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# Guilty Stereotypes: The Social Psychology Of Race And Suspicion In Police Interviews And Interrogations

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GUILTY STEREOTYPES: THE SOCIAL PSYCHOLOGY OF RACE AND SUSPICION IN  
POLICE INTERVIEWS AND INTERROGATIONS

by

SARA C APPLEBY

A dissertation submitted to the Graduate Faculty in Psychology in  
partial fulfillment of the requirements for the degree of  
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This manuscript has been read and accepted by the  
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Abstract

GUILTY STEREOTYPES: THE SOCIAL PSYCHOLOGY OF RACE AND SUSPICION IN  
POLICE INTERVIEWS AND INTERROGATIONS

by

SARA C APPLEBY

Adviser: Maria Hartwig

Over 300 people have been exonerated by post conviction DNA testing, unequivocally proving their innocence. Nearly 70% of these post conviction DNA exonerees are members of minority groups, and approximately 69% of those convicted as a result of false confessions are racial/ethnic minorities ([www.innocenceproject.org](http://www.innocenceproject.org)). To date, there is little research on the role of race in police interviews and interrogations. The present research had two goals. First, we examined Black and White participants' experiences during a mock crime interview. Second, using the interviews from Study 1, we evaluated the role suspect race plays in police officers' veracity judgments. Using a sample of community members, Black and White suspects in Study 1 reported similar levels of anxiety and exhibited similar rates of nonverbal behaviors commonly believed to be cues to deception. Similarly, Black and White suspects cooperated with the investigation at similar rates. Police officers in Study 2 exhibited chance levels of accuracy in their culpability decisions. However, police officers were significantly more likely to misjudge innocent Black suspects as guilty than innocent White suspects, while showing no difference in their accuracy rates for guilty suspects. Additionally, police officers judged Black suspects to be less cooperative and less forthcoming than White suspects. These results suggest that being questioned about a crime is stressful regardless of a suspect's race or ethnicity. They also

suggest that innocent Black suspects are at a greater risk of being erroneously judged as guilty during police interviews and interrogations. Implications and directions for future research are discussed.

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## CHAPTER 1: THE ROLE OF RACE IN WRONGFUL CONVICTIONS

English jurist William Blackstone argued that it is better to let ten guilty men go free than to send one innocent person to jail (Blackstone, 1826). This premise has been one of the building blocks of our adversarial justice system (Volkh, 1997). Yet, to date, 321 people have been exonerated by post-conviction DNA testing, unequivocally proving their innocence ([www.innocenceproject.org](http://www.innocenceproject.org)). Nearly 70% of these post-conviction DNA exonerees are racial-ethnic minorities. Racial-ethnic minorities are over-represented in the criminal justice system as a whole (McCarter, 2009; The Sentencing Project, 1995) and scholars have cited both socio-economic reasons (e.g. higher poverty rates) and discriminatory practices (e.g. drug sentencing policies) as explanations for this over-representation (McCarter, 2009; The Sentencing Project, 1995). The over-representation of racial and ethnic minorities among the DNA exoneree population, however, has largely been ignored. Although socio-economic reasons are likely to play a role in the high racial-ethnic minority presence in the DNA exoneree population though mechanisms such as being less likely to afford quality legal assistance, there are a number of social-cognitive reasons that may also contribute to the high rate of racial and ethnic minorities in the criminal justice system. Some examples of social cognitive biases that have been known to influence decision-making in other areas of the legal system include in-group/out-group biases, stereotyping, and prejudice on the part of the players in the legal system, sometimes operating unconsciously (e.g., Eberhardt, Davies, Purdie-Vaughns, & Johnson, 2006; Sommers & Ellsworth, 2001).

The Innocence Project identifies six major contributing factors to wrongful convictions, but in only one of the contributing factors - eyewitness identifications - has there been ample research on how suspect race can affect legal decision-making. Eyewitness misidentification is

the major cause of wrongful convictions; a contributing factor in over 75% of DNA exonerations ([www.innocenceproject.org](http://www.innocenceproject.org)). A review of Innocence Project (a non-profit organization dedicated to exonerating the wrongfully convicted through DNA testing of evidence) cases shows that 50% of these mistaken eyewitness identifications were cross-race identifications, usually in the form of a Black suspect and a White witness (Innocence Project, 2009). There have been a number of eyewitness studies dedicated to discerning how race affects eyewitness identifications. Meta-analytic findings show that racial attitudes do not predict cross race identification accuracy, and suggests that social-cognitive mechanisms (e.g. amount of interracial contact) influence cross race identification accuracy (Meissner & Brigham, 2001). These findings suggest that, in addition to socio-economic factors, social-cognitive factors play a role in the overrepresentation of minorities among the wrongfully convicted.

Very little research, however, has been conducted on how race affects another leading cause of wrongful conviction, false confessions. False confessions, a narrative admission to a criminal act that one did not commit, have been a contributing factor in approximately 25% of the DNA exoneration cases. The true rate of false confessions is not known, but the number of DNA exonerees represents the tip of the iceberg as many false confession cases are likely invisible. For example, cases where no DNA evidence is present, confessions are disproved prior to trial, confessions from juveniles in files that remain sealed, and confessions to minor crimes that do not receive post conviction scrutiny are rarely included in counts of false confession cases (Kassin et al., 2010). A review of Innocence Project case files reveals that approximately 69% of false confession exonerees are racial-ethnic minorities ([www.innocenceproject.org](http://www.innocenceproject.org)). The evidence is clear that false confessions, and thus a considerable number of convictions of innocent people, have their origin in the interrogation room - a proposition that has received ample support from

field and laboratory research (Baldwin, 1993; Bull & Milne, 2004; Gudjonsson, 2003; Hartwig, Granhag, & Vrij, 2005; Huff, Rattner, & Sagarin, 1996; Kassin, 2005; Kassin, Drizin, Grisso, Gudjonsson, Leo, & Redlich, 2010; Victory, 2002). Further, as will be detailed below, the evidence is overwhelming that these misclassifications of innocent suspects are due largely to police misinterpretations of behaviors when discerning deception and guilt (Kassin, 2008; Vrij, 2004). Given the large number of minorities who have been wrongfully convicted as a result of false confessions, the present research seeks to investigate the effects of suspect race on police officers' credibility judgments.

When interviewing suspects, police officers are often trained to evaluate suspects' nonverbal behaviors, such as gaze aversion and fidgeting, to detect deception (e.g. Inbau, Reid, Buckley, & Jayne, 2013). Research shows, however, that these behaviors are not cues to deception (DePaulo et al., 2003). Instead, they are typical signs of discomfort and anxiety. During police-citizen interactions, there are a number of reasons other than deception why a suspect may be anxious during questioning. Some examples include the discomfort of being accused of a crime or the fear of potentially being mistakenly judged as guilty (deTurk & Miller, 1985; Winkel, Koppeleaar, & Vrij, 1988, Bond & Fahey, 1987). Black suspects in particular may be prone to stress and anxiety due the appraisal of the possibility that they fit the stereotype of a criminal. Indeed, the stereotypical association of African-Americans with criminality is widespread (Eberhardt, et al., 2004) and surveys of African-Americans show that they are acutely aware of this stereotype (Sigelman & Tuch, 1997). The research on *stereotype threat*, concern about being negatively evaluated based on one's membership in a group, shows that being stereotyped is an anxiety provoking process (Abdou & Fingerhut, 2014; Lee, Kim, & Vohs, 2011; Spencer, Steele, & Quinn, 1999).

In this dissertation, I propose that police reliance on cues to anxiety to assess credibility will make innocent Black suspects especially vulnerable targets for misclassifications as guilty suspects. Specifically, I predict that Black suspects' appraisal of the stereotype threat in a police interrogation situation may function as a self-fulfilling prophecy: awareness of the risk of being judged as guilty on the basis of one's race may give rise to anxiety, which in turn is interpreted as signs of guilt by an interviewer (Strömwall, Granhag, & Hartwig, 2004; Vrij, 2008).

## **CHAPTER 2: BACKGROUND ON POLICE INTERVIEWING AND INTERROGATIONS**

The standard American police interrogation is typically a two-step process (Inbau et al., 2013). First, police officers conduct a pre-interrogation interview, a non-confrontational process, to determine whether suspects are innocent or guilty. In the pre-interrogation interview, police are advised to look for behavioral cues to deception. The purpose of the pre-interrogation interview is to eliminate the innocent and identify the guilty. This interaction is a critical moment that determines whether the interviewee will be subjected to further interrogation (Kassin & Gudjonsson, 2004). As will be discussed in detail below, police officers often make mistakes when detecting deception in the pre-interrogation interview (Vrij, 2008; Vrij, Granhag, & Porter, 2011), putting innocent suspects at risk for being exposed to psychologically manipulative and coercive interrogation techniques aimed at eliciting confessions.

Once a suspect has been identified as deceptive and, thus, guilty, the interrogation begins. The interrogation is an accusatorial process where investigators try to elicit a confession from suspects they already believe to be guilty (Gudjonsson, 2003; Kassin & Gudjonsson, 2004). This presumption of guilt can set into motion a process of behavioral confirmation, whereby the interrogator presumes guilt and treats the suspect as so; the suspect then begins to act in a manner that the interrogator interprets as guilt, confirming his initial beliefs (Kassin, Goldstein, & Savitsky, 2003). Moreover, interrogators primed with guilty expectations, regardless of suspects' actual guilt, ask more guilt presumptive questions, use more techniques, and exert more pressure on the suspect to confess than interrogators who presume innocence. Ironically, this pressure is increased when a guilt presumptive interrogator is paired with an innocent suspect (Kassin et al., 2003). Kassin et al. (2003) had observers listen to taped sessions where the interrogator was



primed with expectations of innocence or guilt. Observers listening to the guilty expectations condition rated suspects as more defensive than observers listening to suspects in the innocent expectations condition - regardless of the suspect's actual guilt. The interrogator's expectations about the suspect's culpability ultimately created a behavioral confirmation loop whereby his expectations affected the suspect's behavior, increasing the likelihood that the suspect would be judged in line with the interrogator's initial expectations: guilty. A false confession is thus the result of incorrect veracity assessments in step one of the interrogation and the subsequent exposure of innocent suspects to manipulative and coercive interrogation techniques in step two (Leo, 2001; Kassin, 2008).

The effectiveness of commonly employed interrogation techniques in accomplishing the goal of eliciting confessions is undisputed. Unfortunately, the problem of psychologically coercive and manipulative interrogation tactics is that even innocent people may offer confessions as a result of being exposed to such procedures (Kassin, 2005, Kassin et al., 2010). A number of laboratory studies on the effectiveness of these techniques have shown this to be case (e.g. Horselenberg, Merkelbach, & Josephs, 2003; Kassin & Kiechel, 1996; Perillo & Kassin, 2010, Redlich & Goodman 2003, Russano, Meissner, Narchet & Kassin, 2005). Although some laboratory studies have failed to produce false confessions from participants (e.g. Levine, Shulman, Carpenter, DeAndrea, & Blair, 2013), the lack of false confessions is typically due to methodological flaws rather than the diagnosticity of these interrogation tactics (e.g. Levin et al. make no mention of consequences – such as having to remain in the lab for an indefinite amount of time - for maintaining one's innocence). In sum, police interrogation methods are coercive and can elicit confessions from innocent suspects through a number of channels. The proponents of these coercive interrogation defend the use of coercive and manipulative interrogation tactics by

claiming that only guilty suspects are subjected to these techniques, and that innocent suspects are identified and released after the interview stage (e.g. Inbau et al., 2001). As will be described in detail below, this suggestion is flawed and has been disproved by a large body of empirical research (Meissner & Kassin, 2002; Vrij, 2008). The evidence is overwhelming that misclassifications of innocent suspects occur, largely due to police misinterpretations of behaviors that are unrelated to deception and guilt (Kassin, 2008; Vrij, 2004).

Importantly, even though police-suspect interactions play a critical role in miscarriages of justice (Gudjonsson, 2003), and minority groups are overrepresented in such cases of convictions of innocents ([www.innocenceproject.org](http://www.innocenceproject.org)), to date there has been little empirical research on the effects of race in police interviews and interrogations of suspects. However, an examination of the methods in which police are trained to detect deception and the interracial interaction and stereotype threat literatures suggest that there may be an increased risk of innocent Black suspects being misjudged as guilty. Specifically, police officers often rely on nonverbal behavior to detect deception and the willingness of suspects to cooperate with police to ascertain guilt (e.g. Inbau et al., 2013), but research has shown that these strategies are flawed, resulting in accuracy levels in line with the level of chance (Meissner & Kassin, 2002; Vrij, 2004). Instead, such behaviors are typical indicators of anxiety. Although guilty people may be anxious and uncooperative when being questioned by police, guilt is not the only reason for these behaviors (deTurk & Miller, 1985; Winkel et al., 1988). The fear of being mistakenly judged as guilty can also evoke anxiety and nervous behaviors in suspects (Bond & Fahey, 1987). Another possible reason suspects may be anxious or uncooperative when talking to the police is their race. African-Americans are stereotyped as criminals (Eberhardt, et al., 2004), and, importantly, being stereotyped has been shown to increase anxiety levels (Abdou et al., 2014; Lee et al., 2011; Spencer et al., 1999).

Furthermore, Black suspects may be less likely to cooperate with police investigations than White suspects due to a lack of trust in police (Kennard & Kassin, 2011). Thus, one potential cause of misclassifications of innocent suspects in the pre-interrogation interview may be suspect race. The following sections discuss how police reliance on incorrect cues to deception may interact with the experience of being stereotyped as a criminal to disproportionately put innocent Black suspects at risk of being judged guilty in a pre-interrogation interview.

### **Police Beliefs about Deceptive Behavior**

The ability to detect deception in legal settings is crucial, and the consequences of a misjudgment are serious. Police do not want to wrongfully accuse an innocent person, yet they also do not want to let a guilty person get away. Hence, many police interrogation training programs spend a great deal of time training police in deception detection (e.g. John Reid and Associates). Consequently, most criminal investigators are confident in their ability to detect deception. A survey of police officers showed that, on average, the officers estimated that they were 77% accurate in distinguishing between truth and lies (Kassin et al., 2007). The large body of research on deception detection shows that police officers' confidence in their ability to classify truthful and false denials of crime is inflated (Vrij, 2003). Lay people achieve hit rates around or slightly above chance level when faced with the task of distinguishing between truthful and deceptive statements (Bond & DePaulo, 2006). Although exhibiting higher confidence levels, police officers have, similar to lay people, been found to obtain near chance hit rates (e.g., Meissner & Kassin, 2002; Vrij, 2004). Not only have police officers been found to be unable to correctly classify truthful and deceptive statements on the basis of video-taped material, but highly experienced criminal investigators obtain chance-level hit rates even when allowed to question a guilty or innocent mock suspect according to the approach of their own choice (e.g. Hartwig,

Granhag, Strömwall, & Vrij, 2004; Luke et al., 2014). In sum, police officers' lie detection skills are limited.

### **Police Rely on Cues to Anxiety to Detect Deception**

Two main reasons have been put forth for why people are poor lie detectors. For many years, research focused on the notion that lie catching is flawed due to incorrect beliefs about the cognitive, emotional, and behavioral patterns of liars and truth tellers. Put simply, research examined the notion that people are bad at detecting deception because they are relying on the wrong cues. For example, people expect those who deceptively deny guilt regarding a transgression to experience nervousness, anxiety, and arousal, and that such experiences will leave visible traces in demeanor (Strömwall et al., 2004). This stereotypical assumption about liars has been shown to be invalid by ample research on liars and truth tellers, showing that demeanor cues are largely non-diagnostic as they can be indicative of other states and processes as well as deception (DePaulo et al., 2003). The second posited reason why people may be poor lie detectors is that there are few differences in the behaviors of liars and truth tellers. A recent meta-analysis examining cues to deception, and how perceivers use these cues, suggests that the latter reason best explains why people are poor at detecting deception (Hartwig & Bond, 2011).

When examining reasons for deception detection success and failure within law enforcement contexts, however, there is an added level of complexity to consider – the training law enforcement officials receive. There is no shortage of in-service and private police interviewing and interrogation training programs. In contrast to the decades of empirical research on cues to deception, one of the most widely used training programs, The Reid Technique (a.k.a. John Reid and Associates), trains police officers that 70% of a message is communicated through nonverbal channels and instruct police officers to focus on nonverbal cues such as gaze aversion,

fidgeting, posture shifts, hand gestures, and grooming behavior (Inbau et al., 2013). Supporters of these methods argue that although guilty suspects will be nervous and concerned about how the police perceive them, innocent suspects will have nothing to hide and thus will not be nervous when talking to the police (e.g. Inbau et al., 2013). Thus, they argue that guilty suspects' increased emotion and anxiety caused by lying will lead to nonverbal behaviors indicative of deception, namely the above-mentioned behaviors. Importantly, none of the nonverbal behaviors cited as cues to anxiety and deception in Inbau et al.'s *Criminal Interrogation & Confessions* have been shown to be indicative of deception (DePaulo et al., 2003).

Another reason traditional law enforcement training in deception detection is flawed is that it over emphasizes the differences between the behaviors of liars and truth tellers. As previously noted, Hartwig and Bond (2011) showed that lie detection accuracy is limited primarily because of weak behavioral cues to deception. Police training manuals, however, often show photos of suspects demonstrating truthful and deceptive behaviors, postures, and positioning giving the impression that one can easily identify and use nonverbal behaviors to detect deception (Vrij et al., 2010). Importantly, the few small reliable differences in the nonverbal behavior of liars and truth tellers that have been noted in the literature (e.g., the finding that liars show less leg movement) are not cues to anxiety (DePaulo et al., 2003). Moreover, research shows evidence of individual differences in nonverbal behaviors, none of which are related to veracity (Vrij, Akehurst, & Morris, 1997).

Surveys of police officers have found that the majority of police officers do endorse these nonverbal behaviors as reliable indicators of deception. These findings are robust, as they have been replicated across a number of police forces in a number of different countries throughout the last decade (Akehurst, Köhnken, Vrij, & Bull, 1996; Strömwall & Granhag, 2003; Vrij, Akehurst,

& Knight, 2006; Vrij & Semin, 1996). It seems the belief that liars are fidgety and gaze averse is a global cultural myth. A worldwide investigation into people's beliefs about deception found that these beliefs were expressed with striking consistency across a number of cultures (Global Deception Research Team, 2006; see Gilovich, 1991 for a discussion on false beliefs).

In addition to training people to rely on global myths about deceptive behavior, John Reid and Associates argue that people trained in the use of their Behavioral Analysis Interview (BAI) are 85% accurate in distinguishing between truth and lies (Horvath, Jayne, & Buckley, 1994). The BAI is a series of 16 questions designed by Reid and Associates to elicit different nonverbal and verbal responses from liars and truth-tellers. The evidence Reid and Associates cite for these hit rates is flawed (Kassin, 2008). In fact, experimental investigations have found that only three of the fifteen items on the BAI are actually associated with veracity (Blair & Kooi, 2004) and the behavioral patterns of liars and truth tellers elicited by the interview are directly opposite of the predictions of the BAI (Blair & Kooi, 2004; Vrij, Mann, & Fisher, 2006). Additionally, one study demonstrated that the BAI is simply a constellation of commonly held, but inaccurate, notions about deceptive behavior (Masip, Herrero, Garrido, & Barba, 2010). Some evidence indicates that the Reid method of lie detection is even counterproductive for detecting deception. For example, one study of police officers asked to judge the veracity of suspects in a real-life high-stakes interview found that the more police officers endorse Reid cues, the worse they performed (Mann, Vrij, & Bull, 2004). Furthermore, participants trained to attend to Reid cues to deception have been shown to achieve lower accuracy rates in detecting true and false denials than naïve participants, yet they are more confident in their accuracy judgments (Kassin & Fong, 1999).

### **Anxiety is Not a Cue to Deception**

As the research reviewed above shows, law enforcement is trained in the stereotypical notion that liars are nervous about getting caught and will show signs of such nervousness (Anderson, DePaulo, Ansfield, Tickle, & Green, 1999). In reality, innocent and guilty suspects can be plagued by similar negative experiences, which could stem from several sources (deTurck & Miller, 1985; Winkel et al., 1988). One source of anxiety and arousal for both innocent and guilty people suspected of a transgression may be the unpleasant and threatening nature of the accusation. An accusation of guilt, whether related to a social transgression (e.g., cheating on a partner) or a criminal transgression, represents a threat proportional to the severity of the offense. In the case of the criminal transgression, an ultimate assessment of guilt carries potentially severe and life-altering consequences. Being falsely accused, and the concern that the attempt to convince the police of their innocence may be unsuccessful, may cause truth tellers to show similar patterns of anxiety and behavior that are indistinguishable from liars (Bond & Fahey, 1987). Thus, being suspected of a crime is likely to elicit anxiety in both guilty and innocent suspects. Supporting these claims, meta-analytic findings on the accuracy of deception judgments show that people who are motivated to be believed are more likely to be judged as deceptive, regardless of whether or not they are lying. This finding suggests that any perceived anxiety or distress on the part of the suspect is not a consequence of deception, but a consequence of being motivated to be believed (Bond & DePaulo, 2006; National Research Council, 2003; Vrij, 2008).

### **Police Believe Truth Tellers Cooperate**

Police do not rely solely on nonverbal behavior when making judgments about deception. Vrij et al. (2006) found that police believe liars are less likely to cooperate with them than truth tellers. Additionally, Reid and Associates teach that truthful suspects are more cooperative with the investigation than guilty suspects. Some common “indicators” of cooperation are willingness

to waive Miranda rights, willingness to take a polygraph test, and willingness to keep talking as long as necessary to resolve the situation (Inbau et al., 2013). Although research has shown that innocent people are more likely to waive their Miranda rights (Kassin & Norwick, 2004), and more willing to submit to a polygraph (Jordan, Hartwig, Wallace, Dawson, & Xhahani, 2012), it does not mean that these are unequivocal indicators of innocence. For example, individuals who have had prior experience with the legal system are less likely to waive their rights (Leo, 1996). Other studies have found no relationship between veracity and cooperation when cooperation was operationally defined as the willingness to repeat their statement (Vrij, 2005) or willingness to keep talking without a lawyer present (Jordan et al., 2012). Furthermore, guilty suspects sometimes report “being nice and pleasant” as a strategy for appearing credible to questioners (Hartwig, Granhag, & Strömwall, 2007). Moreover, factors unrelated to veracity have been shown to affect suspects’ willingness to cooperate, including evidence strength, crime seriousness (Gudjonsson, 2003; Vrij, 2003), and suspect personality (Vrij, 2005). Thus, research suggests that police officers’ reliance on the suspect’s level of cooperating as a diagnostic indicator of deception is likely to lead to misclassifications (Vrij, 2005).



## **CHAPTER 3: HOW POLICE STRATEGIES MAY DISPROPORTIONATELY JEOPARDIZE BLACK SUSPECTS**

In addition to individual differences in nonverbal behavior, there are cultural differences in nonverbal behavior. One reason for these differences is that there are context- and culture-dependent rules, called display rules, which regulate aspects of communication and nonverbal behavior (Matsumoto, Yoo, & Nakagawa, 2008). While much of the cross-cultural research has compared Eastern and Western cultures, a smaller subset of cross-cultural research has focused on nonverbal communication differences between the racial and ethnic groups within the United States itself.

Evidence of racial differences in nonverbal behavior in naturally occurring settings is mixed (Ikes, 1984; La France and Mayo, 1976; Smith, 1983). There is, however, evidence of context-dependent racial differences in nonverbal behavior. During employment interviews, Black applicants have been found to be more gaze averse and to have more speech hesitations than White applicants (Fugita, Wexley, & Hillery, 1974). There is also evidence of a self-fulfilling prophecy in interracial interactions: Word, Cooper, and Zanna (1974) found that Black job interviewees were treated with less immediacy than White interviewees. That is, compared to White interviewees, interviewers spent less time with the Black interviewees, made more speech errors when talking with Black interviewees, and placed themselves further away from the Black interviewees. Consequently, this type of treatment was shown to cause Black interviewees to make more speech errors, and be viewed as less calm, composed and friendly compared to White interviewees (Word et al., 1974). As previously noted, people who appear nervous, as the participants in the Word et al. study did, are often judged to be deceptive by both police officers and lay people.

Police-citizen interactions are another context in which racial differences in nonverbal behaviors have been evident. In a naturalistic observation study, videotapes from the TV show COPS were analyzed for racial differences in nonverbal behavior. Results showed that Black suspects exhibited more gaze aversion, used more hand gestures, and smiled more often than White suspects (Johnson, 2006). Importantly, these are all behaviors which police officers and lay people rely on when attempting to establish the veracity of a suspect's statement (Strömwall et al., 2004). A systematic examination of nonverbal behavior patterns in simulated police-citizen interactions in the Netherlands also found differences in the nonverbal behavior of Black and White suspects. Specifically, Black suspects had more speech disturbances, made less eye contact, smiled more often, and moved more than White suspects (Vrij, 1991; Vrij et al., 1988; Vrij & Winkel, 1990, 1991). Using these different patterns of behavior, Vrij and colleagues then had actors portray either racially typical behavior or racially atypical behavior in the context of a police interview and measured police officers' perceptions of the suspect. Interestingly, in these actor portrayals, regardless of the actors actual race, the "typical Black" suspect nonverbal behavior was judged more negatively and as more suspicious than "typical White" suspect nonverbal behavior (Vrij, Koppelaar, & Dragt, 1991; Vrij, Peters, & Winkel, 1991; c.f. Vrij & Winkel, 1992). These findings suggest that the higher suspiciousness ratings are not due to prejudice against Black suspects, but instead due to the stereotypically deceptive behaviors exhibited by the suspect. It is important to note that the most consistent finding regarding context-dependent racial differences in nonverbal behavior is that African-Americans are more gaze averse. As discussed earlier, although gaze aversion is not reliably linked to deception, it is by far the most prominent subjective (i.e., believed) indicator of deception for professionals and lay people.

