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Stereotype Threat in Criminal Interrogations:  
Why Innocent Black Suspects are at Risk for Confessing Falsely  
Cynthia J. Najdowski, M.A.  
University of Illinois at Chicago

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Address for correspondence: Department of Psychology, 1007 West Harrison Street (M/C 285), Chicago, IL 60607-7137.

**Abstract**

Little theoretical attention has been paid to evidence that Blacks are overrepresented in samples of false confessors compared to Whites. One possible explanation is that innocent Black suspects experience stereotype threat in interrogations and that this threat causes Black suspects to experience more arousal, self-regulatory efforts, and cognitive load compared to White suspects. These psychological mechanisms could lead innocent Black suspects to display more nonverbal behaviors associated with deception and, ironically, increase the likelihood that police investigators perceive them as guilty. In response, investigators might engage in more coercive tactics and exert more pressure to confess on Black suspects than White suspects. This could increase the need to escape interrogation and the likelihood of doing so by confessing falsely more for Blacks than for Whites. I present these hypotheses within a social psychological framework, and discuss future directions for testing the model and theoretical and practical implications of such work.

Key words and phrases: stereotype threat, race, deception detection, interrogation, confession

**Stereotype Threat in Criminal Interrogations:  
Why Black Suspects are at Risk for Confessing Falsely**

In 1991, Anthony Wright, an African American man, confessed to raping, robbing, and murdering a 77-year-old woman. Wright later claimed his confession was coerced and requested DNA testing on evidence in his case to prove his innocence. When his request was rejected because “his earlier confession barred him from asserting a claim of actual innocence” (*Commonwealth of Pennsylvania v. Wright*, 2007, p. 7), Wright petitioned to take his case to a higher court. In 2008, the American Psychological Association submitted an *amicus curiae* brief on his behalf explaining that false confessions have contributed to the wrongful prosecution, conviction, and imprisonment of many men and women. In February, 2011, the Pennsylvania Supreme Court recognized that a defendant’s confession, even if deemed to be admissible in court, is not necessarily true, and remanded Wright’s case back to the lower court to determine whether DNA testing might yield exculpatory evidence.

Wright has already served 18 years in prison for crimes he says he did not commit. If he is actually innocent, his case is one of many highlighting the need for a greater understanding of factors that influence suspects to confess falsely to crimes they did not commit. Considering that Blacks are disproportionately more likely than Whites to be targeted by the police as suspects (Weich & Angulo, 2002), interrogated (Feld, 1996; Leo, 1996; Wald, Ayres, Hess, Schantz, & Whitebread, 1967), and wrongfully convicted (Parker, Dewees, & Radelet, 2001), it is surprising that researchers have only recently questioned whether there are racial disparities in false confession rates, too. Results indicate that there are. In Redlich, Summers, and Hoover’s (2010) sample of mentally ill offenders, minorities (including Blacks and members of other racial/ethnic groups) were more likely than Whites to self-report having confessed and/or pleaded guilty falsely, even after controlling for age and the severity of offenders’ mental disorders and symptomatology. In Gross, Jacoby, Matheson, Montgomery, and Patil’s (2005) sample of individuals who were wrongfully convicted and later exonerated, 85% of juvenile false confessors were Black. Gross et al. did not report the racial breakdown of adult false confessors in their sample unfortunately, but other sources indicate that 53% to 73% of adult false confessors who have been wrongfully convicted and later exonerated are Black (Death Penalty Information

Center, 2009<sup>1</sup>; Garrett, 2008; E. West, personal communication, April 21, 2010). These rates stand in stark contrast to the fact that Blacks constitute only approximately 13% of the U.S. population (McKinnon, 2001), and, because Blacks are less likely than Whites to be exonerated (Elks, 2008; Gross, 1996), they might even underestimate the frequency with which Black suspects confess falsely. Thus, as noted by Redlich and colleagues, “there is converging evidence that minorities may be at particular risk for false admissions” (p. 88).

Perhaps one reason that the racial disparity in false confession rates is coming to light only now is that, to date, there has been little theoretical effort to understand *why* a suspect’s race might influence the decision to confess to a crime not committed. Notable exceptions include Vrij (2008) and Taslitz (2006). As discussed in more detail later, Vrij asserts that Black suspects might be at more risk of being targeted as lying during interrogations than White suspects because of cross-cultural differences in nonverbal communication styles, which could cause Black suspects to appear more deceptive and police investigators to put more pressure on them to confess. Taslitz suggests that Blacks are more likely than Whites to be targeted erroneously in the first place because of racial bias and subtle influences of stereotypes on investigators’ decision making (as discussed in more detail later), but he also turns to status differences in speech patterns to explain why powerless Black suspects might be perceived as less credible than White suspects. He further suggests that Black suspects react to false accusations with denials, hostility, and defensiveness, which solidifies investigators’ suspicions. Both Vrij and Taslitz cite evidence that investigators who have formed suspicions of guilt increase pressure on suspects, regardless of their race, and that this pressure leads suspects to confess falsely. Taslitz’ argument is persuasive, but it overlooks an important social psychological explanation for racial disparities in false confession rates, one that likely plays a central role in generating the racial and status differences in communication styles noted by both Taslitz and Vrij. To fill this gap, I synthesize theories on stereotype threat, detection deception, confirmatory bias in hypothesis testing, and false confessions to illustrate how Black and White suspects’ experiences in interrogations might differ and how those differences might alter their likelihood for confessing to crimes not committed.<sup>2</sup> This new model is presented to stimulate research on the influence race has on the interpersonal interactions that are central to interrogations and their legally relevant outcomes.

### **Stereotype Threat in Criminal Interrogations**

Stereotype threat is the apprehension 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). This concern can have ironic effects on performance and behavior which inadvertently increase an individual's likelihood of confirming the stereotype. In their seminal research on this phenomenon, Steele and Aronson (1995) demonstrated that when the stereotype that Blacks are low in intelligence is salient, Black students underperform relative to White students on standardized tests (see also, Nguyen & Ryan, 2008). Most research on Blacks' experiences of stereotype threat has focused on understanding the consequences of negative stereotypes related to intelligence, usually with regard to performance in educational contexts. Stone, Lynch, Sjomeling, and Darley (1999) extended this work by showing that, compared to control participants, Black participants require more strokes to complete a golf task when either intelligence or race is primed. Thus, threat can be elicited by either stereotypes or identity, and it can also have a detrimental impact on Blacks' physical performances and behavior.

