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Social Components of Speech Evaluation: Person Perception of Black and White Voices

A thesis submitted in partial fulfillment of the requirement for the degree of Bachelors of Arts in Psychology from The College of William and Mary

by

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Social Components of Speech Evaluation:

Person Perception of Black and White Voices

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Abstract

The goal of the present study was to attempt to shift the traditional focus of visual cues to vocal cues as a basis for stereotyping. Research has consistently shown that there are a number of negative attitudes held by the American population towards Blacks. This study examined the effects of speakers’ race on listeners’ cognitive and affective reactions towards speakers. In Study 1, participants listened to the audio recording of a monologue by Black and White speakers. Results indicated that relative to White speakers, Black speakers were perceived as poorer communicators who had less intellectual competence, less integrity, less motivation, were more threatening, and had more potency. The purpose of Study 2 was to replicate the findings of Study 1 and to test the hypothesis that perspective-taking reduces stereotyping. Thus, after hearing the audio recording, participants wrote a paragraph about the speaker either with instructions to take the speaker’s perspective or with no perspective-taking instructions. In addition to the cognitive and affective reactions measures, seating distance was used as a tool to test implicit behaviors that may result from stereotype activation. Overall, the participants perceived the White speaker as higher in intellectual competence and motivation, and as less concerned for others and less threatening than the Black speaker. However, the perspective-taking manipulations did not affect the cognitive or the affective judgments of the speakers. Additionally, seating distance did not appear to be affected by any of the variables.
Social Components of Speech Evaluation: Person Perception of Black and White Voices

From an early age, we begin to categorize the world around us into recognizable units called cognitive schemas. Cognitive schemas help to organize information about the world which assist perceivers in accessing information quickly and easily and making decisions about social objects. This is evident in the story of the child who sees a dog for the first time. The parents label the animal for the child, and the child repeats, “Dog.” Then, when the child sees a cat for the first time, he gleefully states, “Dog!” All the child recognizes is that the cat fits the paradigm established by the exemplar of the dog. The “cat” has four legs, a tail, and is furry. Eventually, this source of confusion is eliminated by the cognitive processing of intricate details, or categorization, that will lead the child to accurately label the cat as “Cat” in the future.

Social categorization is the process through which we classify ourselves and others, and exerts a profound influence on our thoughts, beliefs, feelings and behaviors. According to Social Cognition Theory, one or more distinct attributes of a person is used to assign the individual to a particular social category (Hosoda, Stone-Romero, & Walter, 2007). Research suggests that social perceivers categorize others based on common social categories that can be ascertained from physical attributes such as age, sex, and race. Activating these categories in turn activates the appropriate schemas associated with those categories.

In real life situations, people are constantly making judgments of others in the course of social interactions, building their cognitive schemas by using cues such as verbal and non-verbal behaviors. These cues form our initial impressions of other people so that when we meet others who fit the same schema (e.g., dress, race, accent, nationality, etc.) we tend to categorize them into defined groups (Gill, 1994; Hamilton, 1981). Then, our cognitive schemas can facilitate the appropriate behaviors required during a social interaction (e.g., behaving politely when meeting
the queen of England) or our cognitive schemas can activate negative cultural stereotypes that influence negative behaviors (e.g., racial prejudice). Therefore, categorization can first lead to the activation of cognitive schemas that can activate positive and negative stereotypes that can influence person perception.

Researchers have examined the process by which racial stereotypes are spontaneously activated, as well as the consequences of this activation. For example, research has focused on how stereotype activation predicts perceivers’ explicit prejudicial behavior (e.g., Wittenbrink, Judd & Brink, 1977) as well as which stereotypes are activated by exposure to pictures of individuals who vary by race (e.g., Bartholow, Dickter & Sestir, 2006). One research area of interest to social psychologists has been examining potential individual differences in automatic stereotype activation. Lepore and Brown (1997) assessed the shared knowledge of stereotypical traits of Blacks between high- and low-prejudice people. It was found that high- and low-prejudice people know the stereotype of Black people in much the same way and to the same extent, and in turn, do not differ in their automatic responses to the activation of negative stereotypes.