## **The Role of Stereotypes**

The stereotype of African-Americans as criminals is robust (Eberhardt et al., 2004), and the consequences of this stereotype are pervasive. For example, the criminal stereotype can make people see criminality when it is not present. In a series of simulated videogames, participants saw Black and White people holding either weapons or harmless and were instructed to shoot the armed target. Participants mistakenly shot more unarmed Black targets, than unarmed White targets (Correll, Park, Judd, & Wittenbrink, 2002). The link between Black and crime appears to be automatic and not directly related to explicit racial attitudes (Payne, 2001). Moreover, the link appears to be bi-directional. That is, not only does priming participants with a Black face increase the speed at which they identify a handgun in a degraded image, but priming participants with crime increases the speed at which they identify Black faces (Eberhardt, et al., 2004; Payne, 2001). These findings suggest that not only are Blacks stereotyped as criminals, but also crime is strongly associated with Black people (Eberhardt et al., 2004).

Surveys of African-Americans show that they are aware of the stereotypes about their group (Sigelman & Tuch, 1997). Furthermore, these meta-stereotypes have been shown to affect the in-group's expectations of how the out-group will treat them (Brown & Dobbins, 2004; Sigelman & Tuch, 1997; Vorauer, Hunter, Main, & Roy, 2000; Vorauer & Kumhyr, 2001; Vorauer, Main, & O'Connell, 1998). As will be described below, these expectations of stereotyping and prejudice then affect the minority group member's behavior, often in ways that may be construed by outside observers as nervous or anxious behavior. In the context of a police interaction, the expectation that one is going to be treated like criminal based simply on one's skin color may set in motion a chain of events where, during the initial interaction with police, an

innocent Black person's demeanor inadvertently results in them being falsely being accused of a crime.

**Meta-perceptions.** One plausible explanation for context-dependent racial differences in nonverbal behavior is African-American concerns about stereotyping and racism in interracial interactions (Dovidio, Hebl, Richeson, & Shelton, 2006). Research on *meta-perceptions*, people's beliefs about the stereotypes that out-group members hold about their in-group, shows that minorities are both aware of the stereotypes that other races and ethnicities hold about their group (Sigelman & Tuch, 1997), and concerned that the majority group will use these stereotypes to evaluate them during interracial interactions (Shelton, Richeson, & Vorauer, 2006). Specifically, ethnic minorities in the United States expect Whites to stereotype them negatively. Some examples of these stereotypes include, but are not limited to: unintelligent, violent, immoral, and abusers of drugs and alcohol (Sigelman & Tuch, 1997). This expectation that they will be stereotyped and possibly discriminated against during interracial interactions has been shown to increase minorities' self-reported anxiety and stress levels during these interactions (Plant & Devine, 2003; Finchilescu, 2010; Plant, 2004; Stephan & Stephan, 1985). In turn, this increase in anxiety can affect nonverbal communication. For example, Shelton (2003) found that African-Americans who were lead to believe that their conversational partners might be prejudiced fidgeted more than those who knew nothing of their interactants' views (Shelton, 2003). Both employment interviews and police-citizen interactions are contexts where African-Americans are likely to be concerned with meta-perceptions, which may explain the previously discussed context-dependent racial differences in nonverbal behavior. Specifically, within the context of police-citizen interactions Black suspects may be concerned about being stereotyped as a criminal

which may lead to an increase in anxiety and an increase in the stereotypical deceptive nonverbal behaviors.

**Stereotype Threat and Anxiety.** Another argument for what may be driving context-dependent racial differences in nonverbal behavior is that they are the result of *stereotype threat*. Stereotype threat is the fear of confirming a negative cultural stereotype about one's group; consequently performance in that situation suffers (Steele & Aronson, 1995). A great deal of research over the last twenty years has focused on how members of stereotyped groups perform under conditions of stereotype threat (see Inzlicht & Schmader, 2012; Nguyen & Ryan, 2008 for reviews). Effects have been found for a wide variety of stereotyped groups in a number of settings (Nguyen et al., 2008), including African-Americans and intelligence tests (Steele & Aronson, 1995; Steele, 1997), women and math, and Caucasian men and math, when compared to Asian men (Steele, Spencer, & Aaronson, 2002). Yet, the research has largely ignored how minorities react and perform under the possibility of being stereotyped as a criminal. Thus, this discussion will explore how the causes and consequences of stereotype threat might impact a Black suspect's behavior in a police interview and interrogation setting.

Schmader, Johns, and Forbes (2008) argue that stereotype threat is triggered by situations that pose a significant threat to self-integrity via stereotypes that suggest poor performance. Self-integrity is primarily operationalized as identifying with the domain in question, such as women who care about being good math or of African-Americans who care about being intelligent. Although not all people identify with the domain that they are stereotyped to be poor at, most people will likely identify with *not* being a criminal. Thus, being accused of a crime, especially when innocent, should trigger a threat to one's self-integrity. However, a threat to self-integrity is not enough to trigger stereotype threat. People must perceive that it is both possible and probable

that they will be negatively stereotyped for stereotype threat to occur (Wout, Shih, Jackson, & Sellers, 2009). Stereotyping is considered possible when targets are aware that the negative stereotype can be applied to them in the present social setting, and is considered probable when there is a high likelihood of stereotypes being used in their present social setting (Wout et al., 2009). As described above, the stereotype of African-Americans as criminals is robust, and African-Americans are aware that others stereotype them as criminals. Thus, in a police-citizen interaction, African-Americans will feel that it is both possible and probable that they will be stereotyped as a criminal, triggering stereotype threat. Consequently, this threat to self-integrity, triggered by being suspected of a crime, sets in motion a series of physiological, cognitive, and affective responses to help cope with the threat (Major & O'Brien, 2005; Schmader et al., 2008).

Physiological, cognitive, and affective reactions combine to play a key role in how stereotype threat impacts behavior (Schmader et al., 2008). This discussion, however, will focus only on the physiological and affective components of stereotype threat, as they are the current focus of police when making veracity judgments and are thus likely to be the reactions linked to the behaviors that put individuals at risk for unfavorable veracity assessments and for being the target of guilt-presumptive and coercive interrogation techniques. Early studies examining the affective components of stereotype threat showed mixed results, with the role of anxiety in stereotype threat being the most controversial (Bosson, Haymovitz, & Pinel, 2004). For example, some studies have found no link between anxiety and performance under stereotype threat conditions (e.g. Schmader, 2002; Oswald & Harvey, 2000; Steele & Aronson, 1995). Yet, other studies have shown a partial link between anxiety and performance for stereotype threatened individuals (e.g. Abdou et al., 2014; ; Lee et al., 2011; Osborne, 2007; Spencer et al., 1999). The reason for these conflicting results appears to stem from the use of self-report to measure levels of

anxiety. First, some stereotyped individuals may be concerned about self-presentation, leading them to report lower levels of anxiety on self-report measures (Bosson et al., 2004). Second, many of the processes at work during stereotype threat may be non-conscious, making them impossible to tap with self-report measures (Oswald & Harvey, 2000). Finally, measuring arousal and anxiety throughout the study without altering how participants experience the situation is difficult with self-report measures, thus many researchers chose only to assess them at one or two time periods during the study (e.g. Osborne, 2007; Steele & Aronson, 1995). In sum, using direct, self-report measures to assess anxiety during stereotype threat situations provides limited, and often conflicting, data which likely accounts for the disparate results.

Studies using indirect measures of arousal and anxiety, however, have shown more consistent results than studies using self-report measures, suggesting that stereotype threat does increase arousal and anxiety levels. For example, stereotype threatened participants perform better on easy tasks and worse on hard tasks than non-stereotyped threatened participants (Ben-Zeev, Fein, Inzlicht, 2005; O'Brien & Crandall, 2003), a pattern consistent with previous research on the effects of arousal (an indirect measure of anxiety) on performance (Zajonc, 1965). Moreover, when stereotype threatened participants are able to misattribute their arousal to an external source, such as an alleged subliminal noise generator, they do not experience the same performance decreases that traditional stereotyped participants do (Ben-Zeev et al., 2005; Johns, Schmader, & Martens, 2005). Finally, stereotype threatened participants display more nonverbal indicators of anxiety, such as fidgeting, gaze aversion, and nervous smiling than non-stereotype threatened participants, even when they did not self-report feeling anxious during the task. These findings suggest that traditional self-report methods of measuring anxiety may not be adequately capturing the anxiety of being stereotype threatened (Bosson et al., 2004).

The use of physiological measures has provided another way to measure participants' anxiety levels during stereotype threat conditions by measuring arousal. Physiological measures also provided the added benefit of being able to assess arousal throughout the entire stereotype threat situation, and not merely before and after as is often the case in many of the self-report measures. A variety of physiological measures have shown increased levels of arousal in stereotype threatened participants compared to non-stereotyped threatened participants. Specifically, the blood pressure of stereotype threatened participants rose faster and remained higher than that of the non-threatened participants (Blasovich, Spencer, Quinn, & Steele, 2001). Similar effects have been found on heart rate (Croizet et al., 2004) and skin conductance (Murphy, Steele, & Gross, 2007; Osborne, 2007), which are common physiological measures used to assess anxiety indirectly (Bosson et al., 2004). Taken together, the convergence of findings for indirect behavioral and physiological measures of anxiety provide strong evidence that stereotype threatened individuals experience stress-induced physiological arousal (Schmader et al., 2008). Within a police interview, this increased arousal and anxiety may be inappropriately identified as sign that the suspect is lying, placing Black suspects at greater risk of being classified as lying than White suspects.

Although the stereotype of the African-American as a criminal is pervasive, and the interrogation room is a setting where African-Americans have to worry about being stereotyped, there has been little research on how suspect race affects police interviewing and interrogation, and none of the research has examined these interactions within the context of stereotype threat. In police-citizen interrogation situations, innocent Black suspects may be concerned about being stereotyped as a criminal. Similar to previous stereotype threat research, innocent Black suspects should fear confirming this stereotype, leading to increases in anxiety and stress levels. As noted



earlier, because police often use behaviors that are indicative of anxiety as cues to deception, it is plausible that a Black suspect will be at risk of being judged as deceptive as a function of the increased anxiety brought on by stereotype threat.

### **Racial Differences in Trust in Police**

In addition to stereotype threat and meta-perceptions, a lack of trust in police by Blacks may increase the odds of an incorrect veracity assessment during a police interview. As a result of both personal and vicarious experiences with the police, compared to Whites, Blacks tend to considerably be less trusting and more suspicious of the police and the criminal justice system (Fratello, Rengifo, Trone, Velazquez, 2013; Hurwitz & Peffley, 2001; Hurwitz & Peffley, 2005; Warren 2010). A recent study showed that 81% of Black participants perceived the police to be racially biased, compared to only 33% of whites (Warren, 2010). Furthermore, 30% of Black respondents report being treated unfairly by police because of their race, compared to 13% of White respondents (Hurwitz et al., 2001). Moreover, Blacks are more likely than Whites to view the police as rude and physically and verbally abusive, as well as more likely to fear harassment by the police (Schuck & Rosenbaum, 2005; Schuck, Rosenbaum, & Hawkins, 2008). Additionally, perceptions of the criminal justice system as a whole show similar patterns of distrust: 74% of Blacks felt that the justice system treated people unfairly, compared to only 44% of Whites, and 61% of Blacks did not trust the courts to give a fair trial, compared to only 26% of Whites (Hurwitz et al., 2005). Importantly, these perceptions about police fairness have been shown to influence African-American's interpretations of police-citizen interactions. Black participants report being more suspicious of police-citizen interactions when the citizen is Black than when the citizen is White, while White participants report low levels of suspicion regardless

of citizen race. Moreover, the more unfair Black respondents rated the criminal justice system to be, the more suspicious they were of police interactions with Black citizens (Hurwitz et al., 2005).

This distrust in police and the criminal justice system is in contrast not only with the way White citizens think about the criminal justice system, but to the way most people think about the way the world functions. People in general hold a Belief in a Just World (BJW), meaning that the world is fair, that good things happen to good people and bad things to bad people (Lerner, 1980). This motivated belief helps people avoid anxious thoughts about one's own well being by believing that because they are good people, bad things will not happen to them (Hafer & Bègue, 2005). Racial and ethnic differences have been observed with regards to the Belief in a Just World, however, with Blacks generally scoring lower than Whites on instruments measuring this belief (Hunt, 2000; Kennard & Kassin, 2011; Smith & Green, 1984).

In the criminal justice system, BJW often manifests itself as the belief in the power of one's innocence to prevail. This belief often leads innocent suspects to behave in predictable ways during police investigations. Indeed, laboratory research, conducted primarily with White participants, suggests that innocent suspects tend to be more forthcoming, are more likely to waive their *Miranda* rights, and are more likely to believe that their innocence will be apparent to observers (Hartwig, Granhag, Strömwall, & Kronkvist, 2006; Kassin, 2005). Paradoxically, although these behaviors are intended to demonstrate innocence, police still often misclassify suspects demonstrating these behaviors due to poor interrogation techniques (Kassin, 2012), and incorrect beliefs about deceptive behaviors (Strömwall et al., 2004).

Not surprisingly, racial differences have been found in suspects' willingness to waive their rights to silence and trust in police to honor these rights. White participants are significantly more likely than Black participants to expect police to comply with a suspect's request to retain his

rights, showing a greater trust in police from White than Black participants (Johnson, Citron, Raghavan, 2007; Kennard & Kassin, 2011). Additionally, innocent Black participants are less likely to waive their rights to silence than innocent White participants, while there is no difference in waiver rates between guilty Black and White suspects (Kennard & Kassin, 2011). As detailed above, police have preconceived notions about how innocent suspects should behave; for example police believe that innocent suspects are more likely to waive their *Miranda* rights and talk with the police than guilty suspects (Inbau et al., 2013; Kassin et al., 2007). Thus, a suspect who retains his rights to silence may be viewed as not cooperating with the investigation, and consequently at risk of being classified as guilty. In sum, a less pronounced Belief in a Just World may have the self-fulfilling effect of eliciting guilt judgments. Because Black suspects are likely to have a lower BJW and less trust in the police, they may engage in more self-protective behaviors than White suspects, which in turn may be misinterpreted by police officers as indicative of guilt.

Researchers have examined the different strategies that innocent and guilty suspects use during police interviews. Results support the phenomenology of innocence (Kassin, 2005) framework, which suggests that innocent suspects believe in the power of their innocence to exculpate them, (Kassin, 2005). When innocent suspects report a strategy, it is to tell the truth as it happened (Strömwall et al., 2006) because they believe that their innocence will be clear to the interviewer and protect them from harm (Kassin, 2005; Kassin et al., 2004). Guilty suspects, however, try tell concise stories (Hartwig et al., 2007; Strömwall et al., 2006) and avoid disclosing incriminating information (Granhag & Hartwig, 2008). In sum, guilty suspects report planning to withhold more information than innocent suspects. Analysis of verbal content of suspects' statements shows that guilty suspects are, in fact, significantly less forthcoming with information

than innocent suspects (Luke et al., 2014). For Black suspects, expectations about how one will be treated, and meta-perceptions about how one will be judged may lead them to adopt different strategies during a police interview than White suspects. Specifically, this lack of trust may lead Black suspects to adopt a more withholding strategy as to be completely forthcoming requires one to have faith that the end result will be a positive one. By being more withholding, however, Black suspects may be seen as more evasive or less cooperative with the investigation by police.

## CHAPTER 4: CONCLUSIONS

A considerable number of wrongful convictions have their origin in the interrogation room. Moreover, a considerable number of those who have been wrongfully convicted are minorities. Yet, there has been very little research on how a suspect's race impacts police interviews and interrogations. The eyewitness identification literature shows that a suspect's race can impact decision making through social-cognitive mechanisms unrelated to explicit racism, suggesting that the overrepresentation of minorities among the DNA exonerees may be partially due to social-perception errors and not solely socio-economic factors. An examination of both the police interviewing and interrogation literature and the interracial interaction literature lends further support to this argument.

The literature reviewed above shows that police officers are trained to look for invalid cues to deception and guilt that have been shown to be cues to anxiety rather than deception. There are many possible reasons why a suspect may be anxious when being questioned by police, including race. Importantly, a review of the interracial interaction literature shows that the process of being questioned by the police may be more anxiety provoking for Black Americans than White Americans. Thus, in a police-citizen interaction, Blacks may be more likely than Whites to display anxious behavior and less likely to cooperate with the investigation by waiving their rights to silence. Since the overlap between cues to anxiety and stereotypical cues to deception is well established in the empirical literature, we argue that to police officers, innocent Black suspects may appear more deceptive than innocent White suspects. Because police do not rely solely on nonverbal cues to determine whether a suspect is innocent or guilty, but also rely on cues such as a suspect's willingness to cooperate with the investigation, this lack of trust in police may

compound the problem, putting innocent Black suspects at further risk of being misclassified as guilty when interviewed by the police.

More research is needed examining the intersection of the interviewing and interrogation literature and the interracial interaction literature to further understand the over representation of racial-ethnic minorities among the wrongfully convicted. Much research has shown that the reliance on anxiety as a tool to detect deception and guilt leads police officers to be poor lie detectors, overall increasing the risk of innocents being wrongfully accused and wrongfully convicted. An important question is whether this strategy disproportionately puts Black suspects at risk of being wrongfully accused and convicted. Are police interviews more anxiety provoking for Blacks than they are for Whites? Does this increased anxiety affect police officers' ability to detect deception in police interviews involving Black suspects? Although much research suggests this may indeed be the case, this premise has never been directly tested experimentally.

## **CHAPTER 5: OVERVIEW OF THE CURRENT RESEARCH**

Racial differences in non-verbal behavior, willingness to cooperate with the investigation, and suspect strategies during the interview will be evaluated to determine if police strategies to detect deception disproportionately put Black Americans at risk of being classified as deceptive in a pre-interrogation interview. The purpose of these studies will be to expand the literature on investigative interviews with suspects, in particular with regard to the role of race and race-related risks for misclassifications of guilt, as well as the role of stereotype threat within the context of the police interview setting. We will investigate the likely pattern that (1) compared to innocent White suspects, innocent Black suspects will be more nervous and thus more likely to display nonverbal behaviors that perceivers tend to associate with deception; (2) compared to innocent White suspects, innocent Black suspects will be less trusting and thus more guarded when interacting with the police, leading them to be less likely to cooperate with the investigation and more withholding of information during their interview; (3) police officers will rely on these stereotypical indicators of deception and guilt and thus make more misjudgments when assessing innocent Black suspects than innocent White suspects.

## **CHAPTER 6: STUDY 1: EXAMINING RACIAL DIFFERENCES IN SUSPECTS’ EXPERIENCES OF MOCK POLICE INTERROGATIONS**

The purpose of Study 1 was to examine potential racial differences in verbal and nonverbal behaviors, and the self reported experiences of being questioned – in a confrontational way, as is commonly the case in the United States – about a stereotypically Black crime. First, racial differences in non-verbal behavior and willingness to cooperate with the investigation were evaluated, as those are two of the main characteristics of overall behavior that police officers are trained to use to detect deception during police interviews. Participants also provided self-reports about how they felt during their assigned task (half were randomly assigned to commit a mock crime), after being accused of theft but before being interviewed, and how they felt during the interview. In addition, we also gathered data about participants’ planning and strategies going into the interviews. As described earlier, research shows that innocent suspects are less likely to plan their verbal behavior and less likely to use a specific strategy in interviews than guilty suspects; when innocent suspects do report a strategy it is often to report the truth as it happened (Hartwig, et al., 2007; Strömwall, et al., 2006). This research, however, has yet to examine the difference between the strategies that Black and White suspects use when interacting with the police. It is possible that, due to reduced trust in the police, innocent Black suspects may report different strategies than innocent White suspects. Study 1 also served to create the stimulus materials for Study 2. All of the interviews from Study 1 were videotaped, and, with the participants’ permission, we showed the videotapes to lie-catchers (law enforcement officers) in Study 2.

### **Hypotheses**

**H<sub>1</sub> Anxiety:** We predict a main effect for suspect race on both self-reported and behavioral



measures of anxiety as shown in stereotype threat studies (e.g. Johns et al., 2008; Bosson et al., 2004). Specifically we predict that Black suspects will be more anxious than White suspects on both self-report and behavioral measures of anxiety. We also predict a race by culpability interaction on self-report and behavioral measures of anxiety. We predict that innocent Black suspects will be more anxious and display more nonverbal behaviors subjectively associated with deception (e.g. Vrij, 1991; Vrij, et al., 1988; Vrij et al., 1990, 1991), and engage in fewer cooperative behaviors (e.g. Kennard & Kassin, 2011) subjectively associated with innocence (Inbau et al., 2013) than innocent White suspects. We predict that guilty Black and White suspects, however, will show no differences in anxiety or cooperation.

**H<sub>2</sub> Meta-Perceptions:** Because Black Americans are aware of the stereotypes about them

(Sigelman & Tuch, 1997) and expect to be evaluated according to these stereotypes during interracial interactions (Shelton et al., 2006), we predict that that Black suspects will expect to be viewed more negatively than White suspects by both the interviewer and outside observers.

**H<sub>3</sub> Cooperation:** Given the research on Black Americans' general distrust of police (Fratello, et al., 2013; Hurwitz & Peffley, 2005; Warren 2010), we predict a race by culpability interaction on suspects' willingness to cooperate with the investigation. Specifically, we predict that innocent Black suspects will engage in fewer cooperative behaviors (e.g. Kennard & Kassin, 2011) subjectively associated with innocence (Inbau et al., 2013) than innocent White suspects. We predict that guilty Black and White suspects, however, will show no differences in willingness to cooperate

**H<sub>4</sub> Suspects' Strategies:** Finally, we predict that Black and White suspects will have different

strategies when approaching a police interview. In Jordan et al. (2012), 10% of innocent suspects lied during their interview. The Jordan et al. (2012) sample was more racially and ethnically diverse than previous studies on suspect strategies (e.g. Hartwig et al., 2007; Strömwall et al., 2006). Based on this research, and prior research showing Black Americans are more suspicious of police (Fratello, et al., 2013; Hurwitz et al., 2005; Warren 2010), we predict that Black suspects will employ more withholding strategies than White suspects during the interview due to a lack of trust in police.

## **Method**

### **Participants**

Participants ( $N = 97$ ) were recruited to participate in a study on legal decision-making<sup>1</sup> via advertising placed on craigslist.com (Appendix A) in a large urban Northeastern City. Care was taken to ensure none of the participants had participated in any previous deception detection or interrogation studies at the college. Participants were pre-screened for ethnicity and citizenship prior to enrolling in the study through a generic seven question demographics and screening questionnaire asking the potential participants' name, age, job, race/ethnicity, gender, country of citizenship, and prior studies completed at the college (this information was also cross-checked with sign up sheets for ongoing and recent studies to reduce the chance of repeat participants). Even after screening, two participants were removed from analysis for indicating their race was "Other" rather than Black or White; five participants were removed from analysis for failing to follow the experimenter's instructions or directions; two participants asked to stop the study early; and the mock detective misspoke during one interview (see further details below). Thus, the final number of participants for analysis is 87.

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<sup>1</sup> The study was advertised as a legal decision making study instead of a deception detection study to reduce response bias by potential subjects on craigslist.

About half of the participants were female (51.7%) and half were male (48.3%)<sup>2</sup>. As a result of pre-screening, all (100%) of the participants were United States Citizens. As desired, nearly half of the participants were White (47.1%,  $n = 41$ ) and half were Black (52.9%,  $n = 46$ ). The ages of the participants ranged from 18 to 60 ( $M = 33.83$  years,  $SD = 10.61$ ). Finally, a sizeable portion of the participants indicated that they had at least some college education (40.2%), while another sizeable portion of the participants indicated that they had a bachelor's degree (40.2%) and 12.6% indicated they had a graduate or professional degree; only 4.6% had not obtained any college education at all.

Participants were told that the study would take about thirty to forty-five minutes and were paid ten dollars for their time. In addition, participants were incentivized to maintain innocence by being informed that they had a chance to be entered in a lottery to win \$100 if they convinced the interviewer of their innocence. In reality, because the interviewer did not actually make any veracity judgments, every participant was entered into the lottery.

### **Design.**

The study employed a 2 (Culpability: Innocent v. Guilty) x 2 (Race: Black v. White) between subjects quasi-experimental design.

### **Independent Variables**

*Culpability.* Participants were randomly assigned to commit a mock crime (to steal a wallet they are told contains \$100 from a briefcase) or an innocent act (looking for a specific book) in line with a paradigm adopted from previous research studies (e.g. Hartwig et al., 2006; Hartwig et al., 2007).

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<sup>2</sup>Exploratory analyses testing for gender differences were conducted, as Black men tend to be more strongly associated with crime and criminality than Black women. No differences in self-report data or behavioral measures were found between Black men and women in Study 1.

This mock crime plus interrogation paradigm was introduced by Kassin & Fong (1999) and has subsequently been used in many studies since its inception. Results show that this paradigm induces sufficient feelings of discomfort and anxiety in participants, yet does not go as far as to be unethical (Hartwig et al., 2006; Hartwig et al., 2007; Kassin, 2008, Kassin & Fong, 1999). Pilot testing of this specific procedure with student participants revealed similar results, producing sufficient, ethical, levels of task nervousness ( $M = 4.10$ , on a 10-point scale) and discomfort ( $M = 5.40$  on a 10-point scale). All previous studies have been subjected to and approved by ethical review boards and there has never been an instance reported to our knowledge in which a participant became overly upset. Moreover, there is evidence that this paradigm has some external validity. Previous studies have found self-reported motivation to be believed as innocent to be quite high ( $M_s > 8$  on 10-point scale) (e.g. Hartwig et al., 2004; Hartwig, et al., 2005; Hartwig et al., 2006). Again, pilot testing revealed similar results with the student participants reporting being highly motivated to be believed with a mean motivation rating of 7.70 on a 10-point scale.

*Race.* Race of suspect, assessed by participants' self-reports was a quasi-experimental variable of key focus of our analyses.

## **Procedure**

Upon arriving at the laboratory, participants were greeted by the experimenter and given a consent form (Appendix B) to read and sign. Participants were then randomly assigned to one of two culpability conditions (innocent or guilty). Participants were then given typed instructions (Appendix C) to read regarding their task. After reading the instructions they were given a chance to ask the experimenter any questions they had. The experimenter then gave each participant verbal directions as well as a map to the room in which the participant was to carry out their task.