According to Steele and colleagues (2002), stereotype threat generalizes to a broad range of groups and situations, but it has not yet been recognized that interrogations set the stage for innocent Black suspects to experience stereotype threat. This hypothesis is supported, however, by research showing that there is a negative stereotype that depicts Blacks as prone to crime (Devine, 1989; Devine & Elliot, 1995) and that most Black individuals are aware of this stereotype (Cheryan & Monin, 2005; Sigelman & Tuch, 1997). It has been noted that Blacks are concerned about being perceived through the lens of the criminal stereotype (Staples, 2007; Steele, 2010; Steele et al., 2002), but the implications of facing that threat in a legal setting, in which the stereotype is directly relevant, have been discussed only once. Specifically, Rand (2000) noted that Black witnesses might be aware of stereotypes related to criminality and dishonesty when facing a panel including White jurors. As such, Black witnesses might be motivated to control their demeanor to counter stereotypes and appear truthful. Rand suggested, however, that because Black witnesses try so hard to appear truthful, they might actually appear nervous and, ironically, less credible to White jurors. The same process might affect Black suspects in interrogations. Even though both Black and White individuals are probably highly motivated to appear truthful in

interrogations in which police investigators are evaluating them as suspects and judging whether they are guilty of crimes, Black suspects might feel extra pressure if they are concerned that investigators' evaluations and judgments will be biased by negative stereotypes about them, particularly if they are innocent rather than guilty. Therefore, Black suspects might experience stereotype threat in interrogations as concern about being perceived as credible when asserting their innocence or, put another way, about being perceived as guilty for crimes not committed.

### **How are Black Suspects Affected by Stereotype Threat in Interrogations?**

The specific content of a negative stereotype determines which behaviors are relevant and affected by threat (Steele et al., 2002). Given the nature of the threat that Black suspects probably experience in interrogations, threat might cause Black suspects to engage in specific nonverbal behaviors that are, ironically, the same as those displayed by suspects who are lying or guilty. In fact, existing models that attempt to explain how stereotype threat and deception influence behavior point to the same psychological mechanisms: anxiety and related physiological arousal, self-regulatory efforts (including vigilance to threat-related cues and active efforts to monitor behavior), and cognitive load (i.e., increased demand on the cognitive resources needed to store and process information). For example, Major and O'Brien (2005) suggested that threat produces a variety of involuntary responses, including heightened anxiety and arousal, vigilance to threat-related stimuli, and cognitive load, as well as voluntary responses, which involve active efforts to cope with threat. They further theorized that these involuntary and voluntary responses, in turn, affect performance and behavior. Schmader et al. (2008) modified this model by suggesting that arousal and vigilance increase cognitive load, and it is through their effects on cognitive load that the other mechanisms negatively affect performance and behavior, at least on tasks that require cognitive resources. For less controlled tasks, however, Schmader et al. argued that threat negatively impacts behavior by causing individuals to consciously monitor behaviors that are usually automatic. Richeson and Shelton (2007) proposed a model to explain how threat relates to prejudice concerns (i.e., minority group members' concerns about being the target of prejudice and majority group members' concerns about being perceived as prejudiced) and outcomes in interracial interactions. They suggested that threat produces affective reactions (i.e., anxiety and physiological arousal), and that both threat and affective reactions lead individuals to engage in

self-regulatory efforts, including both cognitive vigilance to threat-related cues and active efforts to cope with threat by managing one's behavior. Further, self-regulation increases cognitive load, and both self-regulation and cognitive load, in turn, affect relevant outcomes.

Similarly, Zuckerman, DePaulo, and Rosenthal (1981) suggested a multi-factor model to explain how deception influences behavior. They proposed that liars experience negative emotions and arousal as a consequence of lying; engage in cognitive effort to fabricate plausible lies, be consistent in their telling of them, and monitor their behavior and whether they are being believed; and actively attempt to control their behavior so as to appear credible. Zuckerman et al. proposed that the more liars experience arousal, engage in cognitive effort, and attempt to control their behavior, the more likely they are to engage in nonverbal behaviors that give them away. Subsequent theorists emphasized different components of the multi-factor model. DePaulo (1992) suggested that both liars and truth-tellers might experience emotions/arousal and expend cognitive effort when they want to appear sincere, but, because liars are more concerned about whether they are being believed, they are more likely to suppress expressive behaviors. Buller and Burgoon (1996) also relied on arousal, cognitive effort, and attempted behavior control to explain differences in the nonverbal behavior of liars and truth-tellers, but further proposed that liars and truth-tellers monitor targets' behavior to determine whether they are being believed and, as deemed necessary, adjust their behavior to appear more credible. (For review, see Vrij, 2008.)

Thus, although the exact configuration differs across theories, anxiety and related physiological arousal, self-regulatory efforts, and cognitive load are each thought to be integral components of the psychological process by which stereotype threat and deception influence behavior. These variables might act in concert to increase the likelihood that Black suspects, who theoretically experience threat due to concerns about being perceived in light of the criminal stereotype, engage in more deceptive or suspicious nonverbal behaviors as compared to non-threatened White suspects.<sup>3</sup> Next, I describe empirical evidence that (a) stereotype threat increases anxiety and arousal, self-regulatory efforts, and cognitive load and (b) each of these mechanisms increases the likelihood that, compared to Whites, Blacks will engage in more suspicious behaviors which, as reviewed later, are perceived by others as indicative of lying.

### **Anxiety and Related Physiological Arousal**

Compared to non-threatened individuals, those under stereotype threat experience more anxiety and physiological arousal, including, for example, increased blood pressure (Blascovich et al., 2001) and cardiovascular reactivity (Mendes, Blascovich, Lickel, & Hunter, 2002; Mendes, Major, McCoy, & Blascovich, 2008). Thus, the risk of being perceived in light of the criminal stereotype might cause Blacks to experience greater anxiety and related arousal as compared to non-threatened Whites. Recent efforts to explain stereotype threat suggest that anxiety and arousal influence behavior only through their effects on other mechanisms (e.g., self-regulatory efforts, Richeson & Shelton, 2007; cognitive load, Schmader et al., 2008), but, consistent with other past work (e.g., Major & O'Brien, 2005), I suggest that anxiety and arousal directly affect nonverbal behavior in the context of interrogations, such that as anxiety and arousal increase, suspects are more likely to behave in ways that are associated with deception or guilt. In support, 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 Table 1 for a summary of all effects on nonverbal behavior.) Of importance, research on deception detection also shows that liars report feeling more nervous than truth-tellers (Vrij, Ennis, Farman, & Mann, 2010) and, DePaulo et al.'s (2003) meta-analysis revealed that, when motivated, liars engage in less eye contact, have higher voice frequency or pitch (see also Sporer & Schwandt, 2006), and appear more nervous and tense overall.<sup>4</sup>

Stereotype threat also causes some of these same behaviors. Vorauer and Turpie (2004) found that White Canadians who were concerned about how they would be appraised by First Nations Canadian interaction partners engaged in less eye contact than White Canadians who were not concerned. Also, Bosson, Haymovitz, and Pintel (2004) found that, compared to non-threatened 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. Thus, although anxiety/arousal, deception, and stereotype threat do not have identical behavioral consequences, there are commonalities (see Table 1). Notably, more anxious, lying, and threatened individuals are each *perceived* as more anxious than their less anxious, truth-telling, and non-threatened counterparts. These results are in line with the hypothesis that, in interrogations, Black suspects experience



stereotype threat and are more anxious and aroused and, in turn, more likely to appear as though they are lying than are non-threatened White suspects.