Most social psychological research on social categorization has examined the schemas that are activated by assessing participants’ perceptions of target individuals that unambiguously belong to one category. For example, when Devine (Study 3; 1989) had participants list their thoughts about the racial group Blacks, high-prejudice participants reported primarily negative traits (e.g., hostile, lazy) and low-prejudice participants reported beliefs that contradicted the cultural stereotype and emphasized equality between the races (e.g., “My father says all Blacks are lazy, I think he is wrong.”).
A wealth of research has shown that categorization leads to the activation of stereotypes about a wide variety of social groups. This categorization can affect the stereotyped group, such as leading to the decreased math performance in females compared to males when primed with gender stereotypes (Smith & White, 2002) and leading to the decreased intellectual performance of Black participants compared to White participants on a difficult task when primed with Black stereotypes (Steele & Aronson, 1995). Or, categorization can affect person perception, such as participants’ faster responses to elderly-stereotypic words in a lexical decision task by those who were induced to move slowly compared to a control group (Study 3; Mussweiler, 2006) and leader categorization that led to White leaders being evaluated more favorably than non-White leaders after a clearly successful performance (Rosette, Leonardelli & Phillips, 2008). However, research on language and audio support that vocal cues can be used in addition to these physical cues by the receiver to make judgments and attributions about a source (Berger & Kellerman, 1989; Cargile & Bradac, 1994; Cargile, Giles, Ryan, & Bradac, 1984; Haberstadt, 1983; Henton, 1989; Ryan & Giles, 1982; Ryan, Hewstone, & Giles, 1984; Van Dommelen, 1987; Weyant, 2007).

Vocal Cues and Person Perception

Vocal cues can be defined broadly, to include syntactical and lexical features, or more narrowly, to include speech rate, intonation, and intensity (Chebat, Hedhli, Gelinas-Chebat, & Boivin, 2007; Coleman, 1976; Foon, 2001; see Thomas & Reaser, 2004 for a comprehensive review). Listeners are capable of accessing a wide variety of cues when necessary and there are no shortage of variables that could be accessible to them. Research indicates that people do use various vocal cues to make judgments about an individual’s attributes in the absence of other relevant information (Yamada, Hakada, Yuda, & Kusuhara, 2000; Yarmey, 1993; Zuckerman &
Foon (2001) suggests that these speech evaluations are social rather than linguistic. Therefore, a perceiver’s attitude towards a speaker may reflect social structure, including ethnic and social class stratification, but not beliefs about particular speech styles (e.g., syntactical and lexical features).

Research has indicated that social perceivers can form a mental representation of a target individual based on the voice of that person. Specifically, voice can influence perceptions related to the person’s sex, age, social status (Henton, 1989; Van Dommelen, 1987), social identity (Berger & Kellerman, 1989; Laver, 1968; Long, 1988; Redfield & Friedrich, 1978), emotion (Andreansen, 1981; Arnold, 1961; Haberstadt, 1983; Knapp, 1963; Williams & Stevens, 1972), attitude (Pittam & Gallois, 1987; Scherer, 1988; Williams & Stevens, 1972), and credibility (Gelinas-Chebat & Chebat, 1992, 1999). In Bourhis and Giles’ (1976) study, two groups of White adolescents in Wales evaluated a series of speakers on tape, four of which were Black voices and four of which were White voices. Only one group of perceivers was made aware of the speakers’ race before rating their impressions of the speakers. Results indicated that identifying a speaker’s race before rating the speaker polarized the perception of the speaker’s personality in a favorable direction, but had an opposite effect on the perception of their speech styles.

In addition to physical cues, research has demonstrated that listeners’ responses to vocal cues may depend on the perceived social attributes of speaker (e.g., sex, nationality, ethnicity) and can play an important role in person perception (Cargile & Bradac, 2001; Hosoda et al., 2007). For example, in a study in which participants heard an identical lecture recorded by either a native English speaker or a non-native English speaker, listeners evaluated the native speaker more favorably. They also perceived the native speaker as using correct grammar and the non-
native English speaker as using incorrect grammar (Raisler, 1976). Hosoda et al. (2007) demonstrated that perceivers showed differences in their cognitive evaluations between American-accented English speakers and Asian-accented English speakers. Asian-accented English speakers were perceived as poorer communicators who were less potent (i.e., power and dominance), less threatening, and more concerned about others.