To manipulate innocence and guilt (and consequently truthfulness and deceptiveness during the interview), participants were asked to commit either a mock crime or similar but innocent act. For the *guilty* condition, the mock crime consisted of participants stealing a wallet from a briefcase from the psychology department mailroom. They were told the wallet contained \$100 (in actuality, the money was not in the wallet, only an envelope with a number of papers that could have been concealing the \$100). Participants were then instructed to hide the wallet on their person during the interview. In the *innocent* condition, the innocent act consisted of participants looking for a specific book in a crate containing books on the same table in the mailroom as the briefcase containing the wallet. They were told that the book may or may not be present and that if they could not find it after a few minutes they were to return to the laboratory. The specific book was never there, so all innocent participants returned empty handed.

Upon their return from the mailroom, a mock detective, blind to condition and hypotheses, approached all suspects in the hallway. The mock detective informed the participant that there had been a theft, that they were the main suspect in the theft, and escorted the participant to the mock interrogation room for questioning. The mock detective was a White male Master's student with previous experience of conducting mock interrogations for research purposes.

After being intercepted by the mock detective, participants were led to a mock interrogation room. The mock detective instructed participants to be seated and wait. On the table in the interrogation room were instructions for the interview portion of the experiment (Appendix D). The instructions indicated that the main task for all participants was to convince the interviewer of their innocence. Guilty participants were instructed to deny having taken the wallet, while innocent participants were instructed to tell the truth about not having taken the wallet. In other words, half of the participants provided deceptive denials (guilty condition) while

the other half provided truthful denials (innocent condition). In addition to the task instructions, a short questionnaire with five items to assess participants' pre-interview anxiety levels was left on the table (Appendix E).

After five minutes or when the participant finished the questionnaires, whichever took longer, the detective returned and asserted that the participant was suspected of stealing a wallet from the psychology department mailroom. The detective, blind to participants' guilt, questioned each participant about the missing wallet in accordance with a predefined script (Appendix F). The script was meant to be adversarial and confrontational, similar to typical police interrogations in the United States. At the beginning of the interview, the mock detective made it clear that the participant was suspected of stealing a wallet from the psychology department mailroom. He also told the suspect that he had two pieces of evidence against the suspect: that there was security footage of him/her near the mailroom, and that an eyewitness had seen a *White or Black* male/female (in accordance with the race and gender of the participant) in the mailroom around the time the theft occurred. The suspect's race was used as a piece of evidence against him/her via eyewitness identification to make race a salient factor in the investigation for the suspects.

Suspects were then asked directly if they took the wallet, accused of lying when they said no, and then told to describe - in as much detail as possible - where they were and what they did in the previous fifteen minutes. Whether or not participants mentioned being in the mailroom in their free response, they were asked directly if they were in the mailroom (where the theft occurred), if anyone could back up their story, and why they should be believed. Participants who denied being in the mailroom were also asked how they explained the evidence that showed they were in the mailroom. Finally, the interviewer asked participants if there was "anything else they would like to add" until they were done talking. The interviewer was allowed to go slightly off

script occasionally, so long as the above questions were asked. The interviews were videotaped and reviewed by the experimenter. Only one interview was deemed problematic; this occurred when the interviewer misspoke and told a White female participant that a Black woman was seen at the crime scene. This participant was removed from analysis. Trained observers then coded the videotaped interviews for differences in nonverbal behavior between the four quasi-experimental groups (see Nonverbal Behavior measures below). The interviews ranged in length from 3:07 to 10:19, ( $M = 5:21$ ,  $SD = 1:34$ ).

After the interview was over, all participants filled out a questionnaire (see self-report measures below) to assess their perceptions of the interview (Appendix G). After completing this questionnaire, the experimenter (fictitiously) told participants that the detective thought they were lying and that further investigation was needed. The experimenter then gave them a five-item questionnaire asking them what they would like their next course of action to be and why (see Willingness to Cooperate measures below) (Appendix H). When this questionnaire was complete the experimenter returned and told participants that there would not be further investigation and that the interview part of the experiment was over. Participants were then asked to fill out one last packet of questionnaires containing the 13-item Belief in a Just World Scale (Dalbert, 1999) (Appendix I), the 8-item Shortened Multidimensional Inventory of Black Identity (Wout, Martin, Nguyen, Gonzalez, & Sellers, unpublished data) (Appendix J), and brief demographics questionnaire (Appendix K). After completing all of the questionnaires, the experimenter explained that the interview with the participant had been videotaped and that the intention was to show the videos to police officers who would know that participants were participating in a mock crime experiment (Appendix L). Four participants declined to allow us to use their videotapes in Study 2, but allowed us to use their self-report data in Study 1. The experimenter then debriefed

participants about the purpose of the study and provided them with the contact information for the experimenter, the principal investigator, and the IRB should they feel any lasting discomfort (Appendix M). The experimenter also explained that all participants would be entered into the lottery. Finally, the experimenter made sure that each participant left the study feeling comfortable with the procedure. A majority of the participants indicated interest in the subject matter and expressed that they had gained valuable knowledge by participating in the study.

## **Measures**

*Self-report measures.* Before the interview, participants were given a five-item questionnaire to assess their pre-interview anxiety. Anxiety was measured using ratings of how agitated, anxious, nervous, uneasy, and worried respondents felt on a 10-point scale (1 = *not at all*, 10 = *very much*) (Appendix D). This method has been used in previous stereotype threat studies to measure state anxiety ( $\alpha = .86$ ) (Johns et al., 2008).

After the interview, participants answered a 15-item questionnaire. (Appendix G). The first three questions served as manipulation checks. First, participants rated how truthful their statement during the interview was on a scale of 1-10 (1 = *totally deceptive*, 10 = *totally truthful*) as a manipulation check. The next two questions asked participants to rate – in separate questions - how nervous and how uncomfortable they felt while completing their task on a scale of 1-10 (1 = *not at all*, 10 = *very much*). After the manipulation checks, participants answered four questions assessing their experiences during the interview. These questions asked participants to rate, on a 1 to 10 scale (1 = *not at all*, 10 = *very much*) how nervous and how uncomfortable they felt during the interview, how difficult it was to be interviewed, and how motivated they were to be believed. Participants were then given a free response question asking what they felt during the interview.



Next, participants were asked about their strategies going into the interview. Participants were asked to what extent they planned the verbal content of their statement and their body language, (1 = *not at all*, 10 = *very much*). They were then asked if they had a strategy prior to the interview (*no* or *yes*). Participants who reported having a strategy were then asked to elaborate on what their strategy was. Participants who reported not having a strategy were asked to explain why they did not have a strategy.

Finally, participants were asked about their meta-perceptions of the detective and potential outside observers. Participants were asked to indicate: (a) “Do you think the person interviewing you thought you were innocent or guilty (*innocent* or *guilty*)? Why?”; (b) “Do you think the person who interviewed you thought you were anxious? (*no* or *yes*) Why?”; (c) “Do you think the person who interviewed you is biased against you in some way (*no* or *yes*)? How so?”; and (d) “Do you think that a person who will watch the videotaped interview with you will think that you were lying or telling the truth? (*lying* or *telling the truth*) Why?” Trained coders coded free response data for questions that yielded significant results with high interrater reliability. Results are presented below.

Participants also completed the Belief in a Just World Scale (Dalbert, 1999) (Appendix I). This is a 13-item scale assessing the degree to which one believes the world to be a just, or fair, place. This scale was included, as researchers have proposed that Belief in a Just World (BJW) drives innocent suspects’ behavior during police-citizen interactions, specifically because they are innocent they trust that have nothing to fear (Kassin, 2005). Black Americans, however, generally score lower on the BJW scale than Whites (Hunt, 2000; Kennard & Kassin, 2011; Smith & Green, 1984). Thus, we wanted to measure BJW to see if it was related to suspect behavior, verbal responses, and choices on specific questionnaire items such as predictions about what others will

think of them, and willingness to cooperate measures. On the BJW scale participants rate their agreement on items assessing how just they believe world is to *them*, e.g., “I believe that most of the things that happen in my life are fair,” and, generally, how just they believe the world is *overall*, e.g., “I believe that, by and large, people get what they deserve.” Participants rated their agreement on a 6-point likert scale (1 = *strongly agree*, 6 = *strongly disagree*). Scores are then reverse coded so that higher scores indicate a higher belief in a just world.

Although we made race salient in the moment to our participants by using their race as a piece of evidence against them (that a Black/White male/female was seen in the room at the time of the crime), the role that race played in our participants’ lives likely varied. Thus, it is possible that suspects for whom being Black does not play a central role in their lives, stereotyping concerns may not have been as strong, creating variability in the effectiveness of our race prime. To measure the importance our participants’ racial identity played in their lives participants completed eight items from the 27-item shortened version of the Multidimensional Inventory of Black Identity (MIBI-S) scale to assess racial identity (Wout et al., unpublished data) (Appendix J). These items were from the Centrality Scale and the Public Regard subset of the Regard Scale. The MIBI-S was completed last, so as not to reveal the hypotheses of our study.

The MIBI was originally developed to measure the three stable dimensions of the Multidimensional Model of Racial Identity (MMRI). The MMRI examines the significance that African-Americans place on race and their interpretations of what it means to be Black via four dimensions: the salience of identity, the centrality of the identity, the regard in which the person holds African Americans, and the ideology associated with the identity (Sellers, Shelton, Cooke, Chavous, Rowley & Smith, 1998; Sellers, Smith, Shelton, Rowley, & Chavous, 1998). Psychometric validation studies showed that Confirmatory Factor Analysis (CFA) yielded a poor

fit for the longer 56-item MIBI but an adequate fit for the shortened 27-item MIBI-S (Wout et. al., unpublished). Thus, we opted to use the shortened scales from this measure. Only two of the subscales were included in our study: centrality and public regard. Centrality is the extent to which a person normatively defines his/herself by race; whether or not it is a core part of the person's self-concept. Public regard is the extent to which a person feels others view African Americans positively or negatively (Sellers et al., 1997).

Because our study included both Black and White participants, questions were modified slightly to be race neutral, (e.g., "In general, others respect people of my same race"). As previously mentioned, participants answered eight items from the MIBI-S: four items from the centrality scale, e.g., "I have a strong sense of belonging to my race,"; and four items from the public regard subscale, e.g., "In general, others respect people of my same race." Participants rated their agreement on a 7-point likert scale (1 = *strongly agree*, 7 = *strongly disagree*). Scores were then reverse coded so that higher scores meant more agreement.

On the demographics questionnaire (Appendix K), presented at the end of the study, participants were asked whether they had ever been questioned by police (*no* or *yes*). This question was included because experiences with the police have been shown to predict Miranda waiver rates (Leo, 1996) and disclosure strategies during interviews (Granhag, Clemens, & Strömwall, 2009). During debriefings the experimenter learned that many suspects misunderstood the question, answering yes if they had ever answered *any* questions proffered by a police officer. Thus this variable was not included in analyses.

**Willingness to cooperate.** After completing the first set of self-report measures, the experimenter told participants that the detective thought they were lying and that there would be further investigation. The purpose of this deception was to assess participants' willingness to

cooperate with further investigation in to the theft. The experimenter asked participants to fill out a 5-item questionnaire to determine what they would like their next course of action to be (Appendix H). In order to assess willingness to cooperate, participants were asked if they would (1) like advice from a defense attorney; (2) like a defense attorney present during questioning; (3) be willing to take a polygraph test; (4) like to invoke their right to silence; and (5) like to speak to a different detective. All questions used a dichotomous *yes* or *no* metric, after which participants were asked to elaborate on why they did or did not choose that option.

**Nonverbal behavior.** All interviews were videotaped. Of the 87 participants, 4 participants declined consent for use of their videotaped interview; the video camera failed during 2 sessions, and 1 suspect “invoked” his *Miranda* rights after every question rendering the videotape useless ( $n = 20$  per cell). The suspects’ behavior was coded minutely by analyzing the duration and frequency of a number of cues, and on the basis of global impressions. These are the two most commonly employed approaches to coding nonverbal behavior (DePaulo et al., 2003). For the minute coding, two independent raters, blind to the hypotheses and conditions, coded the behaviors of the mock suspects. These codings were based on both commonly held views of deceptive behavior ascertained by previous research (Global Deception Research Team, 2006) and nonverbal indications of deception taught by John Reid and Associates. These behaviors encompassed stereotypical indicators of deception such as: gaze aversion, laughter, smiling, speech disturbances, speech errors, leg shaking/tapping, hand tapping, fidgeting with objects, and self-grooming/touching. Operational definitions for each of the nonverbal behaviors can be found in Appendix N. Two independent coders were trained by the first author and then coded a random 20% of the interviews together to establish interrater reliability. Disagreements were resolved by discussion with the author. Once satisfactory interrater reliability had been reach, the coders each

coded half of the remaining 80% of the interviews. Interrater reliability for the nonverbal behavior coding can be found in Table 1.

*Table 1. Interrater Reliability for Coding of Nonverbal Behaviors*

Variable	Chronbach's alpha	r-value
Speech Rate	N/A	N/A
Speech Disturbances	.98	.98
Gaze	.83	.81
Head Movements	.90	.92
Laughs	.95	.96
Smiles	.83	.71
Illustrators	.97	.96
Leg/Foot Movements	.98	.96
Fidgets	-.05*	-.05*
Self-Touching Behaviors	.38*	.57*
Trunk Movements	.85	.74

*\*Interrater reliability could not be reached on these two items after many attempts. They will not be considered in further analyses.*

For each of the 80 participants that agreed to use of their videotaped interview for research purposes, two independent raters, blind to condition and hypotheses, provided global impressions of the mock suspects on a 7-point scale (1 = *not at all*, and 7 = *very*) for the following 9 dimensions: (1) uncomfortable; (2) tense; (3) anxious; (4) motivated; (5) confident; (6) cooperative; (7) unsure; (8) forthcoming; (9) thinking hard. Coders were given no instruction on what the dimensions meant, and were simply asked to code in terms of what the concepts meant to them.

Two coders individually code all 80 interviews, however interrater reliability was low across all dimensions. Interrater reliability for the global coding can be found in Table 2. Previous research with this type of coding has shown high interrater reliability with short interviews (DePaulo & Morris, 2004). The length of the statements, ranging from 3:07 -10:19, ( $M = 5:21$ ,  $SD = 1:34$ ) may have made it difficult for raters to provide one single consistent number for a dimension that sums up a suspect's behavior for the entity of a lengthy interview; prior studies that have used global impression ratings (e.g. Anderson, 1999, c.f., Granhag & Strömwall, 2004; Anderson, DePaulo, and Ansfield, 2002) have used shorter segments that likely have less variability in speaker behavior. Due to the low interrater reliability on these global ratings of the participants, these measures will not be discussed further.

*Table 2: Global Impressions of Suspects' Behavior*

Variable	Chronbach's alpha	r-value
Uncomfortable	.67	.51
Tense	.69	.55
Anxious	.56	.41
Motivated	.56	.34
Confident	.70	.54
Cooperative	.57	.41
Unsure	.58	.41
Forthcoming	.53	.36
Think Hard	.48	.32

**Verbal Behavior.** As mentioned previously, we were interested in suspects' strategies during the interview. Relying on suspects' self-reports of strategies might provide limited information as people often have limited insight into the reasons for their behavior (Nisbett & Wilson, 1977). Thus, researchers have begun analysing the verbal content of suspect statements for what they call *critical disclosures* - the number of specific salient details disclosed about the event in question (Luke et al., 2013). In this method of verbal analysis, suspects offering a low number of critical disclosures are considered to have adopted a *withholding* strategy, whereas suspects who volunteer a high number of critical disclosures are said to have adopted a *forthcoming* strategy. In line with this approach, all interviews were transcribed and then coded by trained coders for disclosure of critical details. Two independent coders, blind to hypotheses and condition, coded a random 20% of the transcripts for mentions of three key details in the scenario (described below). Interrater agreement was 87.5%. One coder coded the remaining 80% of the transcripts. The portion of the transcript where the interviewer mentioned the suspect's race was blacked out in each interview so as to keep coders blind, but in a comprehensive manner so as not to arouse suspicion on part of the coders; no relevant details were blacked out. Coders coded for the presence or absence of three pieces of information that we thought would be the most salient to participants: (1) being in the building in which the experiment took place; (2) being in the mailroom where they were to complete their mock crime or innocent act; and (3) seeing or touching either the wallet/briefcase or the crate of books in the mailroom (each one encompassing the tasks participants were supposed to do). Coders marked a "0" if the participant did not mention the detail and marked a "1" if the participant did. This coding allowed us to analyse the data in two ways: (1) how far in to the scenario the suspect placed themselves – that is, what was the most incriminating detail to which the suspect admitted; and (2) how many incriminating

details the suspect admitted. Because innocent and guilty suspects both experienced the same scenario with the one exception of guilt manipulation (stealing a wallet v. looking for a book), it is important to note that the assessment of these critical disclosures only measures the amount of *potentially* incriminating information the suspect volunteered and is thus a measure of forthcomingness, not a measure of actual guilt.



## CHAPTER 7: STUDY ONE RESULTS

### Manipulation Checks

As noted in the methods section, 5 participants did not follow the experimenter's instructions. For the remaining participants, the experimenter questioned them at the conclusion of the study, prior to debriefing, to ensure that they had indeed carried out their assigned task in the mailroom. All the remaining guilty suspects were in possession of the wallet, indicating that they had completed their task. For innocent suspects, knowledge the appearance of the crate of books, or content of the crate of books involved in the innocent act served as a proxy for completing their task. As with guilty suspects, all innocent suspects were sufficiently knowledgeable about the crate or its contents to ensure that they completed the task correctly; none of the innocent suspects were in possession of the wallet.

At the beginning of the interview, the mock detective cited two pieces of evidence against the suspect: (1) security footage of the suspect near the mailroom and (2) an eyewitness who saw someone matching the suspect's description - stated using the suspect's race (Black or White) and gender (male or female) - inside the mailroom at the time of the crime. We predicted that using a description of the suspect based on their race as a piece of evidence would lead Black suspects, but not White suspects, to feel that they were being targeted based on stereotypes about African-Americans and crime. As an indirect manipulation check, we coded for references of race or racial profiling in the suspects' interviews. Though the difference was not significantly different, 40% of Black suspects referenced race (e.g. "Maybe a Black male that looks like me, but not me.") or racial profiling (e.g. "That's racial profiling right now.") compared to only 22.0% of White suspects referencing race (e.g. "I know there are like a million White females here."),  $\chi^2(1, N = 80) = 2.85, p = .09$ .

Jordan et al. (2012) reported that 10% of the innocent participants from a largely racial-ethnic minority sample gave deceptive statements, so in addition to ensuring that participants had completed their assigned task, we also tested for differences in self-reported truthfulness. Participants were asked to rate how truthful their statement was 10-point scale, (1 = *completely deceptive*, 10 = *very truthful*). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed a main effect for culpability,  $F(1, 83) = 152.92, p < .001, \eta_p^2 = .65$ . As expected, innocent suspects reported giving more truthful statements ( $M = 9.11, SD = 1.92, 95\% CI [8.71, 9.51]$ ) than guilty suspects ( $M = 3.07, SD = 2.59, 95\% CI [2.53, 3.61]$ ). There was no main effect for suspect race,  $F(1, 83) = 1.10, p = .30$ ; nor was there a culpability by suspect race interaction,  $F(1, 83) = .12, p = .73$ . These ratings suggest that our innocent suspects followed instructions to tell the truth during their interview and guilty suspects followed instructions to lie about having the wallet. They also suggest that Black and White suspects lied and told the truth at similar rates during the interviews.

Suspects were asked to rate both how nervous and how uncomfortable they felt while they looked for the book/took the wallet on a scale from 1-10 (1 = *not at all*, 10 = *very*). The grand mean for task nervousness was 3.97, ( $SD = 3.05, 95\% CI [3.33, 4.61]$ ). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) as ANOVA revealed a significant main effect for culpability. Guilty suspects reported feeling significantly more nervous taking the wallet ( $M = 4.90, SD = 3.23, 95\% CI [4.22, 5.58]$ ) than innocent suspects reported looking for the book ( $M = 3.09, SD = 2.61, 95\% CI [3.54, 2.64]$ )  $F(1, 83) = 8.02, p = .01, \eta_p^2 = .09$ . There was no main effect for race on task nervousness; White suspects ( $M = 3.80; SD = 2.93, 95\% CI [3.18, 4.42]$ ) and Black suspects ( $M = 4.11, SD = 3.18, 95\% CI [3.44, 4.78]$ ); reported similar levels of tasks nervousness,  $F(1, 83) = .28, p = .60, \eta_p^2 = .001$ . There was not a significant culpability by race interaction for

task nervousness  $F(1, 83) = .48, p = .49, \eta_p^2 = .01$ . Similarly, the grand mean for task comfort was 4.38, ( $SD = 3.06$  95% CI [3.74, 5.02]). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed a significant main effect for culpability on task comfort. Guilty suspects ( $M = 5.74, SD = 3.15, 95\% CI [5.08, 6.40]$ ) reported feeling significantly more uncomfortable when taking the wallet than innocent suspects ( $M = 3.11, SD = 2.38, 95\% CI [2.61, 3.61]$ ) while looking for the book,  $F(1, 83) = 18.81, p < .001, H\eta_p = .19$ . There was not a significant main effect for race on task comfort; White ( $M = 4.24, SD = 3.06$  95% CI [3.60, 4.88]) and Black ( $M = 4.50, SD = 3.24$  95% CI [3.81, 5.18]) suspects reported similar levels of comfort while completing the task,  $F(1, 83) = .28, p = .60, \eta_p^2 = .003$ . There was not a significant culpability by race interaction,  $F(1, 83) = 2.33, p = .13, \eta_p^2 = .03$ . These ratings suggest that our culpability manipulation was effective and did not have differential effects on Black and White suspects.

Participants were also asked to what extent they were motivated to give a credible impression during the interview on 10-point scale (1 = *not at all*, 10 = *very*). Overall participants reported they were highly motivated to appear credible ( $M = 7.95, SD = 2.14, 95\% CI [7.50, 8.40]$ ). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA showed no main effect for veracity on motivation. Innocent ( $M = 7.53, SD = 2.46, 95\% CI [7.01, 8.05]$ ) and guilty suspects ( $M = 8.40, SD = 1.67, 95\% CI [8.05, 8.75]$ ) similarly motivated to be believed,  $F(1, 83) = 3.60, p = .06, \eta_p^2 = .04$ . There was not a significant main effect for race on motivation to be believed; Black ( $M = 7.65, SD = 2.28, 95\% CI [7.17, 8.13]$ ) and White ( $M = 8.29, SD = 1.95, 95\% CI [7.88, 8.70]$ ) suspects showed similar levels of motivation to be believed,  $F(1, 83) = 1.93, p = .17, \eta_p^2 = .03$ . There was not a significant culpability by race interaction for motivation to be believed,  $F(1, 83) = .02, p = .88, \eta_p^2 < .001$ .

### **Attitude Scales**

*Belief in a Just World.* We predicted that White participants would have a higher Belief in a Just World than Black participants. Participants completed the 13-item Belief in a Just World (BJW) scale (Dalbert, 1990). Participants rated their agreement with the statements on a 1 to 6 Likert Scale where lower scores indicated more agreement and thus higher BJW scores. Scores were then reverse coded so that higher scores indicated higher BJW. The responses were then summed to create a total BJW score (scores can thus range from 13-78). The scale is intended to be a trait measure and measure individual differences in suspects' BJW. The grand mean for BJW was 43.28 ( $SD = 10.06$ ). As expected, a two way ANOVA with culpability (culpability: innocent v. guilty) and race (race: White v. Black) as independent variables revealed no main effect for culpability in BJW; innocent ( $M = 42.37$ ,  $SD = 10.70$ , 95% CI [40.08, 44.66]) and guilty ( $M = 44.17$ ,  $SD = 9.25$ , 95% CI [42.19, 46.15]) participants scored similarly on the BJW scale,  $F(1, 79) = .70$ ,  $p = .41$ ,  $\eta_p^2 = .01$ . Contrary to prior research, we did not find a significant main effect for race in BJW; White ( $M = 43.33$ ,  $SD = 10.17$ , 95% CI [41.16, 47.50]) and Black ( $M = 43.17$ ,  $SD = 9.96$ , 95% CI [41.04, 45.30]) suspects scored similarly on the BJW scale,  $F(1, 79) = .009$ ,  $p = .95$ ,  $\eta_p^2 < .001$ . There was not a significant culpability by race interaction,  $F(1, 79) = .02$ ,  $p = .90$ ,  $\eta_p^2 < .001$ . Participants' BJW scores did not moderate pre or post interview anxiety or willingness to cooperate.

*MIBI-S.* Participants completed 8 items from the shortened Multi-Inventary Black Identity Scale (MIBI-S). These items were chosen from the centrality and public regard subscales. Participants rated their agreement on a 1 to 7 Likert Scale where lower scores indicated more agreement (scores could thus range from 8-56). Scores were then reverse coded so that higher scores indicated: (1) *centrality subscale*: more likely to define self by race, (2) *public regard subscale*: feeling others view their race more favorably. Scores on the two scales were not

significantly correlated,  $r(85) = -.14, p = .20$ . Additionally, in the context of this study centrality and public regard measure two different concepts for Black and White suspects. Thus, results for each of the subscales will be presented independently. For centrality, a two way ANOVA, did not reveal a main effect for culpability,  $F(1, 81) = .77, p = .38, \eta_p^2 = .01$ . There was, however, a significant main effect for race, such that Black participants ( $M = 4.97, SD = 1.47, 95\% \text{ CI } [4.66, 5.28]$ ) were significantly more likely to define themselves by their race than White participants ( $M = 3.94, SD = 1.28, 95\% \text{ CI } [3.67, 4.21]$ ),  $F(1, 81) = 11.67, p = .001, \eta_p^2 = .13$ . There was not a significant culpability by race interaction  $F(1, 81) = .51, p = .48, \eta_p^2 = .01$ . For public regard, there was not a significant main effect for culpability,  $F(1, 81) = 1.02, p = .32, \eta_p^2 = .01$ . There was a significant main effect for race, such that White participants ( $M = 4.89, SD = 1.12, 95\% \text{ CI } [4.65, 5.13]$ ) felt others viewed their race more favorably than Black participants ( $M = 2.88, SD = 1.30, 95\% \text{ CI } [2.60, 3.16]$ ),  $F(1, 81) = 57.17, p < .001, \eta_p^2 = .41$ . MIBI-S scores only significantly predicted participant's pre-interview anxiety, and thus will only be discussed for that dependent variable.

