." This effect has been shown to occur in academic contexts (Walton & Cohen, 2003) and mounting evidence suggests that the phenomenon generalizes to a range of other stereotypes and other contexts (see, e.g., Cotner & Burkley, 2013; Laurin, 2013). Future research might explore other effects of White men's nonstereotyped status, including whether salience of the Black criminal stereotype leads White men to feel invulnerable to police or even increases their likelihood of engaging in crime (see Hackney & Glaser, 2013).

Finally, although there were links between spontaneous reactions and anticipated behavior among White men, the implicit measures of stereotype activation did not have the pervasive effects we expected. Previous work used the implicit measure of
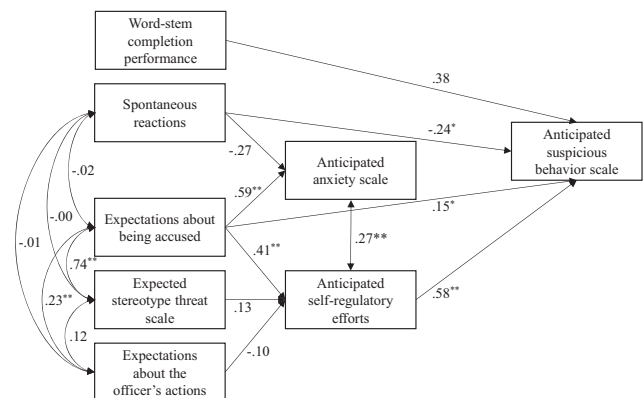

Figure 4. Trimmed model of the effect of stereotype activation and expected stereotype threat on anticipated suspicious behavior among White men.

stereotype activation as an outcome or moderating variable (Steele & Aronson, 1995), not as a mediator of distal effects as in the present work. It may be that stereotype activation is a necessary ingredient of stereotype threat but not sufficient on its own to elicit downstream consequences. That is, perhaps the stereotype must be cognitively activated and accessible for one to experience stereotype threat, but just because one is thinking of a stereotype does not mean he or she will be concerned about actually being stereotyped in any given situation. Additional elements, such as the perceived risk of being stereotyped in the moment, may be required for stereotype activation to translate into stereotype threat. Future research should seek to identify the exact perceptions and cognitive processes critical for producing the psychological experience of stereotype threat (see Steele et al., 2002).

General Discussion

We conducted two studies to explore how cultural stereotypes that depict Blacks as criminals might affect Blacks' experiences of police encounters. In Study 1, Blacks were significantly more likely than Whites to agree that, in general, they are concerned that police officers stereotype them as criminals simply because they are Black. Study 2 showed that this effect generalized to a hypothetical situation in which participants imagined coming face-to-face with a police officer who was watching them. As predicted and consistent with Study 1, Black men were significantly more likely than White men to report that the hypothetical police encounter induced feelings of stereotype threat. An additional aim of this research was to test whether racial differences in stereotype threat translate into differences in anticipated nonverbal behavior, which might ultimately be misconstrued by police officers as evidence of guilt. As hypothesized, Study 2 suggested that expecting to be judged and treated unfairly because of the negative stereotype of Black criminality might cause Black men to behave differently—more "suspiciously"—than White men in encounters with police officers.

This work is the first to explore empirically the role of stereotype threat in Blacks' experiences of police encounters. However, there are limitations that should be noted. Even though Study 2 improved upon Study 1 by encouraging participants to imagine themselves in a very specific hypothetical police encounter, it still might have been difficult for participants to imagine how they would feel and the kinds of nonverbal behaviors that they would engage in during an actual police encounter. Research shows that people are sometimes not very good at predicting how they might feel in a given situation (Ayton et al., 2007), but, in line with Fishbein and Ajzen's (1975) theory of reasoned action, research suggests that intentions to engage in behavior accurately predict actual behavior (Sheppard, Hartwick, & Warshaw, 1988; see also Epley & Dunning, 2006; Kang, Lindell, & Prater, 2007). Considering that interactions with police are salient experiences for which we develop a framework of expectations through legal socialization (e.g., Fagan & Tyler, 2005), it is possible that predictions about anticipated feelings and behavior in police encounters might be at least somewhat accurate. In support, Blacks and Whites were fairly consistent in their estimations of stereotype threat across our two studies, yielding significant differences and large effect sizes. Even so, it would be ideal to test our hypotheses using more realistic circumstances, such as in a simulated police encounter or

real encounters in the field. We expect that the differences we found would be magnified under more realistic conditions, but research is needed to bear this out.