Vocal Cues and Race

Although researchers in a variety of disciplines, ranging from phonetics to social psychology, have examined the role of vocal cues on person perception, less research exists that examines race as a vocal cue. Only a few studies, for example, have examined whether or not perceivers can recognize a speaker’s race through voice alone and, if so, whether categorizing someone by race in this way influences later social judgments as it does in other situations. Research has indicated that perceivers are, in fact, quite accurate at assessing race from vocal cues. Listeners from various parts of the United States and of different ethnic backgrounds can distinguish Black voices from White voices (for a complete review, see Thomas & Reaser, 2004; Buck, 1968; Dickens & Sawyer, 1952; Hibler, 1960; Larsen & Larsen, 1966; Stroud, 1956).

Although some sociolinguists posit that Blacks can use a Standard English that is similar to everyone’s use of Standard English (Labov, Karen, & Millier, 1987), there is evidence that the speech production of Blacks is unique enough for listeners to identify it (Alvarenga, 1971; Buck, 1968). In Lass, Trapp, Baldwin, Scherbick, and Wright’s (1982) study, speakers’ attempts to disguise their voices on listeners’ accuracy in judgments of speakers’ sex and race resulted in only slight differences between control and disguised conditions. Coleman’s (1976) experiment investigated whether listeners would be able to distinguish sex, race, and status of speakers. She demonstrated that perceivers found it easier to decipher own-race voices versus other-race
voices, although White voices were generally easier to distinguish than Black voices for all participants. Taken together, these studies indicate that there is evidence that Black speech patterns are distinctive enough for some listeners to categorize the differences, although most of these studies were conducted more than two decades ago and thus are to some extent outdated. It is important to note that none of these studies investigated the consequences of this categorization on person perception.

Racial Stereotypes and Prejudice

From troubled beginnings, racial minorities in the United States have experienced racism and prejudice in many forms. And despite considerable changes, most social psychologists believe that racial prejudice, especially against Blacks, is still an issue in contemporary society. Although the Civil Rights Movement of the mid-1950’s led to changing social norms and the reduction of the public expression of racial prejudice, research suggests that social perceivers continue to activate negative stereotypes about various racial groups; consequently, this stereotype activation can lead to biased responses toward out-group members (Devine, 1989). The prevalence of racism and prejudice appears to be a highly debatable topic among many scholars, politicians, and the public at large, which may be due to the documented changes in racial attitudes among the White population on self-report measures in the past several decades (Bobo, 2001; Campbell, 1971; Greeley & Sheatsley, 1971; Hyman & Sheatsley, 1956; Schuman, Steeh, & Bobo, 1985; Taylor, Sheatsley, & Greely, 1978). Decreases in the negative evaluation of Blacks are also evident by the fewer number of stereotypes that are endorsed by White college students across numerous studies (Bartholow et al., 2006; Bayton, 1941; Bayton, McAlister, & Hamer, 1956; Brigham, 1971, 1974; Centers, 1951; Devine, 1989; Dovidio & Gaertner, 1986;
Glibert, 1951; Katz & Braly, 1933; Karlins, Coffman, & Walters, 1969; Wittenbrink et al., 1997).