### **Hypothesis 1: Suspects' Anxiety**

We predicted that for both self-report and behavioral measures of anxiety Black suspects would be more anxious than White suspects. We also predicted that among innocent suspects, Black suspects would be more anxious than White suspects, while guilty Black and White suspects would be similarly anxious.

*Self-Reported Pre-interview anxiety.* To assess anxiety prior to the interview participants ( $N = 80$ ) completed a five-item questionnaire; participants rated how agitated, uneasy, nervous, worried, and anxious they were on a scale of 1 to 7 (1 = *not at all*, 10 = *very*). Participants' scores were combined to create a five-item "pre-interview concern" score. Answers were averaged

across the five items so that participants' scores were still reflected on a scale of 1-7, where the closer to one the participant's score was the less concern about the upcoming interview the participant was reporting.

The grand mean for pre-interview concern was 3.29, ( $SD = 1.38$ , 95% CI [3.00, 3.58]). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed a significant main effect for culpability on pre-interview concern. Guilty suspects ( $M = 3.65$ ,  $SD = 1.43$ , 95% CI [3.34, 3.96]) were significantly more anxious than innocent suspects ( $M = 2.94$ ,  $SD = 1.25$ , 95% CI [2.67, 3.21]) about the upcoming interview,  $F(1, 76) = 5.73$ ,  $p = .02$ ,  $\eta_p^2 = .07$ . Contrary to our hypotheses, however, there was not a significant main effect for race on pre-interview concern; White ( $M = 3.30$ ,  $SD = 1.45$ , 95% CI [2.98, 3.62]) and Black ( $M = 3.27$ ,  $SD = 1.33$ , 95% CI [2.98, 3.56]) suspects were similarly concerned about the upcoming interview,  $F(1, 76) = .04$ ,  $p = .84$ ,  $\eta_p^2 < .001$ . Finally, there was not a significant culpability by race pre-interview concern interaction,  $F(1, 76) = 2.54$ ,  $p = .16$ ,  $\eta_p^2 = .03$ . Individual means for each of the five measures can be found in Table 3.

Table 3. Study 1: Participants' Self-Reported Pre-Interview Anxiety

Measure	Suspect Culpability					
	Innocent		Guilty		Overall	
	White	Black	White	Black	White	Black
	<i>M (SD)</i> ( <i>n</i> = 21)	<i>M (SD)</i> ( <i>n</i> = 21)	<i>M (SD)</i> ( <i>n</i> = 19)	<i>M (SD)</i> ( <i>n</i> = 20)	<i>M (SD)</i> ( <i>n</i> = 40)	<i>M (SD)</i> ( <i>n</i> = 41)
Agitated	2.62 (1.32)	3.30 (1.03)	3.79 (1.65)	3.15 (1.90)	3.18 (1.58)	3.23 (1.51)
Uneasy	3.00 (1.55)	3.14 (1.46)	4.11 (1.52)	3.50 (1.73)	3.49 (1.61)	3.32 (1.59)
Nervous	2.81 (1.33)	3.00 (1.30)	4.23 (1.32)	3.80 (1.61)	3.46 (1.50)	3.39 (1.50)
Worried	2.29 (1.27)	2.71 (1.68)	3.32 (1.49)	3.00 (1.89)	2.76 (1.45)	2.86 (1.77)
Anxious	2.95 (1.63)	3.29 (1.38)	4.16 (1.66)	3.50 (1.91)	3.49 (1.70)	3.39 (1.64)
Composite	2.73 (1.34)	3.15 (1.13)	3.83 (1.36)	3.39 (1.52)	3.27 (1.45)	3.27 (1.33)

Note. Values are on a 7-point scale (1 = not at all, 7 = very).

*Nonverbal Behaviors.* Two independent observers coded the frequency with which suspects exhibited eleven nonverbal anxiety cues commonly relied on to detect deception. Each of the nonverbal behaviors was standardized to a per minute frequency (v. an overall frequency) so that participants who engaged in longer interview times did not skew the results. For each of the nonverbal behaviors we tested for outliers more than 3 standard deviations from the mean. For only one behavior, speech rate, did the elimination of outliers affect the results; we made the conservative decision not to remove any outliers. Descriptive statistics for the nonverbal behaviors can be found in Table 4.

Grouping the nonverbal behaviors into non-vocal nonverbal cues (gaze, head movement, laughter, smiles, illustrators, leg/foot movement, trunk movements) and vocal nonverbal cues (speech rate and speech disturbances), we conducted two between subjects MANOVAs. A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA with culpability and race as the between subjects factors and the non-vocal nonverbal cues as the dependent variables showed no significant main effect for culpability,  $F(1, 74) = .62, p = .75, \eta_p^2 = .07$ , or race,  $F(1, 74) = .64, p = .74, \eta_p^2 = .07$  at the multivariate level. There was also not a significant culpability by race interaction  $F(1, 74) = .63, p = .75, \eta_p^2 = .07$  at the multivariate level. We then conducted a between subjects MANOVA with culpability and race as the between subjects factors and the vocal nonverbal cues as the dependent variables. At the multivariate level, there was not a significant main effect for culpability,  $F(1, 74) = 2.13, p = .13, \eta_p^2 = .06$ , nor was there a significant main effect for race on vocal nonverbal cues,  $F(1, 74) = 1.87, p = .16, \eta_p^2 = .05$ . There was not a significant culpability by race interaction for vocal nonverbal cues,  $F(1, 74) = 1.32, p = .27, \eta_p^2 = .03$ .



For the non-vocal nonverbal cues, a series of 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVAs revealed a similar pattern. There were no significant main effects for suspect race or culpability, nor were there any significant race by culpability interactions for the non-vocal cues. Results of these ANOVAs can be found in Table 5.

Examining the vocal cues, there was a significant main effect for culpability on speech rate. Innocent suspects ( $M = 84.40$ ,  $SD = 32.82$ , 95% CI [77.12, 91.68]) spoke significantly faster than guilty suspects ( $M = 71.04$ ,  $SD = 24.17$ , 95% CI [65.68, 76.40]),  $F(1, 75) = 4.14$ ,  $p = .05$   $H\eta_p^2 = .05$ . There was not a significant main effect for race on speech rate; White ( $M = 77.47$ ,  $SD = 28.33$ , 95% CI [71.18, 83.76]) and Black ( $M = 77.81$ ,  $SD = 30.75$ , 95% CI [70.96, 84.66])  $F(1, 75) = .01$ ,  $p = .95$   $\eta_p^2 < .001$ . There was not a significant culpability by race interaction,  $F(1, 75) = .49$   $p = .49$   $\eta_p^2 = .01$ . For speech disturbances, there was not a significant main effect of culpability,  $F(1, 75) = .39$ ,  $p = .53$ ,  $\eta_p^2 = .01$ . There was not a significant main effect of race on speech disturbances,  $F(1, 74) = 3.71$ ,  $p = .06$   $\eta_p^2 = .05$ . There was not a significant culpability by race interaction for speech disturbances,  $F(1, 74) = 2.39$ ,  $p = .13$   $\eta_p^2 < .13$ . Overall, there were no differences between Black and White suspects in their nonverbal behaviors, regardless of their culpability. In sum, on average, our participants behaved similarly during their interview.

Table 4. Descriptive Statistics for Suspects' Nonverbal Behaviors

Measure	Suspect Culpability					
	Innocent		Guilty		Overall	
	White	Black	White	Black	White	Black
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>
Speech Rate	86.42 (30.99)	82.29 (35.37)	68.52 (22.78)	73.56 (25.83)	77.47 (28.33)	77.81 (30.75)
Speech Disturbances	1.46 (1.86)	0.56 (0.58)	0.90 (0.87)	0.80 (0.82)	1.02 (1.08)	0.68 (0.72)
Gaze	44.40 (12.89)	57.46 (34.97)	47.04 (11.24)	45.84 (11.04)	45.72 (12.01)	47.80 (11.95)
Head Movements	2.68 (1.38)	2.86 (1.25)	2.73 (1.55)	2.41 (1.70)	2.70 (1.45)	1.50 (1.28)
Laughs	0.30 (0.41)	0.26 (0.49)	0.32 (0.39)	0.20 (0.29)	0.28 (0.36)	0.19 (0.28)
Smiles	0.41 (0.41)	0.34 (0.68)	0.37 (0.39)	0.56 (1.08)	0.39 (0.39)	0.28 (0.48)
Illustrators	1.26 (1.31)	1.03 (0.98)	0.94 (0.80)	0.87 (1.22)	1.00 (0.90)	0.85 (0.91)
Leg/Foot Movements	6.39 (12.11)	4.41 (12.69)	3.91(5.88)	1.65(2.79)	3.44 (5.88)	1.55 (2.30)
Trunk Movements	0.40 (0.51)	0.46 (0.54)	0.45 (0.50)	0.46 (0.62)	0.43 (0.50)	0.42 (0.52)

Note: All values are computed on a per minute frequency.

Table 5. ANOVA Results for Suspects' Nonverbal Behaviors

	<u>Race</u>	<u>Culpability</u>	<u>Race x Culpability Interaction</u>
<u>Measure</u>			
Speech Rate	$F(1, 75) = 0.01, p = .95, \eta_p^2 < .001$	$F(1, 75) = 4.14, p = ., \eta_p^2 = .05^a$	$F(1, 75) = 0.49, p = .49, \eta_p^2 = .01$
Speech Disturbances	$F(1, 75) = 3.71, p = .06, \eta_p^2 = .05$	$F(1, 75) = 0.39, p = .53, \eta_p^2 = .01$	$F(1, 75) = 2.39, p = .13, \eta_p^2 = .13$
Gaze	$F(1, 75) = 2.52, p = .12, \eta_p^2 = .03$	$F(1, 75) = 0.96, p = .32, \eta_p^2 = .01$	$F(1, 75) = 2.52, p = .12, \eta_p^2 = .03$
Head Movements	$F(1, 75) = 0.04, p = .84, \eta_p^2 < .001$	$F(1, 75) = 0.36, p = .55, \eta_p^2 = .01$	$F(1, 75) = 0.57, p = .46, \eta_p^2 = .01$
Laughs	$F(1, 75) = 0.69, p = .41, \eta_p^2 = .01$	$F(1, 75) = 0.69, p = .41, \eta_p^2 = .01$	$F(1, 75) = 0.14, p = .41, \eta_p^2 = .01$
Smiles	$F(1, 75) = 0.15, p = .70, \eta_p^2 = .002$	$F(1, 75) = 0.93, p = .34, \eta_p^2 = .01$	$F(1, 75) = 0.11, p = .74, \eta_p^2 = .001$
Illustrators	$F(1, 75) = 0.34, p = .56, \eta_p^2 < .001$	$F(1, 75) = 0.93, p = .34, \eta_p^2 = .01$	$F(1, 75) = 0.11, p = .74, \eta_p^2 = .001$
Leg/Foot Movements	$F(1, 75) = 0.31, p = .10, \eta_p^2 = .01$	$F(1, 75) = 1.56, p = .22, \eta_p^2 = .02$	$F(1, 75) = .004, p = .95, \eta_p^2 < .001$
Trunk Movements	$F(1, 75) = 0.07, p = .80, \eta_p^2 = .01$	$F(1, 75) = 0.04, p = .85, \eta_p^2 < .001$	$F(1, 75) = 0.03, p = .86, \eta_p^2 < .001$

<sup>a</sup>Difference was significant at the .05 level

A multiple linear regression was performed with pre-interview concern as the dependent variable and culpability, suspect race, MIBI-S centrality score, MIBI-S public regard score, the culpability by centrality interaction, culpability by public regard interaction, race by centrality interaction, and race by public regard interaction as the predictor variables. The model was significant,  $R^2 = .30$ ,  $F(8, 71) = 3.26$ ,  $p = .003$ . Veracity significantly predicted pre-interview concern,  $b = -.30$ ,  $t(71) = -2.88$ ,  $p = .01$ . The public regard by veracity interaction was also a significant predictor of pre-interview concerns,  $b = -.45$ ,  $t(71) = 3.03$ ,  $p = .003$ . For guilty suspects, as public regard increased, pre-interview concern increased. For innocent suspects, however, as public regard increased, pre-interview concern decreased.

*Self-Report Post Interview.* After the interview, suspects were asked to rate both how nervous and uncomfortable they felt during the interview on a 10-point scale (1 = *not at all*, 10 = *very*). The grand mean for interview nervousness was 4.94, ( $SD = 2.81$ , 95% CI [4.35, 5.53]). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed no significant main effect for culpability on interview nervousness; innocent ( $M = 4.38$ ,  $SD = 2.61$ , 95% CI [4.28, 5.38]) and guilty ( $M = 5.55$ ,  $SD = 2.91$ , 95% CI [4.94, 6.16]) suspects reported similar amounts of nervousness during the interview,  $F(1, 83) = 3.64$ ,  $p = .06$ ,  $\eta_p^2 = .04$ . There was no main effect for race on interview nervousness. Black ( $M = 4.82$ ,  $SD = 2.78$ , 95% CI [4.24, 5.40]) and White ( $M = 5.07$ ,  $SD = 2.84$ , 95% CI [4.47, 5.67]) suspects reported similar amounts of nervousness during the interview,  $F(1, 83) = .14$ ,  $p = .71$ ,  $\eta_p^2 < .002$ . There was not a significant culpability by race interaction on ratings of interview nervousness,  $F(1, 83) = .71$ ,  $p = .40$ ,  $\eta_p^2 = .01$ .

The grand mean for interview comfort was 4.74, ( $SD = 2.93$ , 95% CI [4.12, 5.36]). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed no significant main effect for culpability on interview comfort. Innocent ( $M = 4.36$ ,  $SD = 2.89$ , 95% CI [3.75, 4.97])

and guilty ( $M = 5.14$ ,  $SD = 2.99$ , 95% CI [4.51, 5.77]) suspects reported similar amounts of discomfort during the interview,  $F(1, 83) = 1.52$ ,  $p = .29$ ,  $\eta_p^2 = .02$ . There was not a significant main effect for race on interview comfort. Black ( $M = 4.37$ ,  $SD = 2.80$ , 95% CI [3.78, 2.80]) and White ( $M = 5.15$ ,  $SD = 3.05$ , 95% CI [4.51, 5.79]) suspects reported similar amounts of discomfort during the interview,  $F(1, 83) = 1.48$ ,  $p = .23$ ,  $\eta_p^2 = .02$ . There was not a significant culpability by race interaction for interview comfort,  $F(1, 83) = .09$ ,  $p = .89$ ,  $\eta_p^2 < .001$ .

Across all the anxiety measures, few differences emerged between our participants. Our hypothesis that Black suspects would be more anxious than White suspects was not supported. Our hypothesis that innocent suspects Black suspects would be more nervous than innocent White suspects was not supported either.

### **Hypothesis 2: Suspects' Meta-perceptions.**

We predicted that Black participants would perceive the interviewer as believing them to be more anxious and more guilty than White participants, as well as perceive the interviewer as more biased against them. We also predicted that Black suspects would expect outside observers to judge them as guilty more often than White suspects.

Suspects were asked if they thought the interviewer thought they were anxious (*yes* or *no*) and then *why* or *why not* ( $n = 4$  missing). A binary logistic regression was performed with perceived anxiety as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 111.35$ ,  $\chi^2(3, N = 83) = 3.13$ ,  $p = .37$ . Similar proportions of innocent (40.9%) and guilty (51.3%) suspects thought the interviewer perceived them to be anxious. Likewise, similar proportions of White (52.5%) and Black (39.5%) suspects thought the interviewer perceived them to be anxious.

Suspects were asked if they thought the person who interviewed them was biased against them in some way (*yes* or *no*). A binary logistic regression was performed with perceived interviewer bias as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 109.09$ ,  $\chi^2(3, N = 84) = 7.36$ ,  $p = .06$ . Equal proportions of innocent (51.2%) and guilty (51.2%) suspects felt the interviewer was biased against them in some way. Likewise, roughly equal proportions of White (56.7%) and Black (46.5%) suspects felt that the interviewer was biased against them.

Suspects were asked if they thought the person who interviewed them thought they were innocent or guilty (*yes* or *no*). A binary logistic regression was performed with perceived interviewer veracity judgment as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 85.81$ ,  $\chi^2(3, N = 83) = .97$ ,  $p = .81$ . Overall, 65 of 83 participants (78.3%) thought the interviewer believed them to be guilty. An equal proportion of innocent (78.5%) and guilty (78.4%) suspects thought the interviewer believed them to be guilty. Likewise, a similar proportion of White (82.1%) and Black (75.0%) participants thought the interviewer believed them to be guilty.

Suspects were asked to predict whether they thought a person watching the videotape of their interview think that they were *lying* or *telling the truth* and then to elaborate on *why* ( $n = 6$  missing). A binary logistic regression was performed with dichotomous observer veracity prediction as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The full model was not significant  $-2LL = 97.00$ ,  $\chi^2(3, N = 81) = 6.11$ ,  $p = .11$ . Overall, 54 of 81 participants (66.7%) predicted that a person viewing the videotape would think they were *telling the truth* – a stark contrast to their predictions

about the detective's beliefs. Notably, 32 of the 41 (78.0%) innocent participants predicted that an observer would say that they were being truthful, where as only 22 of 40 (53.7%) guilty participants predicted that an observer would say they were being truthful. Given the direction of the descriptive data, and the low power of our study, a forward stepwise binary logistic regression was then performed with the same variables. The model was significant,  $-2LL = 98.21, \chi^2(1, N = 81) = 4.91, p = .03$ . Innocent suspects were significantly more likely to expect a future "truthful" judgment from outside observers than guilty suspects,  $\beta = -1.07, SE = .49, \text{Wald's } \chi^2(1, N = 81) = 4.69, p = .03, \text{Exp(B)} = .34$ .

Two independent coders, blind to hypotheses, condition, and participant race, coded a random 20% of the open ended "why?" response following this question,  $\alpha = .78$ . One coder coded the remaining 80% of responses. Participants' responses were coded into one of five categories (1) verbal behavior, e.g. "I contradicted myself"; (2) nonverbal behavior, e.g. "I did not fidget"; (3) visibility of internal state, e.g. "I was innocent and it was showing"; (4) race "The witness said it was a Black woman"; (5) other. Overall, participants who expected to be judged as *telling the truth* cited verbal cues most often - regardless of whether they were innocent (62.5%) or guilty (63.5%). Participants who expected to be judged as *lying*, however, showed more variation in their reasons cited. Specifically, innocent participants cited visibility of their internal state most often (66.7%) where as guilty suspects cited their nonverbal behavior most often (61.1%). A complete break down of the reasons participants cited for their predicted judgment by outside viewers are listed in Table 6.

Table 6. Study 1: Participants' reasons for predicted observers judgments.

Reason	Suspect Culpability					
	Innocent		Guilty		Overall	
	Truthful	Lying	Truthful	Lying	Truthful	Lying
Verbal	62.5%	44.4%	63.5%	38.9%	63.00%	50.7%
Nonverbal	34.4%	22.2%	27.3%	61.1%	31.5%	48.1%
Internal State	46.9%	66.7%	31.8%	38.9%	40.7%	48.1%
Race	0.0%	11.1%	4.5%	0.0%	1.9%	3.7%
Other	12.5%	11.1%	27.3%	27.8%	18.5%	22.2%

Note.  $N = 82$ .

In sum, participants' meta-perceptions regarding the interviewer were similar. When asked to predict the interviewers' perceptions of anxiety, veracity, and bias towards them, regardless of their race or culpability, participants provided similar ratings. Notably, the majority of participants felt the interviewer would judge them as lying yet, when asked to predict how an observer would judge them, they expected observers would judge them as truthful. Further, innocent suspects were significantly more likely than guilty suspects to expect that observers would judge them as truthful.

### Hypothesis 3: Suspects' Willingness to Cooperate

We predicted that White suspects would be more likely than Black suspects to endorse cooperative behaviors. We also predicted that, among innocent suspects, White suspects would be more cooperative with the investigation than Black suspects, with guilty suspects cooperating at similar rates across race.

*Attorney Advice.* Participants were asked, "If it is possible, would you like advice from a defense attorney?" Overall, 82.6% ( $n = 71$ ) participants reported they would like advice from a



defense attorney. A binary logistic regression was performed with dichotomous advice as the dependent variable and culpability, suspect race, and culpability by suspect race interaction terms as the independent variables. The model was not significant  $-2LL = 78.59, \chi^2(3, N = 86) = 1.01, p = .80$ .

*Attorney Present.* Participants were asked, “If it is possible, would you like a defense attorney present in the room during the interview?” Overall, 89.4% ( $n = 76$ ) of participants reported wanting an attorney present during the interview. A binary logistic regression was performed with dichotomous attorney present as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 53.71, \chi^2(3, N = 85) = 3.72, p = .29$ .

*Polygraph.* Participants were asked, “If it is possible, would you be willing to take a polygraph test?” A binary logistic regression was performed with dichotomous polygraph willingness as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was significant  $-2LL = 100.25, \chi^2(3, N = 85) = 14.16, p = .003$ . Culpability was a significant predictor of willingness to take a polygraph,  $\beta = -2.08, SE = .77, \text{Wald's } \chi^2(1, N = 85) = 7.16, p = .01, \text{Ex(B)} = .13$ . Overall, 51 (60%) out of 85 participants indicated they would be willing to take a polygraph, Innocent suspects were significantly more willing to take a polygraph (79.1%) than guilty suspects (40.5%). Suspect race was not a significant predictor of willingness to take a polygraph. Similar proportions of white (61.5%) and Black (58.7%) participants were willing to take polygraphs. The culpability by suspect race interaction was not significant predictor of willingness to take a polygraph.

Participants were asked to explain why they would or would not take a polygraph. Two independent coders, blind to suspect race and condition, coded a random 20% of the responses (a

= .89); disagreements we resolved by discussion. The remaining responses were split evenly and coded individually by the two coders. Responses were initially coded into one of 10 categories: (1) protection from self-incrimination, e.g. “I felt I might say something wrong”; (2) protection from interrogator, e.g. “he seemed hungry to accuse me”; (3) mere principle, e.g. “I have my rights”; (4) strategic self-presentation, e.g. “I was hoping to come off less guilty of the crime”; (5) guilt, e.g. “I do not have a good story to back up my crime”; (6) belief in the power of their innocence, e.g. “Because I knew I wasn’t guilty”; (7) for added legal knowledge, e.g. “I need to know the exact legal ramifications”; and (8) other. After initial coding, the protection from self-incrimination, protection from interrogator, and added legal knowledge categories were collapsed into one single “protection” category, and the prove innocence category and was collapsed into the strategic self presentation category – leaving 5 categories remaining.

For the 31 participants *not* willing to take a polygraph, the most common reason cited was protection (38.7%,  $n = 12$ ). For the 49 participants willing to take a polygraph, the most common reason cited was strategic self-presentation (59.2%,  $n = 25$ ). There was no effect for culpability on reasons cited for polygraph decision,  $\chi^2(3, N = 80) = 17.39, p = .004, Cramer's V = .47$ . Overall, there was no effect for race on reasons cited for polygraph decision,  $\chi^2(3, N = 80) = .51, p = .92, Cramer's V = .08$ . A complete breakdown of the reasons participants cited for their decisions are listed in Table 7.

Table 7. Reasons Cited for Polygraph Decision

Reason	Suspect Culpability					
	Innocent		Guilty		Overall	
	Not Willing	Willing	Not Willing	Willing	Not Willing	Willing
Protection	50.0%	0.0%	34.7%	6.3%	38.7%	2.0%
Mere Principle	0.0%	0.0%	13.0%	0.0%	9.7%	0.0%
Strategy	0.0%	51.5%	0.0%	50.0%	0.0%	51.0%
Guilt	12.5%	0.0%	13.0%	0.0%	12.9%	0.0%
Innocence	0.0%	45.5%	4.3%	25.5%	3.1%	38.8%
Other	37.5%	3.0%	34.8%	18.8%	35.5%	8.2%

Note:  $N = 88$ .

*Right to Silence.* Participants were asked, “If it is possible, would you like to invoke your right to silence?” A binary logistic regression was performed with dichotomous invoke silence as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 110.84, \chi^2(3, N = 84) = 5.18, p = .16$ .

*New Detective.* Participants were asked, “If it is possible, would you like to talk to a different detective?” A binary logistic regression was performed with dichotomous different detective as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was significant  $-2LL = 107.70, \chi^2(3 N = 85) = 9.84, p = .02$ . Culpability was a significant predictor of desire to speak to a new detective  $\beta = -2.01, SE = .73, Wald's \chi^2(1, N = 85) = 87.56, p = .01, Ex(B) = .14$ . Innocent suspects were significantly more likely to wish to speak to a new detective. Of 44 innocent suspects, 54.5% ( $n = 24$ ) said they would like to speak to a new detective; of 41 guilty suspects only 39.0% ( $n =$

16) said they would like to speak to a different detective. There was also a significant culpability by race interaction,  $\beta = 2.46$ ,  $SE = .95$ , Wald's  $\chi^2(1, N = 85) = 6.76$ ,  $p = .01$ ,  $Ex(B) = 11.71$ . The percentage of White participants that wanted to change detectives significantly differed as a function of culpability  $\chi^2(1, N = 40) = 8.29$ ,  $p = .004$ . Innocent White suspects (65%) were more likely than guilty White suspects (20%) to want to speak to a new detective. However, the percentage of Black participants that wanted to change detectives did not significantly differ as a function of culpability,  $\chi^2(1, N = 45) = .57$ ,  $p = .45$ . The model also showed a significant culpability by race interaction for desire to speak to a new detective, where more innocent White suspects (65%) than guilty White suspects (19%) wanted to change detectives, while innocent Black and guilty Black suspects reported wanting to change detectives at equal rates,  $\chi^2(1, N = 45) = .57$ ,  $p = .45$ .