### **Self-Regulatory Efforts**

Individuals who experience stereotype threat have been shown to self-regulate in two ways. First, they become vigilant to situational cues to determine whether they are at risk of being stereotyped (Steele et al., 2002). For instance, Murphy, Steele, and Gross (2007) found that women math, science, and engineering majors who were reminded of the stereotype that women underperform relative to men in their field were more cognitively vigilant to details about the context in which threat was induced and more physiologically vigilant in terms of cardiovascular and electrodermal activation as compared to non-threatened women. In the context of interrogations, threatened Black suspects might be more vigilant to cues from the police investigator about whether they are being believed or whether they will be accused of a crime as compared to non-threatened White suspects. Second, threatened individuals become vigilant to cues about whether they are behaving in ways that confirm the stereotype. As noted earlier, this form of vigilance might disrupt automatic behaviors by bringing them to the forefront of consciousness (Beilock et al., 2006; Schmader et al., 2008). For example, women who are faced with the stereotype that men are better at math devote more of their thoughts to worrying about and monitoring their performance on math problems compared to non-threatened women (Beilock, Rydell, & McConnell, 2007). This rumination leads threatened individuals to overcontrol behavior that would otherwise occur automatically. Also, research shows that when individuals think that others have negative beliefs about them, they take measures to try to disprove those negative beliefs (e.g., Hilton & Darley, 1985; Smith, Neuberg, Judice, & Biesanz, 1997; for review, see Miller & Meyer, 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. To appear less threatening, Staples began whistling classical music during his walks. In interrogations, Black suspects who think they are at risk of being stereotyped as a criminal might try to reduce this risk by controlling their behaviors or engaging in counterstereotypical behaviors, and, thus, try harder than White suspects to appear more credible and less suspicious.

Therefore, experiencing stereotype threat in interrogations might lead Black suspects to

engage in more self-regulatory efforts compared to White suspects, including more cognitive vigilance to threat-related cues and more impression management strategies. Yet efforts to self-regulate might have the unintended consequence of making suspects appear less credible and more suspicious. That is, self-regulation might backfire because it is the same strategy that liars use. Liars, more than truth-tellers (DePaulo & Kirkendol, 1989; Vrij, Ennis, et al., 2010), attempt to suppress behaviors thought to be associated with lying and fake behaviors thought to be associated with truth-telling (Krauss, 1981; DePaulo, 1992). Vrij (2008) suggested that liars who attempt to control their behavior might purposefully maintain eye contact, avoid making movements with their extremities and body, or speak more smoothly by controlling speech disturbances (e.g., errors, hesitations, pauses, stutters). In fact, Sporer and Schwandt's (2007) meta-analysis revealed that highly motivated liars move their hands less than do truth-tellers. DePaulo and Kirkendol (1989) showed that motivated liars avert their gaze and blink less often, fidget and move their heads and bodies less frequently, speak in a more polished manner, and give shorter and slower answers. And DePaulo et al. (2003) suggested that self-presentational concerns explain why, compared to truth-tellers, motivated liars move their feet and legs less, have higher pitched voices, take longer to begin their responses, and seem more tense.

Indeed, research on prejudice concerns in interracial interactions indicates that individuals under stereotype threat display some of the same behaviors as liars who actively try to appear truthful. For instance, Richeson and Shelton (2003) had White participants complete a measure of implicit prejudice (which might have primed them to be concerned about appearing prejudiced) and then discuss a controversial topic with an experimenter who was either Black or White. When the experimenter was Black, White participants controlled their behavior more by looking around the room less and moving their hands and bodies less. They also modulated their responses more by apologizing more, having a harder time answering, pausing while answering, asking the experimenter for clarification of questions, and needing to be prompted by the experimenter. Also, when Shelton (2003) told White participants explicitly to try not to be prejudiced against their Black partners, they fidgeted less than White participants who were not given this instruction. Shelton interpreted this lack of movement as a purposeful effort to avoid appearing prejudiced. Although Black participants in that study who were told that their White partners were prejudiced

fidged more than other Black participants, Shelton, Richeson, and Salvatore (2005) showed that Black participants altered other behaviors when they believed that their White interaction partners were prejudiced. Compared to non-threatened Black participants, those who thought their partners were prejudiced reported more negative affect, felt less authentic, and liked their partners less, but, even so, appeared to be more engaged, both verbally (e.g., asked their partners more questions, elaborated on their own thoughts and feelings more, talked more) and nonverbally (e.g., leaned toward their partners more, arms were more open/inviting, smiled more). Thus, threatened Black participants controlled cues that might have given away their true feelings and simulated other cues in an effort to overcome the bias they thought existed.

Again, the nonverbal behavioral correlates of self-regulatory efforts, deception, and stereotype threat are not perfectly overlapping, but studies have revealed consistent effects of each on reducing movement and increasing rigidity (see Table 1). Taken together, these findings offer preliminary support for the hypothesis that, in interrogations, threatened Black suspects engage in more self-regulatory efforts and, in turn, engage in more deceptive or suspicious types of behavior as compared to non-threatened White suspects.

### **Cognitive Load**

Anxiety and related physiological arousal and self-regulatory efforts might have direct effects on nonverbal behavior, in line with Schmader et al. (2008) and Richeson and Shelton (2007), but arousal and self-regulatory efforts also might affect behavior indirectly because they create cognitive load. Stress-related arousal produces cognitive impairments, including less efficient cognitive processing (see Schmader et al., 2008). In addition, monitoring a situation for evidence of threat and controlling one's behavior to offset threat each require cognitive effort. For example, women under stereotype threat who worry about and monitor their performance on math problems are less accurate on problems that require significant cognitive capacity to solve than on less-demanding problems (Beilock et al., 2007). Also, the more Whites control their behavior in interactions with Blacks, the worse they perform on subsequent tasks that require cognitive capacity (Richeson & Shelton, 2003). Thus, due to stereotype threat and increased anxiety/arousal and self-regulatory efforts, Black suspects might have higher cognitive load than White suspects.

Cognitive load can also manifest in nonverbal behavior. Compared to individuals involved

in less complex cognitive tasks, those who are engaged in more complex tasks are not only perceived as having more difficulty (Hrubes & Feldman, 2001), but they have also been shown to avert their gaze more (Doherty-Sneddon & Phelps, 2005; Ekman & Friesen, 1972; Ekman, 1997), blink less (Leal, Vrij, Fisher, & van Hooff, 2008; Wallbott & Scherer, 1991), have more facial activity (Wallbott & Scherer, 1991), have fewer hand and arm movements (Ekman & Friesen, 1972; Ekman 1997), take longer to begin speaking (Goldman-Eisler, 1968; Greene, Lindsey, & Hawn, 1990), have more speech disturbances (Goldman-Eisler, 1968; Greene et al., 1990), and to speak more slowly (Goldman-Eisler, 1968) and for a longer period of time (Greene et al., 1990).