It is also important to validate the use of our stereotype threat scale as a proxy measure of stereotype threat in the new domain of police encounters. Our measure was modified from a version originally developed to assess women's stereotype threat in a math test-taking situation (Marx et al., 2005). Adapted versions have been used to measure Blacks' stereotype threat when given a verbal test (Marx & Goff, 2005) and Whites' concerns about appearing racist in conversations with Black partners (Goff, Steele, & Davies, 2008), conditions in which the occurrence of stereotype threat has been well established (see Steele, 2010, and Richeson & Shelton, 2012, respectively). In addition, past studies using the stereotype threat scale showed that it correlated with domain-specific performance (Marx & Goff, 2005; Marx et al., 2005) and behavior (Goff, Steele, & Davies, 2008). Thus, the extant literature suggests we can be confident that our measure accurately assessed Blacks' psychological experience of stereotype threat in police encounters, which was our primary goal. Exploring the downstream psychological and behavioral consequences of threat was a secondary aim of the current research, but one that should be pursued more rigorously in future research that incorporates objective outcomes. Given the foundational findings of our study, it now is clear that it would be worthwhile and beneficial for future studies to measure, for example, psychophysiological measures of anxiety (e.g., heart rate variability; see Murphy et al., 2007) and actual nonverbal behavior (e.g., eye contact; see Shelton, 2003; Vorauer & Turpie, 2004). Such measures may produce a more accurate picture of how threat affects Blacks in police encounters.

Furthermore, measuring psychophysiological responses to threat and other constructs in future work would provide a more complete picture of the array of consequences stereotype threat might have. For example, to the extent that threat has psychophysiological consequences, Blacks who are frequently concerned about being subjected to bias-based policing could develop chronic health problems (e.g., hypertension, see Blascovich et al., 2001). In addition, through its effects on anxiety and self-regulatory efforts, stereotype threat might increase cognitive load and impair executive functioning (for reviews, see Najdowski, 2011, and Davis & Leo, 2012). This could explain findings from other research showing that stereotype threat is associated with ego depletion and impaired self-control (Inzlicht, McKay, & Aronson, 2006). Thus, stereotype threat might not only lead Blacks to behave in ways that police perceive as suspicious, but it could also make Blacks more susceptible to giving in to negative emotions and impulses than others, which could cause Blacks to experience more negative interactions with police officers. Inzlicht, Tullett, Legault, and Kang (2011) hypothesized that stereotype-threat-related self-regulatory decline could even lead Blacks to succumb to aggressive, violent, and criminal impulses more often than Whites. Furthermore as noted previously, Davis and Leo (2012) suggest that threatened Blacks might not have the self-regulatory resources needed to withstand the pressure to confess in interrogations and so threat might explain higher rates of false confessions among Blacks than Whites. The potential for such effects merits further attention.

Because stereotype threat is conditional upon situational factors that signal that one might be evaluated in terms of a stereotype

(i.e., the stereotype is relevant), other researchers have used situational cues to explicitly activate stereotypes before experiments (e.g., Steele & Aronson, 1995). We did not include control groups in our studies, wherein participants were not asked their race, so racial stereotypes might have been salient for all participants during the study. If another study were to reveal that stereotype threat manifests only when race is primed, that would be consistent with past work (e.g., Steele & Aronson, 1995). The concepts of race and crime are automatically associated with each other (Eberhardt et al., 2004), however, and we believe related stereotypes are so salient in police encounters that participants would have responded similarly even if they had not indicated their race before completing our study materials. Indeed, our data were collected in 2010 and 2011, and police-related stereotype threat effects are probably even stronger now in light of recent racial tensions resulting from fatal confrontations between the police and unarmed Black men (e.g., Michael Brown, Eric Garner, Freddie Gray, etc.). A true control condition would need to strip away all characteristics that might activate stereotypes about race, crime, or the police, which would be impossible in a study of police interactions, like ours. Even so, future research could vary the extent to which the Black criminal stereotype is relevant in police encounters by, for example, varying whether a police confederate asks participants crime-relevant versus crime-irrelevant questions. Such research will be important for determining whether racial differences in police-related stereotype threat are elicited by the specific threat of being perceived in light of the stereotype, and whether these differences can be reduced in certain conditions.

It is also important to note that many variables could moderate the effects of stereotype threat found in this research. Study 1 suggests that gender is one such factor, with Black men at greater risk of experiencing stereotype in police encounters than Black women. Future research should also test for other moderating effects, including, for example, the race of the officer. Considering that 75% of local police officers are White and only 12% are Black (Reaves, 2010), our participants might have been imagining White officers. We did not, however, ask participants the race of the officer they were imagining, which could have several interesting effects on stereotype threat. Would Blacks feel less stereotype threat when confronted by a Black officer? On the one hand, Blacks paired with Black officers might feel "identity safety," or the sense that they will not be perceived in light of the criminal stereotype (Steele et al., 2002). This would be consistent with Marx and Goff's (2005) research showing that Blacks scored lower on intellectual tests than Whites when the experimenter was White, but performed just as well as Whites when the experimenter was Black. On the other hand, if the social categorization of police as outgroup members and authorities representing the White establishment is more salient than that of Blacks as ingroup members, then Blacks might experience just as much stereotype threat when interacting with a Black officer as a White officer.