Participants were also asked to explain why they would or would not like to speak to a new detective. Two independent coders, blind to hypotheses, condition, and participant race, coded a random 20% of the open ended "why?" response following this question,  $\alpha = .74$ . One coder coded the remaining 80% of responses. Participant's responses were coded into one of six categories: (1) belief in the power of innocence (e.g. "Because I know I'm innocent"); (2) perception of interrogator bias (e.g. "He just assumed I did it"); (3) strategy (e.g. "May have better luck with a new detective"); (4) feeling of helplessness (e.g. "It wouldn't make any difference."); and (5) other (anything that did not fit into the four previous categories). Out of 40 participants who did wish to speak to a different detective, the most common response (40.0%,  $n = 16$ ) for wanting to change detectives was perceived bias by the current detective. Out of 43 participants who did not want to speak to another detective, the most common response for not wanting to

change was helplessness (25.6%,  $n = 11$ ). A complete breakdown of the reasons participants cited for wanting to speak to a new detective are listed in Table 8.

*Table 8. Study 1: Reasons Cited for New Detective Decision*

Reason	Suspect Culpability					
	Innocent		Guilty		Overall	
	No	Yes	No	Yes	No	Yes
Helplessness	15.0%	0.0%	34.8%	0.0%	27.3%	0.0%
Innocence	30.0%	0.0%	8.7%	12.5%	18.2%	5.0%
Strategy	20.0%	33.3%	17.4%	43.8%	18.2%	37.5%
Interr. Bias	0.0%	50.0%	0.0%	25.5%	0.0%	40.0%
Other	35.0%	16.7%	39.1%	18.8%	36.4%	17.5%

*Note: N = 82.*

Participants desire to speak with an attorney, have an attorney present during questioning, willingness to take a polygraph, desire to invoke their rights to silence, and desire to speak to a new detective were used to assess willingness to cooperate with the investigation. For the majority of the measures, suspects responded similarly. Innocent and guilty participants requested a lawyer's advice, the presence of a lawyer, and invoked their right to silence at equal rates. However, innocent suspects were more likely to agree to a polygraph and wish to speak to a new detective. Contrary to our hypotheses, however, no race differences were found in willingness to cooperate.

#### **Hypothesis 4: Suspects' Interview Strategies.**

We predicted that guilty suspects would adopt more withholding strategies than innocent suspects. We also predicted that among innocent suspects, Black suspects would adopt more

withholding strategies than White suspects. Via two self-report measures and one behavioral measure we assessed suspects' strategies in during the interview.

*Self-reported strategies.* First, participants were asked to rate on a 10-point scale (1 = *not at all*, 10 = *very*) to what extent they had planned the verbal content of their statement. Overall suspects reported a low extent of planning their verbal statements ( $M = 2.94$ ,  $SD = 2.13$ , 95% CI [2.49, 3.39]). A 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed no main effect for culpability in planning of verbal statements; innocent ( $M = 2.80$ ,  $SD = 2.03$ ) and guilty ( $M = 3.90$ ,  $SD = 2.25$ ) suspects reported similar degrees of planning their verbal statements prior to the interview,  $F(1, 83) = .45$ ,  $p = .50$ ,  $\eta_p^2 < .01$ . There was not a significant main effect for race in planning of verbal statements; Black ( $M = 2.98$ ,  $SD = 2.04$ ) and White ( $M = 2.90$ ,  $SD = 2.26$ ) suspects reported similar extents of planning their verbal statements prior to the interview,  $F(1, 83) = .02$ ,  $p = .88$ ,  $\eta_p^2 < .001$ . There was not a significant culpability by race interaction for planning verbal statements,  $F(1, 86) = .34$ ,  $p = .56$ ,  $\eta_p^2 = .004$ .

Next, participants were asked whether or not they had a strategy before the interview (*yes* or *no*), ( $n = 1$  missing). A binary logistic regression was performed with dichotomous strategy as the dependent variable and culpability, suspect race, and culpability by suspect race interaction term as the independent variables. The model was not significant  $-2LL = 114.16$ ,  $\chi^2(3, N = 86) = 4.87$ ,  $p = .18$ . Of the 86 participants, 45 (52.3%) reported having a strategy before the interview. Similar proportions of innocent (45.5%) and guilty (59.5%) suspects reported having a strategy before the interview. Likewise, similar proportions of White (60.0%) and Black (45.7%) suspects reported having a strategy before the interview.

*Forthcomingness.* Statements of suspects ( $n = 80$ ) who consented to the use of their videotaped interview for research purposes were transcribed and coded for presence of "critical

disclosures” – that is the presence of *potentially* incriminating details in their verbal statement. Recall that critical disclosures were measured in two different ways: (1) *presence at crime scene* - how far into the scenario did the suspect admitted to going? and (2) *critical details* - how many critical details did the suspect include in his/her story? For the first measure, *presence at crime scene*, ratings of suspect forthcomings could range from 0 (no admission to being in the scenario and thus, *not at all forthcoming*) to 3 (admitting to the most incriminating detail – touching items at the crime scene, i.e., the briefcase containing the wallet or crate containing the books, and thus *very forthcoming*). For the second measure, *critical details*, number of details included could range from 0 (no critical details) to 3 (all critical details).

On the measure of *presence at crime scene*, a 2 (culpability: innocent v. guilty) x 2 (race: White v. Black) ANOVA revealed a significant main effect for culpability. Innocent suspects were significantly more forthcoming with the extent of their actions ( $M = 2.38$ ,  $SD = .77$ , 95% CI [2.21, 2.55]) than guilty suspects, ( $M = 1.50$ ,  $SD = 1.06$ , 95% CI [1.27, 1.73]),  $F(1, 76) = 19.16$ ,  $p < .001$ ,  $\eta_p^2 = .20$ . There was also a main effect for race, White suspects were significantly more forthcoming with the extent of their actions ( $M = 2.23$ ,  $SD = .83$ , 95% CI [2.05, 2.41]) than Black suspects ( $M = 1.65$ ,  $SD = 1.12$ , 95% CI, [1.40, 1.90])  $F(1, 76) = 8.27$ ,  $p = .01$ ,  $\eta_p^2 = .10$ . There was not a significant culpability by race interaction  $F(1, 76) = .02$ ,  $p = .90$ ,  $\eta_p^2 < .001$ .

On the measure of how many critical details of the scenario the suspects provided, a 2 (culpability: innocent v. guilty) by 2 (race: White v. Black) ANOVA revealed a significant main effect for culpability; innocent suspects included significantly more details ( $M = 1.75$ ,  $SD = .81$ , 95% CI [1.57, .19]) than guilty suspects, ( $M = 1.28$ ,  $SD = .93$ , 95% CI [1.08, 1.48]),  $F(1, 78) = 7.50$ ,  $p = .01$ ,  $\eta_p^2 = .09$ . There was also a main effect for race, White suspects included significantly more details ( $M = 1.93$ ,  $SD = .80$ , 95% CI [1.75, 2.11]) than Black suspects  $F(1, 78)$

( $M = 1.10$ ,  $SD = .81$ , 95% CI [.92, 1.28]) = 22.61,  $p = .01$ ,  $\eta_p^2 = .23$ . There was not a significant culpability by race interaction  $F(1, 78) = .07$ ,  $p = .80$ ,  $\eta_p^2 = .001$ .

In sum, there were no differences for innocent or guilty participants on self-reported strategies, nor were there differences between Black or White participants on self-reported strategy. A content analysis of the interviews, however, showed that suspects did adopt different strategies. Innocent suspects admitted going further into the mock crime scenario and mentioned more critical details than guilty suspects. Similarly, White suspects admitted going further into the mock crime scenario, as well as mentioned more critical details than Black suspects.



## CHAPTER 8: STUDY ONE DISCUSSION

Despite the overrepresentation of racial-ethnic minorities among the roster of DNA exonerated false confessors, there is little research examining Black and White suspects' experiences and behaviors during police interviews in the U.S. Using a standard mock crime paradigm, the goal of this study was to examine Black and White suspects' experiences during police interviews. Drawing on the social psychological and deception detection literatures, we predicted that innocent Black suspects would be more nervous and display more nonverbal behaviors subjectively associated with guilt than innocent White suspects due to the increased anxiety caused by the probability and possibility that the interviewer would judge them guilty simply because of their race. We also predicted that innocent Black suspects would be less likely than innocent White suspects to cooperate with the investigation, further increasing the risk of an erroneous guilty judgment by police. For guilty suspects, however, we predicted no differences in anxiety or cooperation.

### **Anxiety**

Suspect anxiety was assessed at three time points, in two different manners: (1) self-reports prior to the interview; (2) behavioral measures during the interview; and (3) self-reports after the interview. Results of the pre-interview anxiety measure did not support our hypothesis. Overall, guilty suspects reported being more nervous and uneasy than innocent suspects prior to the interview, but there were no differences in our composite measure. Importantly, our hypothesis predicting that innocent Black suspects would be more nervous than innocent White suspects was not supported. The lack of differences between Black and White suspects in anxiety prior to the interview here may be due to the known shortcomings of self-report measures to adequately assess participants' internal states due to either a lack of ability to actually assess their

own internal states or social desirability – in this case, suspects reporting they were less nervous than they actually were. Another possible explanation, however, is that race was not salient for suspects during the waiting period prior to the start of the interview. It was not until the beginning of the interview that the interviewer revealed the evidence against the suspects, including the piece of evidence that that someone matching the suspect’s description was seen near the crime scene. Research on stereotype threat shows that when Black participants are asked to identify their race on a demographics questionnaire prior to the task, they perform worse than participants asked to complete the demographic questionnaire after the task (Steele & Aronson, 1995). That is, when race is not primed – as it had not been in the pre-interrogation interview – participants do not yet have the concern that they will confirm cultural stereotypes. Although we expected that the mere act of being accused of a crime would be enough to trigger these concerns, it is possible that it was not. Further research, particularly with different anxiety measures and different means of priming the Black-crime stereotype, is needed before drawing any definitive conclusions regarding anxiety differences between Black and White suspects during police interviews.

Examining the post interview anxiety measure, we observed that participants across all conditions reported similar levels of anxiety suggesting that being questioned about a crime causes anxiety, regardless of innocence or guilt. Recall that, prior to the interview, guilty suspects reported being more nervous than innocent suspects, yet after the interview this difference disappeared. These findings further support prior research and theorizing about the phenomenology of innocence. Kassin (2005) argues that innocence puts innocent suspects at risk, and as this data suggests, innocent suspects – regardless of race – did not feel anxious prior to the interview. This lack of pre-interview anxiety may explain why so many innocent suspects are willing to waive their *Miranda* rights and speak to the police - they genuinely believe they have

nothing to fear. Even after a short adversarial interview these differences in anxiety levels no longer exist, providing more evidence that practitioners should not rely on cues to anxiety as cues to deception.

Behavioral measures of anxiety were assessed in two ways: (1) coding of nonverbal behaviors traditionally examined in deception detection research (Vrij, 2000a), and (2) global impressions of observers on the anxiety dimensions in the self-report anxiety measure. Comparing across the two vocal nonverbal behaviors and eight non-vocal nonverbal behaviors, our hypotheses were not supported. There were no differences between Black and White participants' nonverbal behaviors. Similarly there were no culpability differences in participants' nonverbal behaviors, nor was there a race by culpability interaction. These findings replicate decades of deception detection research that consistently shows few differences in the behavior of liars and truth tellers (see DePaulo et al., 2003 for a review). This study, however, is one of the first US studies to examine racial differences in nonverbal behaviors during a deception detection task.

It should be stressed, however, that the lack of significant differences in anxiety between Black and White suspects should not be interpreted as a lack of anxiety on the part of Black suspects. Being questioned about a crime, regardless of one's race, is inherently anxiety provoking. The lack of race differences in anxiety suggests that, for all our suspects, innocent or guilty, Black or White, the experience of being questioned in an accusatorial manner was equally stressful. This is evident by the similar post interview anxiety scores across all groups in the experiment. Further support for this can be found in examining suspects' meta-perceptions of the interviewer. Again, across all groups, an equal proportion of suspects felt the interviewer was biased against them, thought they were anxious, and perceived them to be guilty. It is important to

note that more Black suspects mentioned race or racial profiling (40%) than White suspects (22.5%) in their interview – suggesting that race was salient for our Black suspects during the interview, but possibly not before. Thus, it is possible that although the end results was the same for our suspects – anxiety – the routes to this anxiety may have differed based on race. Our Black suspects’ anxiety may have indeed been from being Black and being accused of a crime, especially when race is a part of the evidence against them. For our White suspects, however, the anxiety may have stemmed from the mere discomfort of being accused of a crime or fear of being potentially mistakenly judged as guilty. Future research designed to exploit these potential different routes to anxiety is warranted to assess their effects. For example, although we used an eyewitness identification that included the race of the suspects as a piece of evidence against our suspects, we did not directly measure race salience or suspects’ perceptions of racial bias during the interview. One suggestion is to manipulate race salience for Black and White suspects while adding indirect measures such as word fragment completion tasks (e.g. Steele & Aronson, 1995) in conjunction with other measures to address perceived racial bias from the suspects’ perspective.

In contrast to our study, a similar study conducted in the Netherlands found differences in nonverbal behavior between Black and White suspects, with Black suspects making less eye contact, smiling more often, and moving more overall than White suspects (Vrij et al., 1988; Vrij et al., 1990, 1991). Although the two studies have similarities in their methods, there are many cultural and historical differences regarding the settings in which the two studies were conducted that may account for the discrepant findings. First, as noted earlier, Black Americans repeatedly show low levels of trust in the police. The study was advertised as a study on “Legal Decision Making” at John Jay College of Criminal Justice, thus it is possible that our Black sample suffered from a volunteer bias. That is, only Black participants who were more trusting in police and the

criminal justice system volunteered to participate in the study. There is some evidence of this when comparing the Belief in a Just World Scale scores. Prior research shows minorities to have a lower BJW than Whites (Hunt, 2000; Kennard et al., 2011; Smith et al., 1984). In our study, however, there were no differences between Black and White participants' BJW scores, suggesting that our study may have attracted an atypical sample of Black participants

Due to the limitations of self-report measures to adequately assess participants' internal states, participants were also rated by outside observers on the same dimensions on which participants rated themselves. Interrater reliability for observers' global ratings of suspects on these dimensions was low, however, thus objective measures could not be assessed, somewhat limiting the conclusions we can draw about participants' anxiety during the interview.

### **Cooperation.**

Participants' willingness to cooperate with the investigation was assessed via self-reports by asking participants what they would like their next steps in the investigation to be after the interview. Our hypotheses were not supported; there were no differences in Black and White participants' responses across all measures, regardless of culpability. We hypothesized that Black participants would be less likely to cooperate due to a lack of trust in the police. All of our cooperation measures were dichotomous *yes* or *no*, thus our measures may not have captured the full range of responses. Future research on cooperation should consider including continuous measures. It must be considered, however, that a lack of trust in the police may have the opposite effect on Black suspects. Not trusting the police may actually increase cooperation, as Black suspects may be wary of what might happen if they do not cooperate. A recent study on the effects of New York City's "Stop-and-Frisk" program (see Fratello et al., 2013 for a complete review), a policing tactic that disproportionately affects minorities, found that found that 46% of

respondents reported experiencing violence at the hands of a police officer (Fratello et al., 2013). For Black Americans, perceptions of the police are formed not only through personal experiences, but vicarious experiences of the Black community (Hurwitz et al., 2005; Warren, 2010). Thus, even if a Black suspect has not had prior experience with the police, the fear of a police-citizen interactions becoming physical may drive Black suspects to cooperate with police as a means of self-protection. Although participants in a laboratory study do not have to fear the situation becoming violent, if being vigilant in how one responds when accused of a crime is part of a behavioral script, it may still influence participants' reactions - even in a nonviolent laboratory setting. Future research on what drives Black suspects decisions to cooperate with police at the beginning of an investigation – where veracity decisions are made – is necessary given the potential consequences of either decision.

For culpability, only one item showed significant differences. Consistent with previous research (Jordan et al., 2012), only 38.7% of guilty suspects were willing to take a polygraph, where as 79.1% of innocents suspects were willing to take a polygraph – most frequently citing strategic self-presentation as their rational. There were no differences, however, in desire to speak with an attorney, have an attorney present, or invoke rights to silence suggesting that these commonly used proxies for assessing a suspect's guilt are flawed strategies.

### **Suspect Strategies**

We also assessed suspects' use of strategies during the interview through both self-report and behavioral measures. We predicted that Black suspects would be less forthcoming with information than White suspects. We also hypothesized that guilty suspects would be less forthcoming than innocent suspects. When asked to what extent they planned their statement and whether or not they had a strategy, Black and White suspects responded similarly. Analysis of the

interviews, however, shows that Black suspects did withhold more information about their actions from the interviewer than the White suspects. Furthermore, innocent suspects withheld more information from the interviewer than guilty suspects. Thus, while participants did not report using different strategies, there was evidence that both Black suspects and guilty suspects did employ different strategies with regards to how much information to disclose to the interviewer.

Black suspects may decide to withhold evidence during a police interview for a few reasons. First, it is possible that our Black suspects chose to withhold some of their activities from the interviewer because they felt that admitting too much, even when innocent, would only serve to confirm the interviewer's assumptions that they must be guilty because they are Black. Similarly, Black participants may withhold information about their activities because they do not trust police to use the information properly (e.g. to prove innocence). Although innocent White suspects know they are innocent and think they are offering up information that will clear them of wrongdoing, Black suspects' general suspicions regarding police may lead them to only tell the police the minimum amount of information necessary. In sum, Black suspects may have adopted a cooperative strategy for the more conspicuous behaviors as a manner of self-protection, yet adopted a less cooperative strategy for the more discreet behaviors for similar reasons. Further research is needed examining the intersection of suspect race and expectations and the role they have in suspects' interview strategies.

### **Suspects' Meta-Perceptions and Predictions**

Suspects were asked what they perceived the interviewer's meta-perceptions to be. They were asked whether or not they thought the interview was biased against them, thought they were anxious, and whether the interviewer believe them to be innocent or guilty. We predicted that Black suspects would expect the interviewer to judge them more negatively than White suspects.

Across all three measures, suspects' meta-perceptions of the interviewer did not vary based on race. Participants were also asked to predict how someone watching the videotape of the interview would judge them. Again, Black and White suspects expected to be judge innocent at similar rates. Notably, the majority of suspects predicted that the interviewer would judge them to be lying; yet the majority of suspects expected the videotape viewer to judge them to be telling the truth. Our interview was structured in a guilt presumptive way, thus it is understandable that suspects would expect the interviewer to think they were lying. The use of this style of interview may have restricted the range of responses on this measure by increasing the number of White participants that felt the interviewer didn't believe them compared to a more investigative interview. Research using a more investigative interview approach (i.e. a less guilt presumptive one) may allow for more variance in responses in testing participants' meta-perceptions of the interviewer.

## **Conclusions**

Overall, these findings suggest that being accused of a crime is stressful for both Black and White suspects, regardless of culpability. These findings also suggest that willingness to cooperate with the investigation may depend on many factors, and cannot be predicted by a suspects' race or culpability. Importantly, these results - for both races - replicate past findings from deception detection and interrogations studies, adding more evidence that suspect demeanor and willingness to cooperate are not diagnostic cues to deception or guilt.

These findings also suggest that Black suspects do adopt different strategies than White suspects during questioning. Although the underlying reasons are still unclear, Black suspects, like guilty suspects, withheld more information from the interviewer than White suspects. As deception detection research focuses more on understanding, and exploiting, the strategies of liars



(compared to truth tellers), it will be important to understand why Black suspects felt the need to withhold information from the interviewer.

Given that Black and White suspects behaved similarly on the majority of our measures – behaviors that police officers typically rely on to determine a suspect’s culpability - we still have few answers regarding the role social-cognitive biases play in the overrepresentation of racial-ethnic minorities among the Innocence Project’s roster of false confessors. It is possible that our anxiety and cooperation measures were not sensitive enough to measure the different challenges facing Black and White suspects during police-citizen interactions. It is also possible that being questioned about a crime is a stressful situation, and that Black and White suspects, in the end, respond similarly to that stress situation. One important difference was found, that Black suspects are less forthcoming than White suspects during questioning. Police may be exploiting this lack of information when making lie judgments, but because this strategy is not a central focus of police training manuals, further research is necessary before reaching any conclusions.

Future research should also look towards assessing suspects’ anxiety via physiological measures. For example, Gyuill et al. (2013) examined participants’ physiological indicators of stress (e.g., blood pressure, heart rate, respiratory sinus arrhythmia) while being pressured to confess to cheating (e.g. Russano et al. 2005; Perillo & Kassin, 2010). Innocent suspects, although stressed by the initial accusation of cheating, were significantly less stressed by the accusation and interrogation than guilty suspects, suggesting that innocent suspects may misjudge the possible consequences of cooperating during an interrogation (Gyuill et al., 2013). The Gyuill et al. (2013) sample, however, was 85.6% White with only 6 (4.5%) Black participants. Would innocent Black suspects behave the same way as innocent White suspects? As we saw when examining suspects’ strategies and cooperation, on the more conspicuous measures – such as

whether or not to take a polygraph - Black participants' behavior did not differ from that of White participants. Yet, on the more inconspicuous strategies – such as how much detail to include in one's story – Black participants did adopt a more withholding, possibly less cooperative strategy. It is possible that these more sensitive physiological measures could detect differences in anxiety and stress that our self-report and nonverbal measures were unable to detect. Specifically, it is possible that innocent Black suspects may not outwardly exhibit more anxiety and stress than innocent White suspects, yet, physiologically, their stress markets may match those of guilty suspects.

## **CHAPTER 9: STUDY 2: POLICE OFFICERS' VERACITY JUDGMENTS OF BLACK AND WHITE SUSPECTS**

The purpose of Study 2 was to examine police officers evaluations of Black and White mock crime suspects. We do not know of any U.S. study that has examined police officers' veracity or culpability judgments as a function of race or ethnicity in a police interview or interrogation setting. The current study seeks to extend the literature on police interviewing by examining police officers' culpability judgments and perceptions of Black suspects, compared to White suspects, in a police interview setting. Given the overrepresentation of Blacks in among the wrongfully convicted ([www.innocenceproject.org](http://www.innocenceproject.org)), as well as the prison system as a whole (The Sentencing Project, 1995) understanding how suspect race affects police officers' judgment and decision-making is essential.

Study 1 predicted that, due to cultural stereotypes and lack of trust in the police, innocent Black suspects would exhibit more anxiety cues and be less cooperative with the investigation than innocent White suspects, yet there would be no differences between Black and White guilty suspects. We hypothesized that this would in turn cause police officers to make more errors when judging the veracity of innocent Black and White mock crime suspects. Our hypotheses were not supported; Black and White suspects behaved similarly on the majority of our measures. If Black and White suspects exhibited similar behaviors during our interviews, would police officers' culpability judgments be similar? Police officers are (incorrectly) trained to rely on suspects' nonverbal behaviors and the extent to which they cooperate with the investigation as indicators of guilt. Given that our Black and White participants behaved similarly in regards to our nonverbal behaviors and willingness to cooperate, if police are using these cues to discern innocence and guilt, there should be no differences in guilt judgments between our Black and White suspects.

The stereotype of African-Americans as criminals is robust (Eberhardt, et al., 2004), and can have pervasive effects: they can induce people to see criminality when it is not present (Correll, et al., 2002), and can alter people's memories for a criminal event to be consistent with the stereotype (Allport & Postman, 1947, c.f., Eberhardt et. al., 2004). Importantly, the link between Black and crime appears to be automatic and not directly related to explicit racial attitudes (Payne, 2001). This stereotype can lead to implicit biases with serious consequences, such those seen in the afore mentioned "shoot-don't-shoot" studies where participants were more likely to shoot unarmed Black targets than unarmed White targets (Correll, et al., 2002). Implicit biases operate unintentionally and outside of conscious awareness, and police officers are not immune to these biases. For example, Eberhardt et al. (2004) asked police officers to view a series of photos of Black and White males and indicate whether or not the person "looked criminal." Police officers rated more Black faces as criminal than White faces, and the more stereotypically Black the face was, the more likely it was to be judged criminal (Eberhardt et al., 2004). Thus, despite the lack of differences in anxiety and cooperation between our Black and White participants, we predict that, due to stereotypes regarding Black criminality, innocent Black suspects will still be at greater risk than innocent White suspects of being erroneously judged guilty. It is important to note that we do not expect this to be a result of conscious biases on the part of the police officers.

## **Hypotheses**

**H<sub>1</sub> Culpability:** Given the strong and automatic association of Black with crime (Eberhardt et al., 2004), we predict a main effect for culpability. We predict that police officers will judge Black suspects to be more deceptive than White suspects, and classify Black suspects as guilty more often than White suspects.

**H<sub>2</sub> Accuracy:** Building on the previous hypothesis, we predicted a suspect race by suspect culpability interaction. We predict that police officers would misclassify more innocent Blacks suspects than innocent White suspects as guilty, yet would show a similar error rate when evaluating guilty suspects.

**H<sub>3</sub> Impressions** We predict that police officers will evaluate Black suspects more negatively than White suspects. We predict that police officers would judge Black suspects as more anxious and more suspicious than White suspects. We also predict that they will rate Black suspects as less cooperative and less forthcoming than White suspects.

## CHAPTER 10: STUDY 2 METHODS

### Participants

Participants were 80 police investigators recruited from four police precincts; two of the precincts served suburban areas of large Southeastern United States city ( $N = 40$ ), and two of the precincts served rural areas of the same large Southeastern United States city ( $N = 40$ ). Participants were recruited during daily roll call at the rural precincts, and via word of mouth at the suburban precincts. Participants were asked not to discuss the study with others and were given a limited debriefing until the entire study was completed, upon which a full debriefing was mailed to participants.

Participants, who were 93.8% male, ranged in age from 22 to 65 ( $M = 37.96$ ,  $SD = 9.3$ ), and had an average of 12.18 years of experience, ( $SD = 9.05$ , range 7 months to 43 years). Across precincts, 81.3% of participants were White ( $n = 65$ ), 12.5% of participants were Black ( $n = 10$ ), one participant was Hispanic, two participants chose “other”, and two participants did not report their racial/ethnic information. A total of 67.5% ( $n = 54$ ) of participants had received formal training in suspect interviewing and interrogations.

### Design

The study employed a 2 (Suspect culpability: Innocent v. Guilty) x 2 (Suspect race: Black v. White) between subjects factorial design ( $n = 20$  per cell)

### Stimulus Materials

*Interviews.* Participants were randomly assigned to watch one of the 80 suspect interviews from Study 1. As described in Study 1, all interviews were conducted according to a pre-determined script; the same mock detective conducted all interviews. Suspects recounted the 15 minutes prior to the interview, and then answered a series of accusatory, guilty presumptive

questions. The video showed the suspect's full body at a diagonal from the suspect's right side; the interviewer's left side and back is visible in all interviews.