Because lying is more cognitively demanding than truth-telling (e.g., Vrij, Ennis, et al., 2010; for reviews, see Vrij, 2008; Vrij, Fisher, Mann, & Leal, 2010), it is not surprising that liars engage in many more of the aforementioned behaviors than do truth-tellers. Meta-analyses have revealed that, compared to truth-tellers, liars who experience cognitive load (i.e., because they either were highly motivated to get away with their lies, had less time to prepare their lies, or had to tell protracted lies) engaged in less eye contact (DePaulo et al., 2003), nodded less (Sporer & Schwandt, 2007), moved their hands less (Sporer & Schwandt, 2007), moved their feet and legs less (DePaulo et al., 2003), took longer to begin their responses (DePaulo et al., 2003; Sporer & Schwandt, 2006), had more speech disturbances (DePaulo et al., 2003), talked for shorter periods of time (DePaulo et al., 2003; Sporer & Schwandt, 2006), spoke more quickly (Sporer & Schwandt, 2006) and in a higher pitched voice (DePaulo et al., 2003; Sporer & Schwandt, 2006), and appeared more nervous generally (DePaulo et al., 2003). Other studies not included in those reviews have shown similar effects. For instance, Leal et al. (2008) demonstrated that cognitive effort and lying each reduce eye blinking. Vrij, Mann, Leal, and Fisher (2010) found that liars who were instructed to maintain eye contact, a cognitively demanding task, moved their hands and fingers less than did truth-tellers. Vrij et al. (2008) increased cognitive demands on their participants by instructing them to tell their stories in reverse-chronological order. Compared to truth-tellers, liars blinked more, moved their feet and legs more, made more speech disturbances, and spoke at a slower pace. Liars also appeared to be thinking harder and more nervous than the truth-tellers. Research has also examined indicators of deception in actual suspects during police interviews, who are presumably highly motivated and experience high cognitive load. Compared

to suspects who told the truth, those who lied blinked less but paused more (Mann, Vrij, & Bull, 2002) and appeared to be thinking harder (Vrij & Mann, 2001a).

Considering that cognitive depletion and deception have similar behavioral symptoms, threatened Black suspects who are under high cognitive load might be more likely than non-threatened White suspects who are under low cognitive load to behave as though they are lying or guilty. Tentative support for this hypothesis comes from an alternate interpretation of Richeson and Shelton's (2003) findings. They concluded that cognitive resources were depleted by White participants' efforts to control their behavior in interracial interactions. Indeed, they measured cognitive capacity after the interracial interaction. It is possible, however, that the mere anticipation of interacting with a Black partner first depleted White participants' cognitive resources and, as a consequence, they engaged in more behaviors that led them to be perceived as controlling their responses. If cognitive load is a more proximal mediator than arousal and self-regulatory efforts of stereotype threat effects on behavior, then it also might have contributed to all of the previously reviewed threat-related behaviors (see Table 1).

#### **Evidence of Racial Differences in Nonverbal Behavior in Legal Settings**

The literature reviewed thus far provides indirect support for the theory that, because threatened Black suspects are more likely than non-threatened White suspects to experience anxiety and arousal and engage in self-regulatory efforts and, in turn, experience cognitive load, they are more likely to behave, nonverbally, as though they are lying or guilty in interrogations. There is also evidence that Black suspects actually do engage in more deceptive behaviors when interacting with the police than do White suspects. For example, by examining clips from a reality television show depicting interactions between police officers and citizens who were either innocent (i.e., crime witnesses or recipients of non-crime related services, e.g., as parents of a missing child) or suspected of committing a crime (i.e., based on witness statements, physical evidence, admissions of guilt, or being filmed committing the crime), Johnson (2007; see also Johnson, 2006) found that Blacks engaged in less eye contact and smiled more than Whites, regardless of whether they were innocent or suspected of a crime. In addition, Black non-suspects moved their hands more than Black suspects or Whites in either condition, and Black suspects had fewer speech disturbances than Black non-suspects or Whites in either condition. In another study,

Vrij and Winkel (1991) used mock police interviews with same- or different-race officers to investigate whether nonverbal behavior differed depending on whether participants were (a) White (Dutch) or Black (Surinamese) and (b) lying or telling the truth. Of importance, in the Netherlands as in America, negative stereotypes about Blacks include criminality (Gordijn, Koomen, & Stapel, 2001). One must be cautious when drawing conclusions from research on Black Surinamese participants about how Black Americans might behave in interrogations, but to the extent that both groups are stereotyped as criminals, both groups might experience stereotype threat in interrogations and, in turn, be more likely than others to behave in ways that are associated with deception. In support, Vrij and Winkel found that, compared to White Dutch suspects, Black Surinamese suspects were more likely to avoid eye contact, smile, laugh, move their hands and bodies, speak with long pauses, speak slower, and raise their voice pitch higher (see also Vrij, Dragt, & Koppelaar, 1992; Winkel & Vrij, 1990). Further, Black suspects smiled and laughed more, made more trunk movements, and made fewer speech disturbances with a White officer than a Black officer. Also, there were no differences in Black suspects' nonverbal behavior as a function of whether they were lying or telling the truth. These studies indicate that, even when they are innocent and telling the truth, Black suspects tend to engage in more deceptive behaviors than White suspects (see Table 1), particularly when paired with a White police officer.

Johnson (2006, 2007) and Vrij and Winkel (1991) suggested that their effects were due to racial differences in communication styles. For example, during both intraracial and interracial conversations, Blacks are more likely to avert their gaze than are Whites (LaFrance & Mayo, 1976; for review, see Halberstadt, 1985). But perhaps these racial differences in nonverbal behavior are at least exacerbated by stereotype threat. Black individuals in Johnson's and Vrij and Winkel's studies could have been concerned about whether the police officers they were interacting with were going to be biased by the criminal stereotype. In addition, Shelton (2003) showed that, regardless of whether Black participants were under stereotype threat or not, they reported paying more attention to their thoughts, feelings, and behaviors during interracial interactions than did White participants. Despite noting that Black suspects were "particularly sensitive to the ethnic origin of the officer conducting the interrogation" and "exhibited more 'black nonverbal behavior' in front of a white police officer" (p. 180), Vrij and Winkel dismissed

the possibility that these differences might have been the product of interracial tension because the same effects did not emerge on a self-report measure of tension. Yet many studies showing typical stereotype threat effects have failed to find differences on self-report measures of anxiety (e.g., Bosson et al., 2004), perhaps because threatened individuals respond in socially desirable ways (i.e., as though they are not anxious) as an impression management strategy. Thus, Black suspects in Vrij and Winkel's study might have had the additional concern of being the target of a White officer's prejudice, which could explain the differences found in Black participants' behavior as a function of the interviewing officer's race. Thus, these findings are consistent with the theory that stereotype threat might provide an important social psychological explanation for racial differences in nonverbal behavior in interrogations.

### **How Stereotype Threat Translates into Police Investigator Bias**

So far I have discussed my hypotheses about the within-suspect effects of stereotype threat but to understand why threat might increase the risk of false confessions among Black suspects as compared to White suspects, it is important to recognize how racial differences in suspects' nonverbal behavior might affect police investigators' perceptions of and reactions to suspects.

### **The Misclassification Error**

Leo and Drizin (2010) note that every police-induced false confession occurs because of a series of mistakes made by the police, the first of which is the erroneous classification of an innocent person as guilty. Why might Black suspects be more likely than White suspects to be misclassified? I propose that this probably occurs because some of the nonverbal behavioral symptoms of stereotype threat are not only actually indicative of lying, but also precisely the cues that police investigators rely on to distinguish liars from truth-tellers.