In the context of interracial police encounters, beliefs about the extent to which a particular police officer is prejudiced or bias-based policing is widespread could affect Blacks' experiences of stereotype threat, too, as could individual differences in sensitivity to race-based rejection in interpersonal interactions in general (see Mendoza-Denton, Downey, Purdie, Davis, & Pietrzak, 2002). However, stereotype threat is a situational threat, based on situational cues and the risk of being stereotyped in a specific situation

(Steele et al., 2002). Blacks' general beliefs that the police are prejudiced or race-based rejection sensitivity might be related to, but also distinct from feelings of stereotype threat. That is, contextual cues should exacerbate the perceived risk of being stereotyped unfairly as a criminal and discriminated against by police in actual encounters. It is important that future research measure all of these constructs to rule out alternative explanations and isolate the unique effects of stereotype threat.

Research on these kinds of issues is critical for understanding how and when situations are perceived as threatening versus safe and, thereby, the boundaries of stereotype threat effects in this important context. Participants' spontaneous reactions in Study 2 suggest that Blacks' feelings of stereotype threat are activated easily in police encounters, but there may be interventions that can attenuate Blacks' feelings of stereotype threat in police encounters. For example, community policing programs, which emphasize building trust and relationships with members of the public (see, e.g., Skogan & Hartnett, 1997) could increase noninvestigatory police contacts with Blacks and increase Blacks' expectations that contacts with the police will be fair and just.

Finally, our research was focused on elucidating the role of stereotype threat in creating differences between Blacks' and Whites' experiences of police encounters, but other studies should test whether our findings generalize to other groups who are stereotyped as criminals (e.g., Hispanics, Muslims, etc.) and other situations in which that stereotype is relevant (e.g., in court, airport security checkpoints, etc.). Bringing social psychological theory on stereotype threat into such contexts might be useful for understanding and solving many real-world psycholegal problems.

Implications for Theory and Practice

Steele (2010) noted the "emerging generality of stereotype threat effects" (p. 97), but to our knowledge, this empirical research is the first to suggest that stereotype threat might occur in the novel context of police encounters. Thus, this work extends the boundaries of stereotype threat theory in regard to the domains in which the phenomenon occurs. It also contributes to our understanding of stereotype threat by shedding light on the range of consequences it can have for stereotyped groups. Indeed, a growing body of research indicates that stereotype threat has adverse behavioral effects with serious implications for a variety of interpersonal interactions (e.g., Apfelbaum, Sommers, & Norton, 2008; Goff, Steele, & Davies, 2008).

The results are also informative for understanding the applied problem of bias-based policing. Our studies provide evidence that Blacks think they would experience stereotype threat when they encounter police officers, and this could translate into an actual experience of threat in a real encounter. Study 2 further suggests that stereotype threat might, in turn, translate into suspicious-looking behavior. The significance of this finding cannot be overstated because police often rely on suspect behavior when determining what actions to take, including whether to arrest (e.g., Stroshine, Alpert, & Dunham, 2008). As evidence, New York Police Department (NYPD) officers cited citizens' "furtive movements" as the reason for 52% of street stops in 2012 (New York Civil Liberties Union, 2013), and, as reviewed by Najdowski (2014), such furtive movements were used to explain stops significantly more often when citizens were Black rather than White.

This disproportionality resulted in legal action against the city (*Floyd v. City of New York,* 2013), which was deemed to have violated citizens' Fourth Amendment right to protection against unreasonable search and seizure and Fourteenth Amendment right to equal protection under the law. Of note, Judge Shira Scheindlin ascribed the disproportionate stops and frisks of minorities to NYPD officers' unconscious bias and noted that, "There is no evidence that Black people's movements are objectively more furtive than the movements of White people" (p. 45). However, our finding that stereotype threat might affect behaviors that police commonly perceive as suspicious has implications for understanding why police officers target Blacks as suspects disproportionately more often than Whites. Of course, police officers should not have unbridled authority to stop Blacks more often than Whites because of racial differences in furtive movements. Rather, the use of such movements to justify stops needs to be evaluated carefully in terms of police policy and practice, and police and others should be trained that certain movements can be the product of normal psychological processes and not necessarily criminality.

These issues are also important to understand because innocent Blacks who are targeted by police because of stereotype-threat-induced behavior are at risk for miscarriages of justice (see Davis & Leo, 2012; Najdowski, 2011, 2014). Misclassification errors aside, factors that contribute to bias in initial police interactions create opportunities for racial disparities at every subsequent step of the criminal justice process (e.g., in charging decisions, interrogations, jury voir dire, and verdicts). This work sheds light on the social psychological processes that contribute to these kinds of biases, which is an important step toward improving racial equity in the criminal justice system.

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