*Suspect Profile.* Prior to watching the videotape, police officers received a one-page report, presented as a "Suspect Profile" (Appendix Q), containing information about what cooperative behaviors the suspect endorsed (i.e. responses to the questions regarding taking a polygraph, waiving right to silence, desire to speak to an attorney, willingness to speak to a new detective) after the initial interview on the willingness to cooperate measure in Study 1. The report opened with a suspect name held constant according to gender (Michelle or Michael Jones) as well as the suspect's actual age and self-reported gender. The report then included some irrelevant biographical information held constant across all suspects to counter demand characteristics regarding the cooperative behaviors. This information was labeled "Biographical Information" and included four items held constant across all conditions: (1) "Suspect lives in Brooklyn, NY"; (2) "Suspect moved from Washington DC to New York five years ago"; (3) "Suspect waits tables at a nearby restaurant"; and (4) "Suspect has no children."

Next, the report contained a section labeled "Additional Information". Although we measured suspects' cooperation in five ways, we only included four of the measures in the additional information. Two of the five measures assessed suspects' desires for counsel during the proposed follow up interview: desire to get advice from a lawyer and desire to have a lawyer present during the interview. Slightly more participants shown in the videos requested to have an attorney present in the interview (90%) than requested advice from an attorney (83.8%). So as not to have "attorney requests" overly influence officers' decisions compared to the other cooperation measures, only one of the two measures was reported on the Suspect Profile. There was more variance in suspects' responses to "desire to speak to an attorney," thus it was selected.

Consequently, the “Additional Information” section included one of the following four variants: (1) “The suspect {wanted/did not want} to speak to a defense attorney”; (2) “The suspect {was/was not} willing to take a polygraph”; (3) “The suspect {wanted/did not want} to invoke their right to silence”; and (4) “The suspect {wanted/did not want} to speak to another detective.

## **Procedure**

Sessions were conducted with a range of 1 to 4 participants per session. At three of the four data collection sites participants sat at individual tables scattered around the available room at each site; at the fourth site participants sat around a conference table in the available room. All participants viewed their video on a laptop and listened to the interview with headphones.

After reading the consent form (Appendix O), participants received written instructions about their task (Appendix P), including background information about the mock crime (Appendix Q). Participants read that researchers previously conducted a study in which suspects were instructed to steal a wallet or do something else not involving a theft, were interviewed about the theft, all denied the theft, and that there was some evidence indicating that the interviewee committed the theft, but that it does not necessarily exclude the suspect. Participants read that there was evidence that the suspect entered the building on the day of the crime in question, that there was video footage of the suspect near the room where the theft occurred, and that a person matching the description of the suspect was seen near the room (the latter two being the two pieces of evidence that are used against the suspect by the interviewer in the tape).

Participants were then instructed that their task was to determine if the suspect in the video was lying or telling the truth – that is, whether the suspect had actually taken the wallet or not. After reading the instructions, participants read the specific Suspect Profile corresponding with the suspect in their video. The experimenter then started the video and told participants to signal



when the video was over. After the video, participants completed a questionnaire assessing perceptions of veracity, culpability, suspect anxiety, suspect cooperation, and verbal and non-verbal cues used in reaching their conclusion (Appendix R). Participants also completed a “Suspect Recall” questionnaire asking them to recall the four items listed under Additional Information on the Suspect Profile and the gender and race of the suspect (Appendix S). They then answered a demographics questionnaire (Appendix T) and were debriefed (Appendix U). Participants were paid \$30 for their time and, to motivate accuracy, told that if they were correct in their lie judgment they would be entered into a lottery to receive \$100. In reality, all participants were entered into the lottery.

## **Measures**

*Guilt.* For each suspect, officers rated the extent they believed the suspect was lying when they denied guilt on a 10-point scale (1 = *no, absolutely not*, 10 = *yes, absolutely*). Participants were then asked, “Which of the following is most likely to be true?”: “*the person is guilty of the theft*” or “*the person is innocent of the theft,*” and to rate their confidence in that decision on a 10-point scale (1 = *not at all*, 10 = *very*). Finally, participants were asked if they would like to interrogate the suspect further for this crime (1 = *no, absolutely not*, 10 = *yes, absolutely*) and to explain why or why not.

*Cues to guilt judgments.* Participants were asked to briefly describe the main reasons why they thought the interviewee was innocent or guilty. They were then asked to rate on a 10-point scale (1 = *not at all*, 10 = *completely*) to what extent the suspect’s: (1) body language; (2) verbal statement; and (3) post interview behavior (i.e. the cooperation behaviors) influenced their decision.

*Impressions of Suspect.* Participants assessed the suspect's anxiety on the same five measures the suspects answered immediately prior to the interrogation: agitated, uneasy, nervous, worried, and anxious on the same 7-point scale (1 = *not at all*, 7 = *very*).

Participants answered seven questions about their global impression of the suspect. Participants rated, all on a 10-point scale (1 = *extremely low*, 10 = *extremely high*), to what extent: (1) did you feel suspicious during the interview? (2) did the person seem forthcoming with information? (3) did the person seem to trust the interviewer; (4) did the person seem willing to cooperate with the investigation? (5) did the person seem willing to talk with investigators? (6) did the person seem willing to talk with investigators?

Finally, participants were asked if they had any special training on how to conduct interviews and interrogations, what kind of training they had received, and how much they thought it affected their lie judgments (1 = *not at all*, 10 = *very*). The majority of officers (65%) reported have received some form of training, either in service or specialized training (e.g., Reid and Associates). Prior training did not significantly affect officers' veracity judgments and will not be discussed further.

## CHAPTER 11: STUDY TWO RESULTS

### Manipulation Checks

Participants were asked a series of multiple choice manipulation checks to ensure that they had read the suspect profile and paid attention to the interview. Beginning with our main manipulation, 97.7% of officers who viewed White suspects correctly recalled that the suspect was White. For officers who viewed Black suspects, 100% correctly recalled that the suspect was Black,  $\chi^2(1, N = 80) = 75.10, p < .001$ , Cramer's  $V = .98$ , suggesting that our suspect race manipulation was effective. Regarding the cooperation measures reported in the suspect profile, significantly more officers (78.21%) correctly recalled whether or not the suspect wanted to speak to a defense attorney than did not (21.80%),  $\chi^2(2, N = 78) = 25.87, p < .001$ , Cramer's  $V = .58$ . Significantly more officers (91.03%) correctly recalled whether or not the suspect was willing to take a polygraph than did not (8.97%),  $\chi^2(2, N = 78) = 53.19, p < .001$ , Cramer's  $V = .83$ . Significantly more officers (88.46%) correctly recalled whether the suspect wanted to invoke their right to silence than did not (11.54%),  $\chi^2(2, N = 78) = 47.06, p < .001$ , Cramer's  $V = .78$ . Significantly more officers (91.03%) correctly recalled whether or not the suspect wanted to speak to a new detective than did not (8.97%),  $\chi^2(2, N = 78) = 54.16, p < .001$ , Cramer's  $V = .83$ , suggesting that our suspect profile was effective at communicating the suspects' cooperation behaviors to the participants.

### Hypothesis 1: Police Officers' Culpability Judgments

We predicted a main effect for suspect race. Specifically, we predicted that police officers would judge Black suspects to be more deceptive than White suspects. Similarly, we predicted that police would judge Black suspects to be guilty more often than White suspects.

*Veracity Judgments.* First, officers indicated on a 10-point scale (1 = *no, absolutely not*, 10 = *yes, absolutely*) whether they thought the interviewee was lying when s/he denied guilt. If observers were making accurate judgments, we would expect a main effect for suspect culpability such that officers judging guilty suspects would give higher scores. A 2 (suspect culpability: innocent v. guilty) by 2 (suspect race: White v. Black) ANOVA showed no main effect for suspect culpability on officers' lie judgments  $F(1, 76) = .66, p = .42, \eta_p^2 = .01$ . There was not a significant main effect for suspect race,  $F(1, 76) = 2.73, p = .10, \eta_p^2 = .04$ , nor was there a significant suspect culpability by suspect race interaction,  $F(1, 76) = .56, p = .46, \eta_p^2 = .01$ .

*Guilt Judgments.* After the veracity ratings, observers indicated whether they thought the suspect was *innocent* or *guilty* of the theft. A binary logistic regression was conducted with dichotomous observer accuracy as the dependent variable and suspect culpability, suspect race, and the suspect culpability by suspect race interaction term as the independent variables. The model was not significant,  $-2LL = 105.58, \chi^2(3, N = 80) = 5.32, p = .15$ . Officers judged Black suspects to be guilty 60% ( $n = 24$ ) of the time while judging White suspects to be guilty 40% ( $n = 16$ ) of the time,  $\chi^2(1, N = 80) = 3.20, p = .07$  *Cramer's V* = .20. Binomial tests show that neither of these accuracy rates are significantly different from chance,  $p = .27$  and  $p = .27$  respectively. Although this main effect for suspect race on officers' guilt judgments was not quite significant, it is important to note that the lack of significance may be due to the small sample size and consequently the lack of power to detect a significant effect for this contrast ( $1 - \beta = .57$ ). A full breakdown of officers' guilt judgments can be seen in Table 8.

*Table 9. Police Officers' Guilt Judgments by Suspect Race*

Officer Judgment	Suspect Culpability					
	Innocent		Guilty		Overall	
	White (n =20)	Black (n =20)	White (n =20)	Black (n =20)	White (n =40)	Black (n =40)
Innocent	70%	35%	50%	55%	60%	40%
Guilty	30%	65%	50%	45%	40%	60%

*Note.* N = 80

To examine the effects of suspects' nonverbal behaviors on police officers' culpability judgment, each of the non-vocal and vocal nonverbal behaviors was entered into a binary logistic regression along with the suspect race, suspect culpability, suspect culpability by suspect race interaction term, and the appropriate nonverbal behavior by culpability and nonverbal by race interaction terms. Overall, none of the models were significant: (a) gaze,  $-2LL = 99.74$ ,  $\chi^2(7, N = 79) = 9.77$ ,  $p = .16$ ; (b) head movements,  $2LL = 103.62$ ,  $\chi^2(7, N = 79) = 5.89$ ,  $p = .55$ ; (c) laughs,  $2LL = 102.97$ ,  $\chi^2(7, N = 79) = 6.54$ ,  $p = .48$ ; (d) smiles,  $2LL = 103.62$ ,  $\chi^2(7, N = 79) = 6.54$ ,  $p = .48$ ; (e) illustrators,  $2LL = 104.39$ ,  $\chi^2(7, N = 79) = 5.12$ ,  $p = .65$ ; (f) for leg/foot movements,  $2LL = 99.62$ ,  $\chi^2(7, N = 79) = 8.46$ ,  $p = .29$ ; (g) trunk movements,  $2LL = 104.65$ ,  $\chi^2(7, N = 79) = 4.86$ ,  $p = .56$ , (h) speech disturbances,  $2LL = -99.24$ ,  $\chi^2(7, N = 79) = 10.21$ ,  $p = .18$ , and (i) speech rate,  $-2LL = 102.76$ ,  $\chi^2(7, N = 79) = 6.74$ ,  $p = .35$ .

To examine the effect of suspects' cooperation with the investigation on officer's culpability judgment, each of the four cooperation measures included on the "suspect information" sheet presented to detectives prior to viewing the interview (asking for advice from a defense attorney, willingness to take a polygraph, invoking right to silence, and desire to speak to a new detective) was entered into a binary logistic regression along with suspect race, suspect culpability, the suspect race by suspect culpability interaction term, the cooperation by suspect race, cooperation by suspect veracity, and three way interaction terms. None of the models were significant. Because officers were provided with these items in the aggregate, the four items were then combined to create a cooperation index ranging from 0 to 4 (0 = *not at all cooperative*, 4 = *fully cooperative*). Again using officer accuracy as the dependent variable, this cooperation index was entered into a binary logistic regression along with the suspect race, suspect veracity, suspect race by suspect veracity interaction, the cooperation by suspect race, cooperation by suspect

veracity, and three way interaction terms. The model was not significant  $-2LL = 103.43, \chi^2(6, N = 80) = 7.47, p = .28$ .

## **Hypothesis 2: Police Officers' Accuracy Rates**

We predicted a suspect race by suspect culpability interaction. Specifically, we predicted that officers would make more errors when judging the culpability of innocent Black suspects compared to innocent White suspects, yet officers would exhibit similar accuracy rates for guilty Black and White suspects. We also predicted that officers would show high confidence in their culpability judgments, regardless of their accuracy.

Examining officers' decisions in terms of their lie detection accuracy, officers obtained a 53.8% accuracy rate; a binomial test reveals this was not significantly different than chance,  $p = .58$ . A binary logistic regression was performed with dichotomous observer accuracy as the dependent variable and suspect culpability, suspect race, and the suspect culpability by suspect race interaction term as the independent variables. The model was not significant,  $2LL = 105.58, \chi^2(3, N = 80) = 5.12, p = .16$ . Officers' accuracy rates were equal for both innocent (52.5%,  $n = 21$ ) and guilty (52.5%,  $n = 21$ ) suspects,  $\chi^2(1, N = 80) = 0.00, p = 1.00$ . Binomial tests revealed that these accuracy rates were not significantly different from chance,  $p = .88$  and  $p = .88$  respectively. Observers were correct in their culpability judgments 60% of the time with White suspects and 45% of the time with Black suspects. Binomial tests revealed that neither of these accuracy rates are significantly different from chance,  $p = .27$  and  $p = .64$  respectively. A full breakdown of officers' accuracy rates can be seen in Table 9.

Table 10. Officers' Accuracy Rates by Suspect Race

Accuracy	Suspect Culpability					
	Innocent		Guilty		Overall	
	White (n = 20)	Black (n = 20)	White (n = 20)	Black (n = 20)	White (n = 40)	Black (n = 40)
Incorrect	30.0% <sup>a</sup>	65.0% <sup>a</sup>	50.0%	45.0%	50%	45%
Correct	70.0%	35.0%	50.0%	55.0%	50%	55%

Note. N = 80

<sup>a</sup>significant at the p < .05 level



*False Alarms.* Accuracy rates do not tell the full story, however. When law enforcement officials assess the culpability of a suspect, there are four possible outcomes: (1) a hit: correctly judging a guilty suspect as guilty; (2) correct rejection: correctly judging an innocent suspect as innocent; (3) a miss: incorrectly judging a guilty suspect as innocent; and (4) a false alarm: incorrectly judging an innocent suspect as guilty. For the 40 guilty suspects (20 per racial group), there was no significant difference in officers' "hits" (correctly identifying the guilty suspect) for Black suspects (55.0%) and White suspects (50.0%),  $\chi^2(1, N = 40) = .10, p = .75$ , Cramer's  $V = .05$ , odds ratio = 1.22. Thus, for guilty suspects, the odds of accurately being judged as guilty were equal for both Black suspects and White suspects.

For the 40 innocent suspects, officers made significantly more false alarms (incorrectly identifying an innocent suspect as guilty) when judging innocent Black suspects (65.0%) than when judging White suspects (30.0%)  $\chi^2(1, N = 40) = 4.91, p = .03$ , Cramer's  $V = .35$ , odds ratio = 4.33. For innocent suspects, Black suspects were 4.33 times more likely to be erroneously judged guilty than White suspects (See Figure 1).

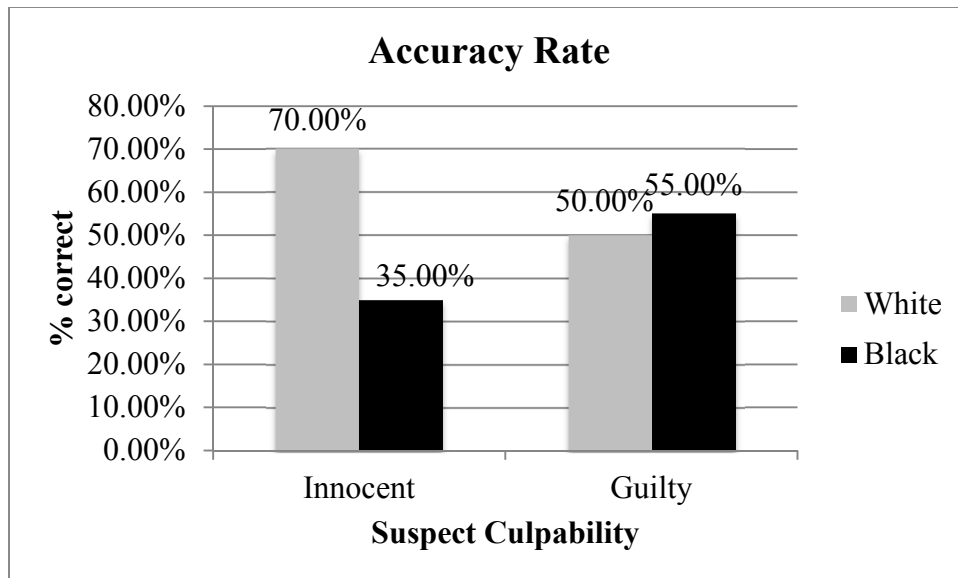


Figure 1. Officer's Accuracy by Condition.

To examine the effect of suspects' nonverbal behaviors on officers' dichotomous accuracy, each of the non-vocal and vocal nonverbal behaviors was entered into a binary logistic regression along with the suspect race, suspect culpability, suspect culpability by suspect race interaction term, and the appropriate nonverbal behavior by culpability and nonverbal by race interaction terms. Overall, none of the models were significant: (a) gaze,  $-2LL = 99.74$ ,  $\chi^2(7, N = 79) = 9.46$ ,  $p = .22$ ; (b) head movements,  $2LL = 103.62$ ,  $\chi^2(7, N = 79) = 5.88$ ,  $p = .59$ ; (c) laughs,  $2LL = 102.97$ ,  $\chi^2(7, N = 79) = 6.24$ ,  $p = .51$ ; (d) smiles,  $2LL = 102.97$ ,  $\chi^2(7, N = 79) = 6.24$ ,  $p = .51$ ; (e) illustrators,  $2LL = 104.39$ ,  $\chi^2(7, N = 79) = 4.81$ ,  $p = .68$ ; (f) leg/foot movements,  $2LL = 99.62$ ,  $\chi^2(7, N = 79) = 8.01$ ,  $p = .33$ ; (g) trunk movements,  $2LL = 103.69$ ,  $\chi^2(7, N = 79) = 5.51$ ,  $p = .60$ ; (h) speech disturbances,  $2LL = -99.24$ ,  $\chi^2(7, N = 79) = 9.91$ ,  $p = .19$ ; and (i) speech rate,  $-2LL = 102.87$ ,  $\chi^2(7, N = 79) = 6.34$ ,  $p = .39$ .

Using officers' culpability judgments as the dependent variable, each of the four cooperation measures included on the "suspect information" sheet presented to detectives prior to viewing the interview (asking for advice from a defense attorney, willingness to take a polygraph,

invoking right to silence, and desire to speak to a new detective) was entered into a binary logistic regression along with suspect race, suspect culpability, the suspect race by suspect culpability interaction term, the cooperation by suspect race, cooperation by suspect veracity, and three way interaction terms. None of the models were significant. Because officers were provided with these items in the aggregate (i.e. all four items at once), the four items were combined to create a cooperative index ranging from 0 to 4 (0 = *not at all cooperative*, 4 = *fully cooperative*). This cooperation index was entered into a binary logistic regression along with the suspect race, suspect veracity, suspect race by suspect veracity interaction, the cooperation by suspect race, cooperation by suspect veracity, and three way interaction terms, again using officer accuracy as the dependent variable. The model was not significant  $-2LL = 103.43, \chi^2(6, N = 80) = 7.26, p = .30$ . The cooperation items will not be discussed further.

*Confidence Ratings.* Observers rated their confidence in their culpability judgments on a 10-point scale (1 = *not at all confident*, 10 = *very confident*). Overall, participants' confidence in their veracity judgments was high, ( $M = 8.31, SD = 1.41$ ). A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effects for suspect culpability on decision confidence  $F(1, 76) = .75, p = .39, \eta_p^2 = .01$ , or suspect race  $F(1, 76) = .75, p = .39, \eta_p^2 = .01$ . The suspect culpability by suspect race interaction was not significant,  $F(1, 76) = .50, p = .48, \eta_p^2 = .01$ .

*Further Questioning.* If police believe a suspect is lying or is guilty of the crime in question, they may want to question the suspect further – past the pre-interrogation interview. Thus, after watching the videotape and answering the above questions about statement veracity and culpability, officers were asked if they would like to question the suspect further about the crime in question ( $n = 8$  missing). Observers indicated on a scale of 1 to 10, (1 = *absolutely not*,

10 = *absolutely*) if they would like to interrogate the suspect further for this crime. A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effects for suspect culpability on desire to question the suspect further  $F(1, 68) = .30, p = .58, \eta_p^2 = .004$ , or suspect race  $F(1, 68) = 2.18, p = .15, \eta_p^2 = .03$ . The suspect culpability by suspect race interaction was also not significant,  $F(1, 68) = .69, p = .41, \eta_p^2 = .01$ .

*Accuracy of suspects' predictions.* As a group, 78.0% ( $n = 32$ ) of innocent suspects believed an observer of the videotape would judge them as innocent; yet only 52.5% ( $n = 21$ ) of innocent suspects were correct in this belief (not necessarily the same 52.5% of innocent suspects). As a group, 55.5% ( $n = 22$ ) of guilty suspects believed an observer of the videotape would judge them as innocent; 47.5% ( $n = 19$ ) were correct in this belief (again, not necessarily the same 47.5%). On a group level, innocent suspects expected to be judged innocent more often than they actually were, whereas guilty suspects' expectations, as a group, were somewhat accurate.

Examining the accuracy of suspects' predictions by race, 84.2% ( $n = 16$ ) of innocent White suspects predicted they would be judged innocent; 70% ( $n = 14$ ) of innocent White suspects were judged innocent (not necessarily the same White suspects). In contrast, 72.7% ( $n = 16$ ) of innocent Black suspects predicted they would be judged innocent, yet only 35% ( $n = 7$ ) of innocent Black suspects were judged innocent. On a group level, innocent White suspects expected to be judged innocent and, for the most part, were judged innocent. Innocent Black suspects as a group showed the same belief in the power of their innocence as innocent White suspects, yet their expectations of a favorable outcome were not met.

As for guilty suspects, 60.0% ( $n = 12$ ) of guilty White suspects predicted they would be judged innocent and 50.0% ( $n = 10$ ) were judged guilty (not necessarily the same 10). Similarly, 50.0% ( $n = 10$ ) of guilty Black suspects predicted they would be judged innocent and 45.0% ( $n =$

9) were judged innocent (again not necessarily the same 9). Guilty suspects of both races, as a group accurately estimated their likelihood of being judged guilty. In sum, innocent Black suspects in our sample were the only group that misjudged their likelihood of being deemed truthful. A full break down of suspects' predictions by race and culpability can be seen in Table 10.

Table 11. Percentage of suspects expecting to be judged innocent v. percentage of suspects actually judged innocent

Judgment	Suspect Culpability					
	Innocent		Guilty		Overall	
	White	Black	White	Black	White	Black
Suspects' Predicted	84.2%	72.7%	60.0%	50.0%	71.8%	61.9%
Officers' Actual	70.0%	35.0%	50.0%	45.0%	60.0%	40.0%

*Self-Reported Cues.* Observers were asked to rate on a 10-point scale (1 = *not at all*, 10 = *completely*) to what extent the interviewee's body language (nonverbal behavior), verbal statement, and post interview behavior (i.e. willingness to cooperate measures reported from Study 1) influenced their judgments. A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for suspect culpability for nonverbal behavior as a self-reported cue; officers reported using nonverbal behavior to a similar degree for innocent ( $M = 7.53$ ,  $SD = 1.59$ , 95% CI [7.18, 7.88]) and guilty ( $M = 7.33$ ,  $SD = 1.85$ , 95% CI [6.92, 7.74]) suspects,  $F(1, 76) = .26$ ,  $p = .61$ ,  $\eta_p^2 = .003$ . There was also no significant main effect for suspect race on nonverbal behavior as a self-reported cue; officers reported using nonverbal behavior to a similar degree for White ( $M = 7.43$ ,  $SD = 1.71$ , 95% CI [7.06, 7.80]) and Black ( $M = 7.43$ ,  $SD = 1.74$ , 95% CI [7.05, 7.81]) suspects,  $F(1, 76) = .00$ ,  $p = 1.00$ ,  $\eta_p^2 < .001$ . The culpability by race interaction was also not significant,  $F(1, 76) = .15$ ,  $p = .70$ ,  $\eta_p^2 = .002$ .

A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for suspect culpability for verbal statement as a self-reported cue; officers reported using verbal behavior to a similar degree for innocent ( $M = 7.48$ ,  $SD = 1.83$ , 95% CI [7.08, 7.88]) and guilty ( $M = 7.38$ ,  $SD = 1.71$ , 95% CI [7.01, 7.55]) suspects,  $F(1, 76) = .06$ ,  $p = .80$ ,  $\eta_p^2 = .001$ . There was also no significant main effect for suspect race on verbal behavior; officers reported using verbal behavior to a similar degree for White ( $M = 7.30$ ,  $SD = 1.67$ , 95% CI [6.93, 7.67]) and Black ( $M = 7.55$ ,  $SD = 1.85$ , 95% CI [7.14, 7.96]) suspects,  $F(1, 76) = .39$ ,  $p = .53$ ,  $\eta_p^2 < .05$ . The suspect culpability by suspect race interaction was also not significant,  $F(1, 76) = .25$ ,  $p = .62$ ,  $\eta_p^2 = .003$ .