Based on the belief that liars are betrayed by their nonverbal behavior (Depaulo & Kirkendol, 1989; Ekman & Friesen, 1969), most police investigators are trained to rely on Inbau, Reid, Buckley, and Jayne's (2001) behavioral analysis techniques to determine whether individuals are being deceptive (Colwell, Miller, Lyons & Miller 2006; Gudjonsson, 2003; Leo, 2004; but see Kassin et al., 2007). Inbau et al. train investigators that, compared to truthful suspects, deceptive suspects avoid eye contact; have more variation in their facial expressions; make fewer hand movements; fidget more; have more slouching, retreating, or barrier postures;

respond before the investigator finishes the question or take longer to begin responding to questions; laugh, cough, or clear their throats more after significant denials; and speak for shorter periods of time, more slowly, with more disturbances, and in an unwavering voice pitch. In general, police adhere to the Inbau et al. (2001) training protocol—they believe that nonverbal cues to deception include gaze aversion (Akehurst, Köhnken, Vrij, & Bull, 1996; Mann, Vrij, & Bull, 2004; Stromwall & Granhag, 2003; Vrij, Akehurst, & Knight, 2006; Vrij & Mann, 2001b; Vrij & Taylor, 2003), tense, nervous, or unfriendly facial expressions (Akehurst et al., 1996; Vrij, Akehurst, & Knight, 2006), smiles (Vrij & Semin, 1996), finger/hand movements (Akehurst et al., 1996; Mann et al., 2004; Vrij & Semin, 1996), foot/leg movements (Vrij & Semin, 1996), tense or nervous postures (Akehurst et al., 1996), speech disturbances (Akehurst et al., 1996; Mann et al., 2004; Vrij & Semin, 1996; Vrij & Taylor, 2003), unchanging voice pitch (Vrij & Semin, 1996), and social anxiety (Vrij & Winkel, 1992b). Even so, police believe that longer rather than shorter responses and faster rather than slower speech rate are indicative of deception (Vrij & Semin, 1996). In addition, they report using head movements (Vrij & Semin, 1996), body movements (Akehurst et al., 1996; Mann et al., 2004; Stromwall & Granhag, 2003; Vrij & Semin, 1996), fake emotions (Vrij & Mann, 2001b), and longer speech onset latency (Vrij & Semin, 1996) as cues to deception. Also, police believe that liars experience emotions (Vrij, Akehurst, & Knight, 2006), try to control their behavior and speech (Mann & Vrij, 2006; Vrij, Akehurst, & Knight, 2006), and have to think hard (Mann & Vrij, 2006; Vrij & Taylor, 2003). (See Table 1 for summary.)

Given that police investigators' beliefs about nonverbal cues are not entirely accurate, it is not surprising that they detect deception at only slightly better than chance rates (Mann & Vrij, 2006; Mann et al., 2002; Mann et al., 2004; Vrij et al., 2008). Yet, their limited ability to discriminate truthful from lying suspects can also be explained by their misguided reliance on cues that are actually associated with deception, but also related to other psychological processes. As shown in Table 1, there is considerable overlap between the nonverbal behaviors that the police associate with deception and those caused by arousal, self-regulatory efforts, and cognitive load. Thus, as noted previously in the literature (e.g., DePaulo, 1992; Gudjonsson, 2003; Inbau et al., 2001; Kassin & Fong, 1999; Johnson, 2006; Leo & Drizin, 2010; Memon, Vrij, & Bull, 2003; Ofshe & Leo, 1997), innocent suspects who are aroused, attempt to manage their behavior, or are



cognitively taxed by virtue of being in a stressful interrogation are likely to behave in ways that are associated with lying, and possibly mistaken as guilty by police.

For the same reason, stereotype threat might increase the likelihood that Black suspects will be victims of the misclassification error more often than White suspects. Indeed, the correspondence between cues of stereotype threat and deception alone is significant enough to justify concern that innocent Black suspects might be at greater risk than White suspects of being misclassified as guilty. The evidence reviewed above showing that Blacks in legal settings engage in more behaviors that police associate with deception than do Whites (Johnson, 2007; Vrij & Winkel, 1991) provides further reason for concern. Moreover, police judgments are influenced by racial differences in nonverbal behavior. Winkel and Vrij (1990) asked police officers to judge whether mock suspects were lying or telling the truth based on their nonverbal behavior. Black Surinamese suspects, who engaged in more smiling, laughing, gaze aversion, fidgeting, and long pauses, were more likely to be perceived as lying than were White Dutch suspects. Other mock investigation research showed that this effect was driven not by suspects' race but, instead, by their nonverbal behaviors. Vrij (1993) varied a suspect's skin color separately from his nonverbal behavior and found that White police officers actually perceived Black suspects to be less suspicious than White suspects (see also Vrij & Winkel, 1992a, 1994), but officers perceived suspects who averted their gaze, smiled, moved their hands and arms, and had speech disturbances as more suspicious than suspects who did not engage in these nonverbal behaviors. Thus, when investigators make guilt judgments on the basis of nonverbal behavioral cues that are sometimes related to deception but also to stereotype threat and its psychological correlates, they are relying on cues that have limited diagnostic value and risk misclassifying suspects as guilty more often when they are Black than White.

### **The Coercion Error**

The next error that investigators make which leads to false confessions is to interrogate innocent suspects with guilt-presumptive, accusatory methods (Leo & Drizin, 2010). Indeed, theory on confirmatory bias in hypothesis testing suggests that, once investigators misclassify innocent suspects as guilty, they might be more likely to employ coercive questioning tactics in an effort to confirm suspects' hypothetical guilt. Confirmation bias involves, among other things

discussed later, assuming a hypothesis is true, searching for evidence that supports the hypothesis, and asking questions that are designed to bolster the hypothesis (for reviews, see Gilovich, 1993; Nickerson, 1998; Nisbett & Ross, 1980; Snyder & Stukas, 1999; Trope & Liberman, 1996). In the vast majority of actual interrogations, investigators presume that suspects are guilty and their primary objective is to get suspects to confess (Inbau et al., 2001; Stephenson & Moston, 1994).

Two studies suggest that investigators who believe that suspects are guilty rather than innocent are more likely to engage in coercive tactics to secure confessions. Hill, Memon, and McGeorge (2008) demonstrated that, among participants who expected to interview students about whether they had cheated, those who were led to believe that most students were guilty rather than innocent planned to ask more guilt-presumptive questions. Similarly, Kassir, Goldstein, and Savitsky (2003) found that participants who expected most suspects to be guilty versus innocent of a theft not only planned to ask more guilt-presumptive questions—they actually engaged in more coercive techniques (e.g., threats of punishment, presentation of false evidence) during mock interrogations. Further, mock investigators who had high rather than low guilt expectations saw themselves and also were perceived by others as exerting more pressure on suspects and trying harder to get a confession, particularly when suspects were innocent rather than guilty.

If investigators are more likely to misclassify Black than White suspects as guilty on the basis of racial differences in nonverbal behaviors produced by stereotype threat and its correlates, investigators might be more likely to employ coercive questioning tactics with Black suspects. Consistent with this theory, Leo's (1996) observational study of actual interrogations revealed that minority suspects were subjected to more tactics (e.g., offering justifications/excuses, appealing to the suspect's conscience) than were White suspects (but see Wald et al., 1967).