A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for suspect culpability for post interview behavior as a self-

reported cue; officers reported using post interview behavior to a similar degree for innocent ( $M = 5.25$ ,  $SD = 2.62$ , 95% CI [4.68, 5.82]) and guilty ( $M = 4.35$ ,  $SD = 2.88$ , 95% CI [3.72, 4.88]) suspects,  $F(1, 76) = 2.09$ ,  $p = .15$ ,  $\eta_p^2 = .03$ . There was no significant main effect for suspect race on post-interview behavior; officers reported using post interview behavior to a similar degree for White ( $M = 4.60$ ,  $SD = 2.80$ , 95% CI [3.99, 5.21]) and Black ( $M = 5.00$ ,  $SD = 2.77$ , 95% CI [4.39, 5.61]) suspects,  $F(1, 76) = .41$ ,  $p = .52$ ,  $\eta_p^2 = .01$ . The suspect culpability by suspect race interaction was also not significant,  $F(1, 76) = .03$ ,  $p = .87$ ,  $\eta_p^2 = .02$ .

Observers were also asked to describe the main reasons why they thought the interviewee was guilty or innocent. Officers cited between 1 and 4 reasons for their culpability judgment and the mean number of reasons cited was 2.3 ( $SD = .92$ ); all reasons were included in analysis. Officer's answers were initially coded into one of 8 categories: (1) suspect's gaze, (2) suspect's body movements, (3) suspect's statement, (4) suspect's overall demeanor; (5) suspects' credibility; (6) cooperation of suspect; (7) suspect race; and (8) other. Of the officers who believed the suspect innocent, the most common response cited (35%) was the suspect's body movements. Of the officers who believed the suspect guilty, the most common response cited (27.5%) was the suspect's statement. A full breakdown of officers' cited cues can be seen in Table 11.



Table 12. Officers' Cited Reasons for Culpability Judgments

Cue Cited	Culpability Judgment				Overall ( <i>N</i> = 80)
	Innocent		Guilty		
	White ( <i>n</i> = 24)	Black ( <i>n</i> = 16)	White ( <i>n</i> = 16)	Black ( <i>n</i> = 24)	
Body	22.3%	36.5%	25.0%	25.0%	30.0%
Statement	25.0%	25.0%	25.0%	33.0%	30.0%
Gaze	12.5%	43.8%	25.0%	12.5%	21.3%
Nervousness	16.7%	12.5%	6.4%	12.5%	12.5%
Credibility	12.5%	0.0%	0.0%	0.0%	3.8%
Cooperation	0.0%	6.3%	6.3%	4.2%	3.8%
Race	0.0%	0.0%	0.0%	0.0%	0.0%
Other	20.8%	12.5%	18.8%	37.2%	23.8%

Note. Officers cited between 1-4 reasons; ( $M = 2.3$ ,  $SD = .92$ ).

Given the documented difficulties with introspection (Nisbett & Wilson, 1977) and relying on self-reported cue usage (Hartwig & Bond, 2011) we computed Pearson product-moment correlations between the nonverbal behaviors coded for in Study 1 and police officers' culpability judgments, as well as suspects' scores on the forthcoming measures (crime scene and critical details) and officers' culpability judgments. This method allowed us to examine what behaviors the police officers were actually relying on to detect deception. None of the correlations between the nonverbal cues and officers' judgments were significant (utilization coefficients presented in Table 12). This suggests that officers did not objectively rely on suspects' nonverbal behavior when detecting deception. Similarly, neither of the correlations between the forthcoming measures and officers' judgments were significant. Further, we broke these analyses down by each of the

four conditions in the study, such that the effect of each cue on officers' judgments could be assessed based on suspect race and culpability. Only one correlation was significant, presence at crime scene in the innocent White suspects condition,  $r(18) = -.48$   $p = .02$ . Paradoxically, this suggests that officers used innocent White suspects' forthcomingness against them when judging their veracity. That is, the more forthcoming innocent White suspects were, the more likely they were to be judged guilty.

*Table 13. Officers' utilization of potential cues to deception*

Cue	Observer Judgment				Overall <i>r</i>
	Innocent		Guilty		
	White <i>r</i>	Black <i>r</i>	White <i>r</i>	Black <i>r</i>	
Speech Rate	-.10	-.09	-.15	-.14	-.06
Speech Disturbances	.05	-.29	.38	-.14	.01
Gaze	.26	-.14	-.04	-.35	.19
Head Movements	.08	.19	-.10	.05	.04
Laughs	.16	.02	.24	.05	.12
Smiles	.13	.12	.26	.29	.20
Illustrators	.04	.04	-.07	-.08	-.01
Leg/Foot Shaking	.41	-.20	.03	.04	-.14
Trunk Movements	.21	.02	-.03	-.04	.02
Crime Scene	-.48*	-.20	.23	.12	.06
Critical Details	-.13	-.18	.32	-.01	.13

*Note: Positive correlations indicate innocence, negative correlations indicate guilt. \*Indicates  $p < .05$ .*

### **Hypothesis 3: Officers' Impressions of Suspects.**

We predicted that the police officers would rate Black suspects more negatively than White suspects overall. Specifically, we predicted that police officers would rate Black suspects as more anxious and more suspicious than White suspects. We predicted that they would rate Black suspects to be less cooperative and less forthcoming than White suspects. We also predicted a suspect race by suspect culpability interaction. Specifically we predicted that officers would rate innocent Black suspects to be more anxious, more suspicious, less cooperative, and less forthcoming than innocent White suspects, while there would be no differences in officers' ratings of guilty Black and White suspects.

*Anxiety.* Observers provided ratings of the mock suspects' anxiety levels on the same five items that were used in the "pre-interview concern" questionnaire in Study 1. This questionnaire asked observers to rate how: agitated, uneasy, nervous, worried, and anxious the suspects were on a scale of 1 to 7 (1 = *not at all*, 7 = *very*). The five items were combined into an overall five-item "suspect anxiety scale." We summed observers' ratings and divided by five so that ratings were still reflected on a scale of 1-7, where the closer to one the observer's rating was - the less anxiety the participant appeared to have and the closer to seven the participant's score was - the more anxiety the participant appeared to have. The grand mean for observers' anxiety ratings was 3.53 ( $SD = 1.12$ , 95% CI [3.28, 3.78]). A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for culpability on observers ratings of anxiety,  $F(1, 75) = .14, p = .71, \eta_p^2 = .002$ . There was not a significant main effect for suspect race on observers ratings of anxiety,  $F(1, 75) = .36, p = .55, \eta_p^2 = .005$ . The suspect culpability by suspect race interaction was also not significant for observer ratings of anxiety,  $F(1, 75) = .13, p = .72, \eta_p^2 = .002$ .

Like the pre-interview concern scale, given the lack of significant results on the anxiety scale, each individual item on the scale was analyzed in case our compilation was overlooking specific concepts that may be integral to understanding the unique experiences and perceptions of Black and White suspects in police interrogations. None of the five items individually showed any significant main effects or interactions, and thus will not be discussed further.

*Suspicion.* Observers were also asked to rate, on a 10-point scale (1 = *extremely low extent*, 10 = *extremely high extent*), to what extent they felt suspicious during the interview. A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for culpability for observer suspicion,  $F(1, 76) = .01, p = .94, \eta_p^2 = < .001$ . There was, however, a significant main effect for suspect race on observer suspicion; observers of Black suspects ( $M = 6.28, SD = 2.66, 95\% CI [5.70, 6.86]$ ) were significantly more suspicious than observers of White suspects ( $M = 5.08, SD = 2.78, 95\% CI [4.47, 5.69]$ ),  $F(1, 76) = 3.91, p = .05, \eta_p^2 = .05$ . The suspect culpability by suspect race interaction was not significant for observers' suspicion ratings,  $F(1, 76) = 2.20, p = .14, \eta_p^2 = .03$ .

*Cooperation.* Observers were then asked to provide their global impressions of the suspects on a 10-point scale (1 = *extremely low extent*, 10 = *extremely high extent*) to what extent: (1) did the person seem forthcoming with information? (2) did the person seem to trust the interviewer? (3) did the person seem willing to cooperate with the investigation? and (4) did the person seem willing to talk with investigators?

A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for culpability for the extent the suspect seemed forthcoming with information,  $F(1, 76) = 1.73, p = .19, \eta_p^2 = .02$ . There was no significant main effect for

suspect race for forthcomingness,  $F(1, 76) = .74, p = .39, \eta_p^2 = .01$ . The suspect culpability by suspect race interaction was also not significant,  $F(1, 76) = 3.13, p = .08, \eta_p^2 = .04$ .

A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for culpability for the extent the suspect seemed to trust the interviewer,  $F(1, 76) = .11, p = .74, \eta_p^2 = .001$ . There was no significant main effect for suspect race for trust of interviewer,  $F(1, 76) = .51, p = .48, \eta_p^2 = .01$ . There was, however, a significant suspect culpability by suspect race interaction for trust of interviewer,  $F(1, 76) = 5.42, p = .02, H\eta_p = .07$ . Contrary to our hypotheses, pairwise comparisons indicate that officers rated guilty White suspects ( $M = 3.60, SD = 2.35$ ), as significantly less trusting of the interviewer than guilty Black suspects, ( $M = 5.20, SD = 2.29$ ),  $F(1, 76) = 4.62, p = .04, 95\% CI [.12, 3.08]$ . For innocent suspects, however, there was no significant difference in observers' ratings of trust for Black ( $M = 4.15, SD = 2.35$ ) and White ( $M = 5.00, SD = 2.43$ ) suspects,  $F(1, 76) = 1.31, p = .26, 95\% CI [-.63, 2.33]$ .

A 2 (suspect culpability: innocent v. guilty) x 2 (suspect race: White v. Black) ANOVA revealed no significant main effect for culpability for the extent the suspect seemed willing to cooperate,  $F(1, 76) = 2.73, p = .10, \eta_p^2 = .04$ . There was no significant main effect for suspect race for cooperation,  $F(1, 76) = .50, p = .48, \eta_p^2 = .01$ . There was, however, a significant suspect culpability by suspect race interaction for cooperation,  $F(1, 76) = 5.42, p = .02, \eta_p^2 = .07$ . As predicted, pairwise comparisons indicate that, for innocent suspects, observers rated White suspects ( $M = 7.60, SD = 1.67$ ) as more cooperative with the investigation than Black suspects ( $M = 5.90, SD = 2.58$ ),  $F(1, 76) = 5.15, p = .03, 95\% CI [.21, 3.19]$ . For guilty suspects, however, there was no significant difference in observers' ratings of cooperation for White ( $M = 5.35, SD = 2.54$ ) and Black ( $M = 6.3, SD = 2.56$ ) suspects,  $F(1, 76) = 1.61, p = .21, 95\% CI [-.54, 2.44]$ .

A two-way ANOVA with suspect culpability (innocent v. guilty) and suspect race (White v. Black) as independent variables revealed no significant main effect for culpability for the extent the suspect seemed to willing to talk with investigators,  $F(1, 76) = .93, p = .34, \eta_p^2 = .01$ . There was no significant main effect for suspect race for willingness to talk,  $F(1, 76) = 1.39, p = .24, \eta_p^2 = .02$ . There was, however, a significant suspect culpability by suspect race interaction for willingness to talk,  $F(1, 76) = 5.54, p = .02, \eta_p^2 = .07$ . As predicted, pairwise comparisons indicate that, for innocent suspects, observers rated White suspects ( $M = 7.90, SD = 1.48$ ) as more willing to talk to investigators than Black suspects ( $M = 6.25, SD = 2.45$ ),  $F(1, 76) = 6.23, p = .02, 95\% CI [.33, 2.97]$ . For guilty suspects, however, there was no significant difference in observers' ratings of cooperation for White ( $M = 6.90, SD = 2.17$ ) and Black ( $M = 6.35, SD = 2.13$ ) suspects,  $F(1, 76) = .69, p = .41, 95\% CI [-.76, 1.87]$ .

## CHAPTER 12: STUDY TWO DISCUSSION

This goal of this study was to examine police officers' abilities to judge the guilt and innocence of Black and White suspects during a police interview. Using the videotaped interviews from Study 1, where both Black and White suspects committed either a mock crime or an innocent act, we tested the hypotheses that (1) officers would judge Black suspects to be guilty more often than White suspects; and (2) that they would make more mistakes when judging the culpability of innocent Black suspects than innocent White suspects, while showing similar accuracy rates guilty Black and White suspects. This is only the second known series of studies to test this hypothesis (Vrij, 1991; Vrij, et al., 1988; Vrij et al., 1990, 1991) and, to our knowledge, the first conducted in the US.

Overall, police officers showed poor accuracy when assessing the culpability of our mock suspects, displaying mere chance levels of accuracy (53.8%). Despite their chance levels of accuracy, officers were very confident in their judgments. This pairing of poor accuracy and high confidence is consistent with past findings using police officers as participants in deception detection research (e.g., Kassin, Meissner, & Norwick, 2005; Meissner & Kassin, 2002). Examining officers' decisions by suspect race, our hypotheses were partially supported. Our police participants incorrectly judged innocent Black suspects guilty 65% of the time, compared to only 30% of the time when judging innocent White suspects. Stated differently, for innocent Black suspects the odds of being mistakenly judged as guilty were four times higher than that of innocent White suspects. When judging guilty suspects, however, police officers showed similar accuracy rates, correctly judging 55% of Black suspects guilty and 50% of White suspects guilty. Given that there were no differences in nonverbal behavior between Black and White suspects on our measures in Study 1, however, our hypothesis for why police officers made more errors with

innocent suspects was not supported.

After rendering culpability judgments, officers rated suspects on a number of global dimensions. Officers who viewed Black suspects reported feeling more suspicious than officers who viewed White suspects. Officers also rated innocent Black suspects as both less willing to speak with the interviewer and less cooperative than innocent White suspects. In Study 1, we were unable to achieve an adequate level of interrater reliability for observers' ratings of the impressionistic cues, thus we do not know if these ratings by police are a results of stereotyping and implicit prejudice or if our Black suspects were, in fact, being less cooperative and less forthcoming. Willingness to speak with the interviewer and overall cooperation are behaviors that require trust in the interviewer and the criminal justice system, to which it has been document Black Americans have little (Fratello et al., 2013; Hurwitz & Peffley, 2005). Importantly, recall that police believe liars are less likely to cooperate than truth tellers (Vrij et al., 2006) and that the Reid Technique teaches that truthful suspects are more cooperative with the investigation than guilty suspects (Inbau et al., 2013). Thus, these impressions of the suspects may in fact be moderating police officers' culpability judgments for innocent Black suspects. Research using a more standardized, controlled, stimulus – such as using Black and White actors to portray cooperative, forthcoming suspects v. uncooperative, withholding suspects – to control for prejudice - is needed.

When describing what cues they relied to on make their decisions, 43.75% of officers who judged Black suspects to be innocent cited the suspect's gaze while only 12.5% of officers who judged White suspects to be innocent cited suspect's gaze. Conversely, officers who judged Black suspects to be guilty only cited gaze 12.5% of the time (compared to 25% for guilty White suspects), with "other" reasons being the most cited category at 37.5% of officers. Although the



conclusions we can glean from self-reported data are limited, the differences here are notable for two reasons. First, it raises the question of whether officers seek out different cues for innocence and guilt when judging suspects of different races and ethnicities. It is possible that Black suspects “Blackness” and, thus, automatic triggering of the stereotype of criminal, forces officers to seek out more “cues to innocence” compared to White suspects. Because White suspects do not start the interview at an automatic disadvantage by being stereotyped as a criminal, it is possible that officers seek out cues to deception in White suspects but seek out cues to veracity with Black suspects. It is important to note, however, that our analyses of objectively measured nonverbal cues to deception showed no relationship between the suspects’ behaviors and the officers’ judgments for either Black or White suspects. Thus, it appears that the cues that officers report using are not the cues they are actually using. This perspective is supported by a recent meta-analysis showing that the behaviors people self-report using as cues to deception are not the same as those they actually used when making judgments of veracity (Hartwig & Bond, 2011). The possibility that officers rely on different cues, or perceive cues differently, depending on the race or ethnicity of the suspect when making veracity judgments warrants further investigation.

The second reason officers’ self-reported cues are interesting is the near double mentions of cues that fall into the “other” category for Black suspects that were judged to be guilty (37.2%) compared to White suspects judged to be guilty (18.8%). Anything that did not fit into gaze, body movement, nervousness, statement, credibility, or cooperation was coded as other. For each of the three other possible judgment outcomes: innocent White, guilty White, innocent Black, these six categories combined were able to account for approximately 80-90% of the cues to deception. When officers judged Black suspects to be guilty, however, there was a sizeable increase in the mention of “other” cues. It is possible that this increase in cues that did not fit into the main

categories was a by-product of stereotyping. Stereotypes are activated automatically and often without our knowledge, and these stereotypes can affect our interpretations of ambiguous behavior (Devine, 1989). When evaluating Black suspects, the pervasive cultural stereotype of Blacks as criminals may have lead officers to see ambiguous behaviors by Black suspects as indicators of guilt more often than they did for White suspects. As a result these cues were reported as indicators of guilt for Black suspects, but not White suspects. It is important to note, however, that we did not measure or control for prejudice in this study, thus we are merely speculating on possible reasons for the difference cues cited. Again, more research examining how suspect race or ethnicity affects lie catchers' strategies is important. Similarly, the role of stereotyping during police interviews warrants continued investigation, as we know that there is a strong and automatic stereotype of African-Americans as criminals in the U.S. today.

## **Conclusions**

The results of this study extend the police interviewing and interrogation literature by comparing police officers' culpability judgments of Black and White suspects. Using an experimental mock crime paradigm we were able to manipulate veracity and standardize the interview in a manner that allowed us to compare officers' decisions across both Black and White and innocent and guilty suspects. As expected, officers judged innocent Black suspects to be guilty at a significantly higher rate than innocent White suspects, while judging guilty Black and White guilty suspects at similar rates. Whether the unintended consequence of poor deception detection skills combined with Blacks suspects' concerns about being stereotyped as criminals, or the consequences of stereotyping and implicit biases on the part of police officers, these results show that innocent Black suspects are, indeed, at a greater risk than innocent White suspects of

being deemed guilty during a pre-interrogation interview, increasing the innocent Black suspect's risk of wrongful prosecution.

## CHAPTER 13: GENERAL DISCUSSION

We examined the effects of suspect race on police officers' veracity assessments. Although false confessions are a contributing factor in approximately 25-30% of DNA exonerations, and approximately 69% of DNA exonerated false confessors are racial-ethnic minorities ([www.innocenceproject.org](http://www.innocenceproject.org)), there is little research on the role of suspect race in police interviewing and interrogations. An interrogation is a guilt-presumptive process; those who are being interrogated have been deemed liars in either a formal or informal pre-interrogation interview. Thus, a false confession is the result of an inaccurate veracity judgment during the pre-interrogation interview (Kassin, 2008). This raises the question: Is there some aspect of the pre-interrogation interview that increases the risk of an incorrect lie judgment to Black suspects? To test this we conducted two studies. First we examined Black and White suspects' experiences and behaviors in a police interview. Next we showed the videotaped interviews to police officers for veracity judgments.

Our mock suspects, regardless of race or culpability, reported feeling equally nervous during the interview, exhibited similar rates of nonverbal cues commonly associated with deception, and cooperated with the investigation at similar rates. As noted previously this may be due to a biased, more trusting of police, sample of Black participants. This is a limitation of our study, and replicating and extending this research with a more representative sample is recommended (but see Freimuth et al., 2001 on the difficulties of obtaining African-American research participants). This limitation, however, suggests we may be underestimating the scope of the problem. There were no differences between our suspects on precisely the measures police officers are trained to look for to discern guilty, yet innocent Black suspects were mistakenly judged guilty significantly more often than innocent White suspects. Would a more representative

Black sample also have behaved similarly to the White sample? It is possible that a more representative Black sample in regards to trust in law enforcement would have behaved in accordance of our hypotheses from Study 1. Yet if police officers are, in fact, relying on the Reid cues, it would almost certainly increase the error rate for innocent Black suspects.

Given the similarities of our suspects in Study 1 in regards to anxiety and cooperation, it appears that officers' erroneous judgments in Study 2 were a result of some other factor. Because of the strong and automatic stereotype of Black Americans as criminals, we must consider the possibility that racial biases had an effect on officers' culpability judgments. This is not to say that these judgments were intentionally biased, as biases can be implicit. That is, biases often occur outside of conscious awareness. Because we did not assess officers' biases in anyway, we cannot say with certainty what role bias played in officers' decisions, and what role other unmeasured cues played in their decisions. However, none of our measured variables predicted or explained officers' (mis)judgments of innocent Black suspects. As described earlier, police officers are not immune to implicit biases against African-Americans (Eberhardt et al., 2004). Thus, research examining the role of implicit biases during police interviews and interrogations is needed.

An area requiring further research is interrogators' strategies when questioning Black suspects. The current study was limited in that police officers' made culpability judgments after watching a short video interview instead of being able to question the suspects themselves. Although research shows that accuracy rates do not necessarily improve when investigators are allowed to question suspects in a manner of their own choosing, (Hartwig et al., 2004; Luke et al., 2014), we do not know of any research to date on police officers' interrogation strategies where suspect race was a variable. In Study 2, officers described relying on different behaviors as

indicators of innocence and guilt as a function of the suspects' race. Did suspect race affect what strategy the officer used to detect deception? The strong and automatic association of Black and crime may prime officers to use different strategies or look for different cues making veracity judgments for Black suspects compared to White suspects. In a study on the effects of interrogator bias, Kassin et al., (2003) found that mock student interrogators led to believe the suspect they were questioning was guilty asked more guilt presumptive questions and used more interrogation tactics than officers primed to believe their suspect was innocent. Moreover, this approach made suspects questioned by guilty primed interrogators appear more guilty than the suspects questioned by innocent primed interrogators. Do officers questioning Black suspects exhibit a similar pattern of behavior? The stereotype of African-Americans as criminals may serve as a guilt prime, changing both the interrogators' strategies and subsequent interpretations of the suspects' behavior. Future research should examine how the priming of suspect race and the priming of criminal stereotypes affect interrogation strategies and the possibility that suspect race may create behavioral confirmation in investigators.

Similarly, future research should examine the efficacy of investigative, non-adversarial interviewing and interrogation techniques in increasing accuracy rates in judging veracity in Black suspects. In comparison to the adversarial, guilt-presumptive interrogation model used in the United States, where the main goal is eliciting a confession, the PEACE model used in the United Kingdom is focused on fact finding and interviewers are encouraged to be fair and open-minded (see Williamson, 2006). Would Black suspects questioned with an investigative approach be evaluated differently than those questioned with an adversarial approach? As noted above, via behavioral confirmation, guilt-presumptive interrogators tend to "produce" suspects that look guilty (Kassin et al., 2003). That interrogations in the US are guilt-presumptive disadvantages all

suspects, and the criminal stereotype may further disadvantage Black suspects. Removing the presumption of guilt as sanctioned practice may begin to reduce the disadvantages that Black suspects face in an interrogation. Because the investigative approach stresses being fair and open minded, research on its ability to reduce implicit biases is recommended.

Currently, research on deception detection and investigative interviewing has moved away from nonverbal cues and turned toward examining alternatives to the adversarial, guilt-presumptive approach. Researchers have begun testing a variety of non-accusatorial approaches, including increasing cognitive load (Vrij, Fisher, Mann, & Leal, 2006; Vrij, Mann, Leal, & Fisher, 2010), asking unanticipated questions (Vrij et al., 2009), and strategic use of evidence (Hartwig et al., 2005). As these methods are tested, an eye should be kept towards potential racial biases in evaluating suspects when using these newer techniques. For example, in the current study Black suspects were less forthcoming with information about their activities than White suspects – regardless of their culpability. Techniques that rely on innocent suspects being more forthcoming than guilty suspects should keep this in mind, and possibly research how race/ethnicity affect respondents' answers and consequently observers' ability to detect deceit.

Finally, it is important to note that the lack of any differences in self-reported or behavioral measures of anxiety in this research between Black and White suspects does not mean that Black and White suspects have the same experiences when being questioned by the police. We interpret these finding to mean that, in the end, being questioned was anxiety provoking regardless of one's race, but it is possible that our measures were not able to capture the specific stresses experienced by our Black suspects. Given the high number of racial-ethnic minorities that come in contact with the U.S. criminal justice system each year, researchers should continue to examine ways in which racial-ethnic minorities experience interviews and interrogations. Similarly, researchers

should continue examining police officers' interviewing and interrogation strategies with racial/ethnic minorities, as well as ways to reduce bias, in the continuing efforts towards criminal justice reform.

### **Implications**

The current research suggests that innocent Black suspects are at considerable risk of being erroneously judged as guilty during a police interview. Recall that the pre-interrogation interview is the step in which investigators make veracity assessments before proceeding to a pre-interrogation interview (Inbau et al., 2013). Thus, these misjudgments consequently place innocent Black suspects at a significant risk of being interrogated about crimes they did not commit. This is the first U.S. study that we know of to compare police officers' perceptions and culpability judgments of Black and White suspects, thus more research is needed to identify the specific causes for these misjudgments and as well as potential remedies for these misjudgments. It should be noted here, however, that it was difficult to recruit Black community member participants as well as police officer participants, which may be one reason why there is a dearth of research on this topic. Similarly, a few of our findings were trending towards significance, but due to the above-mentioned difficulties in recruiting participants, our sample size may not have been large enough to detect an effect, which may also be contributing to the dearth of published research. In regards to future research examining the intersection of suspect race and police interviewing, these difficulties should be kept in mind, and adjusted for when possible.



## **Appendix A**

Seeking participants for a study on Legal Decision Making. The study is being conducted at John Jay College at 59<sup>th</sup> St. and 10<sup>th</sup> Ave in Midtown.

The study takes about 30 minutes to complete and you will be paid \$10 for your time with a chance to earn more!

If you are interested in participating, please take the survey below to determine your eligibility.

<http://www.psychsurveys.org/sappleby/legaldecisionmaking>

If you are eligible we will contact you shortly to set up a time to participate.

## Appendix B

### Legal Decision Making Informed Consent (for interviewee participants)

You are invited to participate in a study of interview techniques. We plan to enroll 100 research participants for this study.

If you agree to be in this study, you will be asked to carry out the task of getting an item from adjacent room. You will be interviewed about your actions in that room; the questions you will be asked concern only the task you carried out during the study. Before the interview, you will get instructions about how to act during the interview. You may be asked to provide false information about your actions. After the interview, you will be asked to complete a questionnaire about the experience. This interview might be videotaped, and shown to other research participants. You will receive further information about this, and be fully debriefed at the end of the experiment. The total time required to complete the experiment should be about 30 minutes. If you feel uncomfortable, you can leave the experiment at any time. For participating in this experiment, you will receive \$10.

Participation in this study will provide you with an opportunity to learn more about research methods in psychology. There is minimal risk to participating in this study, though some participants may find it somewhat stressful to be interviewed.

Any information collected in this study will be strictly confidential. It will not be possible to identify any one participant in written reports; only aggregate data will be presented. All data will be stored in locked files, to which only the researchers have access.

Your decision on whether or not to participate will in no way affect your future relations with John Jay College of Criminal Justice or any of the researchers involved. You can choose not to answer any questions asked of you. If you decide to participate, you are free to discontinue at any time without any consequences. You may ask the experimenter any questions you have now. If you have questions later, please contact the project director, Dr. Maria Hartwig at 212 237 8059. If you have concerns or questions about the rights of a research participant or the ethics of this study, please contact the Institutional Review Board Chair at John Jay College of Criminal Justice, Thomas Kucharski ([jj-irb@jjay.cuny.edu](mailto:jj-irb@jjay.cuny.edu)), at 212-237-8961.

At your request, you will be given a copy of this form to keep. You are making a decision on whether or not to participate. Your signature indicates that you have read the information in this form and have agreed to participate. Should you want to, you can withdraw whenever you want even after signing this form.

\_\_\_\_\_  
Participant's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Experimenter's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix C

### Task instructions

#### (Innocent Suspects)

Your task is to go to the Psychology Department Mailroom (Room 2100A), and look for a book. The experimenter will give you directions to the Mailroom. There is a box of books on the table in that room – look through the box for a book called “Moral Minds”. If you find the book, take it with you and return to this room. If you don’t find it in the box, **return to this room for further instructions.**

Please note that you are not committing any theft by taking the book with you, if you find it. All the books in the box belong to the experimenter.

### Task Instructions

#### (Guilty Suspects)

Your task is to go to the graduate Psychology Department Mailroom (Room 2100A). The experimenter will give you directions to the Mailroom. Once you are in the Mailroom look for a briefcase. The briefcase can be found on the table in that room. There is a wallet in the briefcase containing \$100– take it and put it in your pockets. Make sure no one sees you taking the wallet. After having done this, return to this room. **There will be further instructions when you return.**

Please note that you are not committing a real crime by taking this wallet. Both the briefcase and the wallet belong to the experimenter.

## Appendix D

### Instructions before interview

#### (Innocent Suspects)

Earlier today, a wallet disappeared from a room in the North Hall. There is an investigation about the theft, and therefore, you will be interviewed. Those involved in investigating the theft have indications that you could be the one who took it.

Regardless of how the interviewer acts, your task is to tell the truth and **deny that you took the wallet**.

**Your task is to convince the interviewer that you are innocent!**

Please note that everyone involved in this study is aware that you are participating in an experiment. We would appreciate, however, if you help us make this study as realistic as possible. Don't tell the interviewer that you participated in an experiment. Try as hard as you can to make him believe that you are innocent. **If you are able to convince him that you are telling the truth, and that you didn't take the wallet, you will be entered into a lottery to win \$100.**

Of course, you are free to leave the experiment at any time, without any consequences.

### Instructions before interview

#### (Guilty Suspects)

Earlier today, a wallet disappeared from a room in the North Hall. There is an investigation about the theft, and therefore, you will be interviewed. Those involved in investigating the theft have indications that you could be the one who took it.

Regardless of how the interviewer acts, your task is to **deny that you took the wallet**.

**Your task is to convince the interviewer that you are innocent!**

Please note that everyone involved in this study is aware that you are participating in an experiment. We would appreciate, however, if you help us make this study as realistic as possible. Don't tell the interviewer that you participated in an experiment. Try as hard as you can to make him believe that you are innocent. **If you are able to convince him that you didn't take the wallet, you will be entered into a lottery to win \$100.**

Of course, you are free to leave the experiment at any time, without any consequences.

## Appendix E

Please rate how you feel *right now*, as best as you can, on each of the following dimensions:

- |    |            |   |   |   |   |   |          |
|----|------------|---|---|---|---|---|----------|
| 1. | 1          | 2 | 3 | 4 | 5 | 6 | 7        |
|    | Not at all |   |   |   |   |   | Very     |
|    | Agitated   |   |   |   |   |   | Agitated |
| 2. | 1          | 2 | 3 | 4 | 5 | 6 | 7        |
|    | Not at all |   |   |   |   |   | Very     |
|    | Uneasy     |   |   |   |   |   | Uneasy   |
| 3. | 1          | 2 | 3 | 4 | 5 | 6 | 7        |
|    | Not at all |   |   |   |   |   | Very     |
|    | Nervous    |   |   |   |   |   | Nervous  |
| 4. | 1          | 2 | 3 | 4 | 5 | 6 | 7        |
|    | Not at all |   |   |   |   |   | Very     |
|    | Worried    |   |   |   |   |   | Worried  |
| 5. | 1          | 2 | 3 | 4 | 5 | 6 | 7        |
|    | Not at all |   |   |   |   |   | Very     |
|    | Anxious    |   |   |   |   |   | Anxious  |

6. How *difficult* do you think it will be to be interviewed? (circle one)

- Not at all Extremely
- 1    2    3    4    5    6    7    8    9    10

## Appendix F

### Interview Script

Do you know the charges against you?

The reason I'm talking to you here today is that a wallet has been stolen from the mailroom and I think you did it. I have security footage of you **near** the mailroom and I have an eyewitness who says she saw a {white/black} {male/female} in the mailroom around the same time that the wallet was stolen.

1. Did you steal the wallet?
2. Do you have the wallet in your possession right now?
3. The way you're reacting makes me think you're lying. Are you lying to me?
4. Well, I don't believe you so I'm going to need you to tell me in as much detail as possible, me what you did over the past 15 minutes or so.

3. Is there anything you would like to add?

**4. If the suspect denies having been in the mailroom or has not indicated that he or she was there:** Were you in the mailroom?

[**If suspect denies being in the mailroom:** Listen, you say you weren't in the mailroom today, but we have evidence that you were. How do you explain that?]

**{If suspect admits to being in mailroom:** So you admit to being in the mailroom where the wallet was stolen?

Why were you there?}

Listen, you say you were in the mailroom today and a wallet just happened to go missing right around the time you were there. That sounds like a pretty strange coincidence, don't you think? How do you explain that?}

5. Do you have anyone that can back this story? Did you talk to anyone? Did anyone see you?
6. Are you sure you're telling me the truth?
7. Why should I believe you?

7. Is there anything you wish to add at this time?

All right, I'm going to step outside and talk to my colleagues. Please wait here.

## Appendix G

### Post-interview questionnaire 1

The statement I gave during the interview was (circle one):

Completely deceptive

Completely truthful

1 2 3 4 5 6 7 8 9 10

Circle the alternative that fits best.

**The questions below concern the event when you {looked for the book/took the wallet}.**

Did you feel *nervous* when you {looked for the book/took the wallet}? (circle one)

No, not at all

Yes, extremely

1 2 3 4 5 6 7 8 9 10

Did you feel *uncomfortable* when you {looked for the book/took the wallet}? (circle one)

No, not at all

Yes, extremely

1 2 3 4 5 6 7 8 9 10

The questions below concern when you were interviewed.

Did you feel *nervous* when you were interviewed? (circle one)

No, not at all

Yes, extremely

1      2      3      4      5      6      7      8      9      10

Did you feel *uncomfortable* when you were interviewed? (circle one)

No, not at all

Yes, extremely

1      2      3      4      5      6      7      8      9      10

Was it *difficult* to be interviewed? (circle one)

No, not at all

Yes, extremely

1      2      3      4      5      6      7      8      9      10



What did you feel during the interview?

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To what extent had you planned the *verbal content* of your statement?

Very low extent

Very high extent

1 2 3 4 5 6 7 8 9 10

To what extent had you planned your *body language* (including facial expressions)?

Very low extent

Very high extent

1 2 3 4 5 6 7 8 9 10

Did you have a strategy before the interview?

Yes, the following:

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No, because:

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Do you think that the person who interviewed you thought that you were innocent or guilty?

Innocent

Guilty

Why?

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To what extent were you motivated to be believed during the interview?

Very low extent

Very high extent

1 2 3 4 5 6 7 8 9 10

Do you think the person who interviewed you thought you were anxious?

Yes

No

Why? -

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Do you think the person who interviewed you was biased against you in some way?

Yes

No

Why? -

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Do you think that a person who will watch the videotaped interview with you will think that you were lying or telling the truth?

Lying

Telling the truth

Why?

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**Appendix H**

**Post-interview questionnaire 2**

If it is possible, would you like advice from a defense lawyer?

- Yes
- No

If yes, why? If no, why not?

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If it was possible, would you like to have a defense lawyer present in the room during the interview?

- Yes
- No

If yes, why? If no, why not?

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If it is possible, would you be willing to take a polygraph (lie detector) test?

- Yes
- No

If yes, why? If no, why not?

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If it is possible, would you like to invoke your right to silence?

Yes

No

If yes, why? If no, why not?

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If it is possible, would you like to talk to a different detective?

Yes

No

If yes, why? If no, why not?

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## Appendix I

Please read each of the following statements and decide to what extent you personally agree or disagree with it. Circle the number that corresponds to this judgment.

1. I believe that, by and large, I deserve what happens to me.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

2. I am usually treated fairly.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

3. I believe that I usually get what I deserve.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

4. Overall, events in my life are just.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

5. In my life, injustice is the exception rather than the rule.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

6. I believe that most of the things that happen in my life are fair.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

7. I think that important decisions that are made concerning me are usually just.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

8. I think basically the world is a just place.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

9. I believe that, by and large, people get what they deserve.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

10. I am confident that justice always prevails over injustice.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

11. I believe that in the long run people will be compensated for injustices.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

12. I firmly believe that injustices in all areas of life (e.g. professional, family, politics) are the exception rather than the rule.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

13. I think people try to be fair when making important decisions.

1	2	3	4	5	6
Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree

## Appendix J

Please read each of the following statements and decide to what extent you personally agree or disagree with it. Circle the number that corresponds to this judgment.

1. In general, my race is an important part of my self-image.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree Disagree	Strongly Disagree

2. I have a strong sense of belonging to my race.

1	2	3	4	5	6	7
Strongly Agree	Agree Agree	Slightly	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

3. I have a strong attachment to other people of my race.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

4. My race is an important reflection of who I am.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

5. Overall, people of my same race are considered good by others.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

6. In general, others respect people of my same race.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

7. In general, other groups view people of my same race in a positive manner.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree

8. Society views people of my same race as an asset.

1	2	3	4	5	6	7
Strongly Agree	Agree	Slightly Agree	Neither Agree or Disagree	Slightly Disagree	Disagree	Strongly Disagree



**Appendix K**

**Demographics Questionnaire**

1. Age \_\_\_\_\_

2. Gender

MALE

FEMALE

3. Race:

WHITE (NOT-HISPANIC)

AFRICAN-AMERICAN

OTHER

4. Are you a U.S. Citizen?

YES

NO

5. Highest Level of Education obtained

- a. Some High School
- b. High School/GED Equivalent
- c. Some college
- d. Bachelor's
- e. Graduate or Professional Degree

6. What do you do for a living?

7. Have you ever been questioned by the police?

NO

YES

## Appendix L

### Permission to Use Videotape Data

I understand that the interview session I participated in was videotaped. The experimenter has explained to me why it was necessary to videotape the interview, and he or she has also explained to me that by signing this form, I give permission for the researchers of this study to use my videotape for data analysis purposes and for further research purposes. I have received the information that other research participants may view the tape in order to provide their impression of whether I provided false or true statements. It has been explained to me that these participants will be clearly informed about the conditions of my participation.

I understand that my videotape will be kept in a locked file cabinet and that only the primary researchers will have access to that cabinet. I have been given an opportunity to view my tape, decline the use of my tape, and erase my tape before anyone else has the opportunity to view it.

I have read the above statement and give my permission for the researchers to use my videotape data for the research purposes outlined above.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

## **Appendix M**

### **Debriefing Protocol**

The study you participated in focuses on a suspect's race may impact his/her behavior in a police interrogation. Many police officers are trained to look for cues that the suspect is anxious when making judgments about whether a suspect is lying or telling the truth. There are many reasons, however, why a suspect may be nervous when talking to the police – including race. Many studies show that police officers are often very poor lie detectors; specifically they are usually no better at judging whether a suspect is lying than someone who is simply flipping a coin.

This research has the goal of determining whether or not these strategies police officer's use to detect deception disproportionately put Black suspects at risk of being judged as guilty due to the stereotype that African-Americans are criminals. We simulated an investigation in which you were acting as the suspect. To mimic real-life investigations, some participants acted as innocent (they did not take the wallet), while others acted as guilty (they were instructed by us to take the wallet). We hypothesize that the increased anxiety experienced by Black suspects (often erroneously relied on by police to detect deception) and potential racial difference in willingness to cooperate with the police (another cue police officers often erroneously rely on) may put Black suspects at risk of appearing like a prototypical guilty suspect, even when s/he is innocent, putting more Black suspects at risk of being mistakenly accused of crime than white suspects.

Please note that we did not use surveillance camera footage to establish that you had been in the room in which the theft occurred nor did we have an eyewitness. This deception was necessary to ensure the validity of the study.

This session was videotaped to allow for data analysis. Also, we plan to show these videotapes to other research participants (both police officers and other community members like yourself), and ask them if they think that you were telling the truth or not. All participants will be clearly informed that you participated in a study, that the investigation was not real and that you were never suspected of anything. If you are not comfortable with us using the videotape for these purposes, we will immediately destroy the videotape before anyone sees it.

We understand that it may have caused you some discomfort to play the role of the suspect in this study. However, studies such as these are important in order to improve the justice system, and we therefore greatly appreciate your participation. If you have any questions, complaints or concerns about this research, please contact the project director, [sappleby@jjay.cuny.edu](mailto:sappleby@jjay.cuny.edu).

## Appendix N

### Operational Definitions for Nonverbal Behaviors

- 1. Gaze:**
  - number of seconds looking at face of police officer
- 2. Head movement**
  - nodding (up and down) and shakes (side to side) of head; series of nods or shakes coded as one
- 3. Laughter**
  - audible expulsion of air from the lungs
- 4. Smiles**
  - mouth movement pulled to the side of the face
- 5. Illustrators**
  - hand/arm movements used to demonstrate size, form, location of object or place
- 6. Leg/Foot Shaking/Tapping**
  - distinct shakes (back and forth, up and down) or taps (up and down) of foot or leg
- 7. Fidgeting With Objects**
  - number of seconds suspect spends fidgeting with objects
- 8. Self-Touching**
  - Scratching or touching parts of one's body; gestures intended to improve a person appearance
- 9. Trunk Movements**
  - visible movements of the trunk, forward, backward, sideways
- 10. Minutes Speaking**
  - total # of minutes that the participant spends speaking during the interview
- 11. Speech Rate**
  - # of words per minute spoken by suspect
- 12. Speech Disturbances**
  - # of ahs, ums, mmm

## Appendix O

### Deception Detection Study Informed Consent

You are invited to participate in a study on deception detection. We plan to enroll 80 research participants for this study. If you agree to be in this study, you will be asked to watch a videotaped interview with a person who is providing either a true or a false statement. Your task will be to determine whether the person is lying or telling the truth. The total time required to complete the experiment should be around 30minutes.

Participation in this study will provide you with an opportunity to learn more about research on deception detection and will provide researchers with valuable information on how police officers detect deception. You will also receive \$30 for participating in this study. There is minimal risk to participating in this study.

Any information collected in this study will be strictly confidential. Participants will only be identified by a number. It will not be possible to identify any one participant in written reports; only aggregate data will be presented. All data will be stored in locked files, to which only the researchers have access.

Your decision on whether or not to participate will in no way affect your future relations with John Jay College of Criminal Justice or any of the researchers involved. You can choose not to answer any questions asked of you. If you decide to participate, you are free to discontinue at any time without any consequences. You may ask the experimenter any questions you have now. If you have questions later, please contact the project director, Sara Appleby at [sappleby@jjay.cuny.edu](mailto:sappleby@jjay.cuny.edu). If you have concerns or questions about the rights of a research participant or the ethics of this study, please contact the Institutional Review Board Chair at John Jay College of Criminal Justice, Thomas Kucharski ([jj-irb@jjay.cuny.edu](mailto:jj-irb@jjay.cuny.edu)), at 212-237-8961.

At your request, you will be given a copy of this form to keep. You are making a decision on whether or not to participate. Your signature indicates that you have read the information in this form and have agreed to participate. Should you want to, you can withdraw whenever you want even after signing this form.

_____ Participant's Printed Name	_____ Signature	_____ Date
_____ Experimenter's Printed Name	_____ Signature	_____ Date

## Appendix P

### Instruction for observers

A while ago, we carried out a study in which a number of people participated. Some of these people were instructed to carry out a mock theft of a wallet; others were instructed to do something else, not involving a mock crime. All these participants were interviewed about the theft, and they all deny. However, some actually did take the wallet, while others are actually innocent of the mock theft.

You are going to get some information about one of the suspects and then see a videotaped interview that suspect. **Your task is to decide whether the interviewee is lying or telling the truth – in other words whether the person actually did take the wallet or not.**

*There are some indications that the interviewee committed the theft. First, the security department at John Jay College could establish that the person entered the building on the day the theft occurred. Second, surveillance camera footage shows the person was near the room from which the theft occurred. Third, a person matching the interviewee's description was seen in the room around the time the wallet was stolen.*

This information does not exclude the possibility that the interviewee is innocent. Again, some of the research participants did take the wallet, some did not take the wallet.

Please note that the wallet that was taken belongs to the experiment, and that there is no real suspicion towards the interviewees.

Pay close attention during the interview, which will last approximately 10 minutes. After the interview, you will be asked to fill out a questionnaire regarding your perception of the interviewee.

If you make a correct judgment of whether the interviewee is telling the truth or lying, you have the chance of winning \$100 in a lottery.

## Appendix Q

### Suspect Profile

#### Demographics:

Name: Michael/Michelle Jones

Age:

#### Biographical Information:

- Suspect lives in Brooklyn, NY.
- Suspect moved from Washington D.C. to New York 5 years ago.
- Suspect waits tables at a nearby restaurant.
- Suspect has no children.

#### Case Information:

- Suspect wanted/did not want to speak with a defense attorney.
- Suspect was/was not willing to take a polygraph.
- After the initial interview, suspect wanted/did not want to invoke their right to silence.
- After the initial interview, suspect wanted/did not want to speak to another detective.

## Appendix R

### Observer Questionnaire 1

The questions concern the interview you just watched.

When the interviewee denied guilt, was s/he lying?

No,  
absolutely not

Yes,  
absolutely

1      2      3      4      5      6      7      8      9      10

What was your impression of the interviewee?

Completely truthful

Completely deceptive

1      2      3      4      5      6      7      8      9      10

Of the information that the interviewee provided, how much do you think was truthful?

Everything was deceptive

Everything was truthful

1      2      3      4      5      6      7      8      9      10

Which of the following is most likely to be true?

The person was innocent of the theft

The person was guilty of the theft

How confident do you feel in this?

Not at all confident  
(simply guessing)

Extremely confident

1      2      3      4      5      6      7      8      9      10



When did you decide whether the interviewee was guilty or innocent?

At the very beginning  
of the interview

1

2

3

4

5

6

7

8

At the very end  
of the interview

9

10

How difficult was it to judge whether the interviewee was guilty or innocent?

Extremely easy

1

2

3

4

5

6

7

8

9

10

Extremely difficult

Briefly describe the main reasons why you think the interviewee was innocent/guilty.

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If possible, would you interrogate this suspect further for this crime?

No, absolutely not

Yes, absolutely

1      2      3      4      5      6      7      8      9      10

If yes, why? If no, why not?

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## Observer Questionnaire 2

To what extent did the interviewee's body language (including facial expressions) influence your impression of guilt/innocence?

Not at all

Completely

1      2      3      4      5      6      7      8      9      10

To what extent did the interviewee's verbal statement influence your impression of guilt/innocence?

Not at all

Completely

1      2      3      4      5      6      7      8      9      10

To what extent did the interviewee's biographical information influence your impression of guilt/innocence?

Not at all

Completely

1      2      3      4      5      6      7      8      9      10

To what extent did the interviewee's post interview behavior influence your impression of guilt/innocence?

Not at all

Completely

1      2      3      4      5      6      7      8      9      10

**Finally, take another moment to think about the interviewee you just saw, and the impressions you formed.**

To what extent did the person seem to think hard during the interview?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did you feel suspicious during the interview?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did the person seem forthcoming with information?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did the person seem to trust the interviewer?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did the person seem willing to cooperate with the investigation?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did the person seem willing to talk with investigators?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

To what extent did you feel like you obtained enough information?

Extremely low extent

Extremely high extent

1 2 3 4 5 6 7 8 9 10

**Please rate your impressions of the suspect as best you can on each of the following dimensions:**

1	2	3	4	5	6	7
Not at all						Very
Agitated						Agitated
1	2	3	4	5	6	7
Not at all						Very
Uneasy						Uneasy
1	2	3	4	5	6	7
Not at all						Very
Nervous						Nervous
1	2	3	4	5	6	7
Not at all						Very
Worried						Worried
1	2	3	4	5	6	7
Not at all						Very
Anxious						Anxious

**Please rate your impressions of the suspect as best you can on each of the following dimensions:**

A.	1 immoral	2	3	4	5	6	7	8	9	10 moral
B.	1 respectable	2	3	4	5	6	7	8	9	10 not respectable
C.	1 mistrustful	2	3	4	5	6	7	8	9	10 trusting
D.	1 intelligent	2	3	4	5	6	7	8	9	10 unintelligent
E.	1 good	2	3	4	5	6	7	8	9	10 bad
F.	1 unlikable	2	3	4	5	6	7	8	9	10 likable
G.	1 trustworthy	2	3	4	5	6	7	8	9	10 untrustworthy
H.	1 unhelpful	2	3	4	5	6	7	8	9	10 helpful
I.	1 sincere	2	3	4	5	6	7	8	9	10 insincere
J.	1 forthcoming	2	3	4	5	6	7	8	9	10 not forthcoming
K.	1 convincing	2	3	4	5	6	7	8	9	10 unconvincing
L.	1 certain	2	3	4	5	6	7	8	9	10 uncertain
M.	1 not credible	2	3	4	5	6	7	8	9	10 credible
N.	1 not cooperative	2	3	4	5	6	7	8	9	10 cooperative
O.	1 defensive	2	3	4	5	6	7	8	9	10 not defensive
P.	1 not friendly	2	3	4	5	6	7	8	9	10 friendly

8. Have you received any special training (seminars, workshops, etc) on who to conduct suspect interviews and interrogations? Circle one.

a. NO

b. YES: (please describe)

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How much do you think your deception detection training affected your judgments in this case?

Not at all

A lot

1      2      3      4      5      6      7      8      9      10

## Appendix S

### Observer Questionnaire 3

#### Suspect Recall

Please think back to the information we presented you with before the interview and the interview you just saw:

1. After the interview, did the suspect want to speak with a defense attorney?
  - a. NO
  - b. YES
2. After the interview, was the suspect willing to take a polygraph?
  - a. NO
  - b. YES
3. After the interview, did the suspect want to invoke their right to silence?
  - a. NO
  - b. YES
4. After the interview, did the suspect want to speak to another detective?
  - a. NO
  - b. YES
5. What was the gender of the suspect?
  - a. Male
  - b. Female
6. What was the race of the suspect?
  - a. White
  - b. Black
  - c. Hispanic
  - d. Asian
  - e. Middle Eastern
  - f. Other: \_\_\_\_\_



**Appendix T**

**Demographics Questionnaire**

**9. Age** \_\_\_\_\_

**10. Gender**

MALE

FEMALE

**11. City/Town:** \_\_\_\_\_

**12. Race/Ethnicity:**

- a. White
- b. Black
- c. Hispanic
- d. Asian
- e. Middle Eastern
- f. Other: \_\_\_\_\_

**13. How long have you been employed in law enforcement?**  
\_\_\_\_\_ years, \_\_\_\_\_ months

**14. Over the course of your career, about how many interview and interrogations of suspects have you conducted, alone or with other investigators? Please estimate as best you can.**  
\_\_\_\_\_

## Appendix U

### Debriefing Protocol

The goal of this study was to examine how a suspect's race affects their behavior in a police interview, and how that subsequently affects observers' ability to detect deception during a police interview.

Research has shown that ethnic minorities are concerned about being stereotyped during interracial interactions. Moreover, stereotype concerns increase anxiety and stress, hinder inter-racial interactions, and affect nonverbal communication by increasing behaviors associated with anxiety. Thus, we predict that in a police-citizen interaction African-Americans may be more likely than Caucasians to display anxious behavior. Police are often trained to look for signs of anxiety as cues to deception during an interview, and, as a result of the stereotype concerns of minority suspects, we predict that police will perceive innocent Black suspects to be more deceptive during a pre-interrogation interview compared to innocent White suspects. We predict no differences in perceptions of deceptiveness for guilty suspects.

The intellectual merit of this research lies in its ability to further our understanding of what affects suspect behavior in the police-citizen interactions, and our ability to determine if there are racial and ethnic differences that the legal system should be sensitive to. Additionally, this research can help us develop and research remedies to reduce any negative effects that may occur due to cultural differences. It is possible that additions to police training programs could help increase awareness of the risks of misjudgments of minority suspects in police interviews and interrogations.

We simulated an investigation in which some people acted as mock suspect. To mimic real-life investigations, some participants acted as innocent (they did not take the wallet), while others acted as guilty (they were instructed by us to take the wallet). They did not make the choice to take the wallet or not, they were simply following our instructions. *Please note that the accusation against the interviewee was purely part of the experiment. There was never any real suspicion against them.* We did not gather information from the Security staff that the interviewee had been in the building, nor did we use surveillance camera footage to establish that they had been near the room in which the mock theft occurred. This deception was necessary to ensure the validity of the study.

Studies such as these are important in order to improve the justice system, and we therefore greatly appreciate your participation. If you have any questions, complaints, or concerns about this research, please contact the project director, Sara Appleby at [sappleby@jjay.cuny.edu](mailto:sappleby@jjay.cuny.edu).

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