### **Why Suspects Falsely Confess**

As investigators ratchet up the pressure they exert, they also ratchet up the pressure suspects experience. Hill et al. (2008) found that when investigators asked guilt-presumptive rather than neutral questions, suspects perceived that investigators were trying harder to get them to confess and felt more pressure to confess. Because investigators use more coercive tactics with Black than White suspects (Leo, 1996), Black suspects probably feel more pressure to confess than do White suspects. When interrogated by an investigator who is biased to see guilt rather than

innocence, suspects also think they are more likely to be judged guilty (Kassin et al., 2003). Therefore, the more pressure innocent suspects experience in interrogations, the more likely they might be to feel the threat of being judged guilty erroneously. Although both Black and White suspects probably perceive investigators' coercive tactics as evidence that they are being perceived as guilty of the crime in question, Black suspects probably feel this threat to a greater degree because they are also concerned about being perceived as a stereotypical Black criminal. Next, I discuss how the pressure to confess might influence suspects to confess falsely.

### **The Self-Fulfilling Prophecy and Behavioral Confirmation**

According to theories on self-fulfilling prophecies and behavioral confirmation (Gilovich, 1993; Nickerson, 1998; Snyder & Stukas, 1999), when subjected to coercive tactics, innocent suspects might interpret the pressure they feel as evidence that the investigator believes they are guilty, and, inadvertently, respond by behaving in ways that the investigator perceives as deceptive or suspicious. Research bears this out. For example, during a mock interview with a police officer using Inbau et al.'s (2001) guilt-presumptive behavioral analysis technique, suspects who were telling the truth were rated by independent observers as appearing more nervous (i.e., crossed their legs and shifted their posture more) than suspects who were lying (Vrij, Mann, & Fisher, 2006). In Hill et al. (2008), observers rated suspects paired with an interviewer who asked guilt-presumptive questions as more nervous and defensive and their denials as less plausible than suspects who were paired with an interviewer who asked neutral questions, and these effects tended to be stronger for innocent than guilty suspects. Also, observers in Kassin et al. (2003) rated suspects paired with investigators who expected suspects to be guilty rather than innocent as more defensive. Further, suspects paired with guilt-presumptive investigators were more likely than other suspects to be judged guilty, regardless of whether they had actually committed the mock crime, by not only third-party observers but by investigators, too. Thus, self-fulfilling prophecies and behavioral confirmation create a vicious cycle whereby investigators search for information in biased ways that confirm their presumptions of guilt, suspects react in ways that investigators perceive as confirming their presumptions, and investigators, increasingly convinced of suspects' guilt, push harder and harder for suspects to confess. In fact, investigators in Kassin et al.'s (2003) study used more coercive techniques when questioning innocent suspects than guilty

suspects. These effects are probably amplified for Black compared to White suspects because Black suspects are already concerned about being misperceived as guilty and prone to exhibiting the kinds of behaviors that investigators interpret as evidence of guilt. The end result is that Black suspects are likely to feel escalating pressure as the cycle continues, more so than White suspects.

### **The Need to Escape: The Proverbial “Final Straw”**

Ofshe and Leo (1997) suggest that the core psychological reason that suspects confess falsely is that they feel as though denial is futile and will prolong the stress of being interrogated whereas confessing, in contrast, will relieve the stress. Indeed, the need to escape from coercive and hostile interrogations is a widely recognized force that compels innocent suspects to confess falsely (see Drizin & Leo, 2004; Gudjonsson, 2003; Kassin & Wrightsman, 1985). In Redlich et al.’s (2010) sample of mentally ill offenders, 48% of false confessors reported that they confessed in response to police pressure, and 65% said they confessed because they wanted to end the interrogation or go home. Suspects also believe that, because they are innocent, things will sort themselves out in the end (Kassin, 2005; Meissner & Kassin, 2002; Warden & Drizin, 2009). Thus, the pressure that innocent suspects experience in interrogations is aversive and ultimately increases their need to escape the interrogation and, in turn, the likelihood that they will confess falsely. Because Black suspects probably experience greater pressure than do White suspects, they might be more likely to confess falsely.

### **Implications for Research**

By bringing together four distinct theories on stereotype threat, deception detection, confirmatory bias in hypothesis testing, and false confessions, I have developed a novel model of the underlying social-psychological mechanisms explaining racial differences in the likelihood of confessing falsely. This model makes specific predictions that should be tested empirically. Whether innocent Black suspects actually experience stereotype threat in interrogations could be determined by conducting retrospective surveys or interviews of Blacks who have been interrogated and assessing the degree to which they were concerned about being perceived as criminals by police investigators due to racial stereotypes. Similar research could test whether Blacks and Whites differ in anxiety and self-regulatory efforts in interrogations. It is always ideal to test hypotheses under realistic conditions, however, so both of these questions and more would

be answered more convincingly with a mock interrogation study. Such research would allow one to assess stereotype threat, anxiety and related physiological arousal, and self-regulatory efforts as well as cognitive load and nonverbal behavior as they actually occur. For example, a research confederate acting as a police investigator could question Black and White participants about a mock crime. Additional manipulations could ensure that race effects on nonverbal behavior are produced by stereotype threat and its psychological correlates rather than basic cross-cultural differences in communication styles. For example, participants could be questioned under conditions in which the police investigator could see them or not (e.g., following Crocker, Voelkl, Testa, & Major, 1991). Because the investigator would only be aware of suspects' race when they are visible, the interrogation would be diagnostic and elicit stereotype threat only in Black suspects who could be seen.

Once the within-suspect effects of race, stereotype threat, and its psychological correlates on nonverbal behavior have been demonstrated, research will need to test how they affect police investigators' judgments and interrogation tactics. A follow-up study could be conducted in which actual police officers view videos of the participants during the mock interrogations and rate how suspicious and deceptive participants appear. Officers could also be asked to imagine that they were going to interrogate the suspects and rate how hard they would try and how much pressure they would put on the suspect to confess to the crime, including how likely they would be to engage in various coercive techniques (e.g., make repeated accusations, present false evidence). Prior mock interrogation studies (Hill et al., 2008; Kassin et al., 2003) have tested how investigators' presumptions of guilt influence suspects' perceptions of pressure. These studies could be replicated and extended upon by examining whether perceptions of pressure, behavioral confirmation effects, and the tendency to confess falsely vary depending on suspects' race. Although, as described, it would take multiple studies to test the proposed model adequately, such a program of research could make unique contributions to the psychology and law literature by revealing why Black suspects are more likely to falsely confess than White suspects.

Once the core of the theory has been validated, future work will be necessary to establish its boundaries. For example, what factors determine whether or to what degree Black suspects experience stereotype threat in interrogations? Prior research on stereotype threat suggests that

Black suspects might experience more stereotype threat when paired with a White rather than Black investigator (see, e.g., Marx & Goff, 2005; Steele et al., 2002). In support, Vrij and Winkel (1991) found that Black suspects behaved most suspiciously when paired with a White investigator. In addition, the stereotype of Black criminality is typically associated with men and violent crime (Rome, 2004), so Blacks who are women or accused of nonviolent crimes might not perceive the stereotype as relevant or experience threat. Also, Black suspects who are high in stigma consciousness (i.e., chronically concerned about being stereotyped) probably experience more stereotype threat than others (see, e.g., Brown & Pinel, 2003; Shelton et al., 2005). Finally, prior legal experience could either attenuate or accentuate racial differences in threat effects. On the one hand, threat could be lessened if Black suspects who have had prior arrests or convictions think that they have already confirmed the stereotype. Also, because more experience in the legal system is associated with greater distrust of the police among both Blacks and Whites (Woolard, Harvell, & Graham, 2008), innocent suspects of either race might be concerned about being judged guilty erroneously because of their prior records. On the other hand, threat could be intensified for innocent Black suspects who have prior records of perpetrating crimes because they have two reasons to be concerned about being perceived as guilty for crimes they did not commit.

There are also variables that might increase bias in investigators' decision making. Police investigators tend to be biased to perceive deception and guilt to begin with (Ask & Granhag, 2005; Garrido, Masip, & Herrero, 2004; Leo, 2008; Meissner & Kassin, 2002), and this bias tends to be exacerbated by receiving training in the Inbau et al. (2001) tradition (Kassin & Fong, 1999; Kassin, Meissner, & Norwick, 2005; Mann et al., 2004; Masip, Alonso, Garrido, & Herrero, 2009; Meissner & Kassin, 2002) and experience (e.g., in terms of age, years in law enforcement, or experience interviewing suspects) (Meissner & Kassin, 2002; but see Mann et al., 2002; Vrij & Mann 2001a, 2001b). A more pernicious form of bias is that based solely on suspects' race, although field and experimental studies suggest that police officers' explicit racial biases do not affect their judgments (e.g., Correll, Park, Judd & Wittenbrink, 2002; Correll et al., 2007; Eberhardt, Goff, Purdie, & Davies, 2004; Wald et al., 1967). Even in the absence of explicit prejudice, however, race and the stereotype about Black criminality might have subtle influences on the ways investigators perceive suspects, process information, and form their judgments (e.g.,

Devine, 1989; for review, see Trope & Liberman, 1996). For example, investigators might be primed with the stereotype of criminality just by virtue of Black suspects' race (see, e.g., Eberhardt et al., 2004), and police and probation officers who have been primed to think of stereotypes about Blacks perceive racially unidentified offenders as more mature, violent, culpable, and deserving of punishment than do officers who have not been primed, regardless of officers' levels of explicit prejudice (Graham & Lowery, 2004). Also, regardless of what group an individual is in, if it is not the same group as the perceiver, he or she may be subjected to outgroup bias. These biases could have a number of effects on the proposed model. Investigators who are extremely biased might jump right to the conclusion that a suspect is lying or guilty. This is particularly likely when White investigators are paired with Black suspects (see, e.g., Desmarais, 2009; Sommers & Ellsworth, 2000; but see Ruby & Brigham, 1996; for reviews, see Rand, 2000, Taslitz, 2006, and van Prooijen, 2009). Theory on confirmatory bias in hypothesis testing suggests that investigators might see what they expect to see during interrogations (e.g., Ask & Granhag, 2005, 2007; Kerstholt & Eikelbloom, 2007; Meissner & Kassin, 2002; O'Brien, 2009; for reviews, see Findley & Scott, 2006; Gilovich, 1993; Martin, 2001; Nickerson, 1998; Trope & Liberman, 1996). As investigators unwittingly try to prove their biased hypotheses (i.e., that suspects are guilty or that Blacks are criminals), they might attend more readily to nonverbal cues to deceit or see nonverbal behavior as indicative of guilt without considering alternative explanations for why the suspect is engaging in those behaviors. As a result of seeing what they want to see, investigators might become overconfident in suspects' guilt and, as described earlier, push harder to try to get them to confess. Also, outgroup bias might lead White investigators' to abandon procedural protections and engage in coercive tactics more readily when interrogating Black than White suspects (see, e.g., Boeckmann & Tyler, 1997). To the extent that racial and outgroup biases lead investigators to engage in more coercive tactics or other behaviors that are perceived by Black suspects as biased (for review, see Dovidio, Hebl, Richeson, & Shelton, 2006), it could also contribute to self-fulfilling prophecies and behavioral confirmation (Snyder & Stukas, 1999; Taslitz, 2006; Wang, 2006), as described earlier. In addition, effects of these biases might be further moderated by characteristics of the investigator (e.g., cognitive load, Ask & Granhag, 2005; 2007; van Knippenberg, Dijksterhuis, & Vermeulen, 1999; motivation to reach accurate

conclusions, see Kunda, 1990), suspect (e.g., stereotypicality, Eberhardt et al., 2004; 2006), and case (e.g., stereotype-consistency, Biernat, Ma, & Nario-Redmond, 2008; Jones & Kaplan, 2003).

All of these hypotheses present opportunities for research to test for moderating effects. To the extent that research confirms hypotheses about factors that might alleviate stereotype threat or minimize bias in investigators' decision making, results could yield important insights about how to reduce racial disparities in false confession rates. Yet, there are even more questions research should explore. For example, a great deal of the research on deception detection has been conducted in Europe. Thus, similar investigations into actual nonverbal behaviors associated with deception in American citizens as well as American police investigators' beliefs about cues to deception are needed. In addition, investigators also sometimes use speech content and physiological responses as evidence that suspects are lying (Vrij, 2008). Thus, a similar analysis of how stereotype threat might affect such cues is needed. In particular, Taslitz (2006) noted that Black suspects' use of powerless speech (which includes some of the nonverbal behaviors reviewed here as well as other verbal content cues) might lead investigators to doubt their credibility. Also, because some of the evidence that threat produces deceptive-looking nonverbal behavior is derived from studies of non-Black targets (e.g., Whites in Richeson & Shelton, 2003, and Vorauer & Turpie, 2004; gay men in Bosson et al., 2004), it will be essential to show the same effects in Black targets if the model is to be supported. Also, I focused on Black suspects' feelings of stereotype threat in interrogations, but the theoretical model might generalize to other groups who are stereotyped as criminals (e.g., Hispanics, Simmons, 1961) and other situations in which that stereotype is relevant. For example, judges and jurors might perceive Black defendants as less credible than White defendants (see Rand's, 2000, argument related to witnesses).

Also, I focused on the stereotype of Black criminality, but Blacks are also stereotyped as aggressive, angry, and hostile (Devine, 1989; Devine & Elliot, 1995; Madon et al., 2001). These stereotypes might also contribute to Black suspects' increased likelihood of confessing falsely. In particular, Taslitz (2006) suggested that innocent Blacks who are targeted as suspects might react with hostility, defensiveness, and antagonism and appear more guilty (see also Engel, 2003; Walker, 1999). Research should examine whether these reactions occur and if they are attributable to stereotype threat. Further, negative stereotypes and bias might affect investigators' perceptions



of how angry (Hugenberg & Bodenhausen, 2003) or hostile (e.g., Devine, 1989) a Black suspect is behaving. All of this is important because suspects who behave more defensively or hostilely are more likely to be perceived by police officers as suspicious (Winkel, Koppelaar, & Vrij, 1988) and more likely to be subjected to severe action, particularly if they are Black (Moyer, 1981) (see also Taslitz, 2006). It is also important to consider how behaviors that are perceived as disrespectful play a role in contributing to investigators' judgments and actions (see, e.g., Weitzer, 2000). Research should also explore how automatic ideomotor processes affect interactions between investigators and Black suspects. For example, activating racial stereotypes could cause both investigators and Black suspects to act in ways that are associated with the Black stereotype (e.g., aggressive, hostile; Chen & Bargh, 1997; for reviews, see Todorov & Bargh, 2002; Wegener & Petty, 1997). Further, to the extent that either suspects or investigators behave in ways associated with aggression, anger, hostility, and disrespect, their interaction partners might unintentionally and nonconsciously mirror those behaviors (Chartrand & Bargh, 1999), potentially creating a situation in which each perceives the other to be increasingly confrontational.

### **Implications for Theory and Practice**

The proposed model makes several novel theoretical contributions. To begin with, it extends stereotype threat theory by exploring the consequences of a stereotype that has yet to be investigated in a context that has been overlooked. Even though it has been noted that the criminal stereotype can directly influence how Black suspects behave (e.g., Staples, 2007; Steele, 2010) and how law enforcement officials perceive and respond to Blacks (e.g., Eberhardt et al., 2004; Payne, 2001), to my knowledge, this is the first effort to evaluate how stereotype threat might affect Black suspects' behaviors when they are accused of crimes. Also, because most research on stereotype threat, particularly related to Blacks' experiences of threat, has focused on effects on academic performance, Steele (2010) recently called for researchers to broaden the theory by exploring other consequences of stereotype threat. This work contributes to a new but growing literature that demonstrates that threat can manifest in behavior (e.g., Bosson et al., 2004; Goff et al., 2008; Shelton, Richeson, & Salvatore, 2005), and considers the theoretical underpinnings that might explain how threat affects Black suspects' behavior in the high-stakes context of interrogations. In addition, research based on this model could make an important contribution to

the stereotyping and prejudice literature because it uses a dynamic-process approach to understand how negative stereotypes affect interpersonal interactions.

This work also has serious practical implications. By linking threat theory to other social psychological theories on deception detection, confirmatory bias in hypothesis testing, and false confessions, I considered how such behavioral effects might be interpreted by investigators as stereotype-consistent (i.e., indicative of deception/guilt) and, ultimately, contribute to racial disparities in false confession rates. Leo (1996) found that suspects who incriminated themselves, admitted, or confessed (truthfully or falsely) during their interrogations were more likely to be charged, less likely to have their cases dismissed, more likely to resolve their cases by plea bargaining, more likely to be convicted, and received more punishment following conviction. Indeed, false confessions have contributed to at least 7% and as many as 40% of wrongful convictions (Bedau & Radelet, 1987; Connors, Lundregan, Miller, & McEwen, 1996; Death Penalty Information Center, 2009; Garrett, 2008; Gross et al., 2005; Huff, Rattner, & Sagarin, 1996; Innocence Project, 2009; Saks et al., 2001; Saks & Koehler, 2005; Scheck, Neufeld, & Dwyer, 2000; Rattner, 1988; Warden, 2003). It is becoming clear that race is a risk factor for confessing falsely and the model presented herein attempts to elucidate why so that the effect can be understood and safeguards can be implemented to mitigate it.

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### Footnotes

<sup>1</sup> To determine whether exonerees on the Death Penalty Information Center's (2009) "Innocence List" (i.e., individuals who have been exonerated from death row since 1973) had confessed, I examined the Center's case descriptions and cross-referenced exonerees' names with cases involving false confessions described by Leo and Ofshe (1998) and Drizin and Leo (2004). A least 15 (11%) of the 139 exonerees on the Innocence List had falsely confessed: 11 (73%) were Black, 2 (13%) were White, and 2 (13%) were Latino.

<sup>2</sup> Although I focus on the potential for stereotype threat to cause innocent Black suspects to be misclassified as guilty and subsequently confess falsely, a reviewer pointed out that stereotype threat could also cause guilty Black suspects to confess truthfully, which is arguably beneficial from a law enforcement standpoint. Observations of actual interrogations in which suspects' innocence or guilt was unknown indicate that, overall, Blacks and Whites incriminate themselves or confess at similar rates (Leo, 1996; Wald et al., 1967). Thus, existing data do not support the idea that stereotype threat ultimately causes racial disparities in confession rates, regardless of whether the confessions are reliable, but it remains possible and research should specifically test the proposed model with respect to both false and true confessions.

<sup>3</sup> Note that there may also be reciprocal or feedback effects among the mediator variables (see Major & O'Brien 2005; Schmader et al., 2008; Steele, 2010). For example, Richeson and Shelton (2007) suggest that feeling aroused might lead threatened individuals to engage in self-regulatory efforts. Also, self-regulatory efforts might yield evidence of threat or that one is failing to present the intended impression, and this evidence might increase arousal. Increasing cognitive load might further increase arousal and anxiety (e.g., Leal et al., 2008; Vrij et al., 2008, Wallbott & Scherer, 1991). Schmader et al. (2008) also suggested that other thoughts and appraisals related to stereotype threat and efforts to suppress those thoughts play an important role in determining whether performance is impaired. These are important effects to consider, but I focus here on the links between variables that are more directly relevant for explaining why Black suspects are more likely than White suspects to engage in nonverbal behaviors linked to deception.

<sup>4</sup> This review was restricted to deception detection studies in which target liars were either highly motivated, under high cognitive load, or actual suspects in police investigations because the

psychological experiences of these liars are probably more similar to those of suspects in actual interrogations than are the experiences of participants who are not very motivated or cognitively burdened while lying.

Table 1  
*Nonverbal Behaviors: Actual Psychological Correlates, Actual Racial Differences in Legal Situations, and Police Professionals' Perceptions about Behaviors Associated with Lying*

Nonverbal Behavior	Actual Psychological Correlates				Lying	Blacks relative to Whites in legal situations	Police professionals' perceptions about liars compared to truth-tellers
	Increased arousal	Increased self-regulatory efforts	Increased cognitive load	Feeling stereotype threat			
Eye blinking	>		<		> / <		
Gaze aversion	>	<	>	> / <	> / <	>	>
Nervous facial expressions	>						>
Total facial movements	>		>				
Smiles/mouth movements	>		>	>		>	>
Appears aroused/anxious	>		>	>	>		>
Appears to be thinking hard			>		>		>
Faked emotions							>
Speech onset latency			>		>		>
Speech duration			>	>	<		>
Speech disturbances		<	>	>	> / <	> / <	>
Speech pace			<		<	<	>
Voice frequency/pitch					>	>	-
Nodding/head movements					<		>
Finger/hand/arm movements	>	<	<	> / <	<	>	>
Foot/leg movements		<			> / <		>
Rigidity	>	>		>	>	<	> / <
Irregular breathing	>						

Note. < means that the cue occurs less often in this condition; > means that the cue occurs more often in this condition; empty cells mean that the cue was either not affected or not examined. For example, eye blinking actually increases in frequency in aroused participants, decreases in participants under high cognitive load, and may either increase or decrease in participants who are lying.