Social psychologists investigating racial prejudice have traditionally used self-report measures to assess the content and prevalence of stereotypes. Participants are usually asked to generate a list of stereotypes about a particular racial group, or to indicate which of an existing list of stereotypes they consider to be accurate characteristics of those groups. Over the past seven or eight decades, self-report studies have indicated that racial stereotypes are changing in their content and strength. In 1933, the top ten characteristics most frequently assigned to Blacks included superstitious, lazy, happy-go-lucky, ignorant, musical, ostentatious, very religious, stupid, physically dirty, naïve, slovenly, and unreliable (Katz & Braly, 1933). Using the same format as the Katz and Braly study, two other studies examined racial stereotypes years later to study potential changes over time (Gilbert, 1951; Karlins, Coffman, & Walters, 1969). These three studies became known as the Princeton trilogy because they examined the cultural stereotypes held by three generations of Princeton students. The two later studies in the Princeton trilogy used the same procedure and the same set of adjectives employed in Katz and Braly’s initial investigation but, over time, participants have selected a different set of traits to represent the Black stereotype.

Research has indicated that over the years, some Black stereotypes have remained the same, while others have changed (Devine & Elliot, 1995; Dovidio & Gaertner, 1991). For example, the stereotype that Blacks are hostile has became part of the racial stereotype (Brigham, 1971; Study 1; Devine & Elliot, 1995), along with traits such as poor, uneducated, humorous, dishonest, threatening, and athletic (Devine, 1989; Devine & Elliot, 1995; Dixon & Rosenbaum, 2004; Gitter, Kozel, & Mostofsky, 1972; Krueger, 1996; Marin, 1984; Plous & Williams, 1995;
Stereotypical traits used in this study included the contemporary cultural stereotypes associated with both Blacks and Whites and were both positive and negative in valence (see illustration in Figure 1). Numerous studies have also shown that social perceivers associate Whites with negative traits such as weak, greedy, selfish, conceited, and with positive traits such as ambitious, educated, polite and intelligent (Bartholow et al., 2006; Bayton, 1941; Centers, 1951; Katz & Braly, 1933; Wittenbrink et al., 1997). Some examples of these polarized stereotypes for Blacks include entertaining (positive) and lazy (negative); for Whites, these stereotypes include educated (positive) and conceited (negative).

Cognitive Reactions during Person Perception

As reviewed earlier, when a person recognizes an out group member, whether by a facial stimulus or vocal cues, the perceiver is likely to categorize the individual on the basis of their group status, and the stereotypes associated with the individual will be activated. Research has demonstrated that categorizing a social target as a member of an out group will activate negative stereotypes that can have consequences for social judgment. Findings suggest that cognitive evaluations of speakers might reflect the cultural stereotypes associated with the racial or ethnic group to which the speakers are perceived to belong (Hosoda et al., 2007; Nesdale & Rooney, 1990). For example, perceivers rated English-speaking individuals with a foreign accent more negatively on attributes such as potency and communication and more positively on the attribute of concern for others, as compared with American English-accented individuals (Hosoda et al., 2007).
In their study on perceptions of foreign accented English speakers, Hosoda et al. (2007) based their cognitive evaluation measure on Eagly, Ashmore, Makhijani, and Longo’s (1991) evaluative dimensions. Eagly et al. maintained that at least six major evaluative dimensions are made about others. These include (a) Social Competence, including interpersonal skills and traits (sociable, fun loving) and the successful outcomes of such skills (popularity, likeability); (b) Intellectual Competence, including intellectual ability (intelligent) and rational mental style (logical); (c) Concern for Others, including social sensitivity (sensitive), nurturance (generous), and lack of egotism (modest, not egotistic); (d) Integrity, including honesty (honest, trustworthy); (e) Adjustment, including normal psychological functioning and indicators of positive adjustment such as good mental health (well adjusted) and high self-esteem (positive self-regard); (f) Potency, including power (strong, self-assertive, leader) and dominance (dominant, acting as leader, implying dominance over others).

The Present Study

As previously reviewed, social perceivers can determine the race of an individual by simply hearing a person’s voice (Alvarenga, 1971; Buck, 1968; Dickens & Sawyer, 1952; Bourhis and Giles, 1976; Coleman, 1976; Hibler, 1960; Larsen & Larsen, 1966; Lass, Trapp, Baldwin, Scherbick, & Wright, 1982; Stroud, 1956; Thomas & Reaser, 2004). Additionally, because certain vocal cues can serve as salient markers of a speaker’s race (Ryan & Sebastian, 1980; Ryan et al., 1984), listeners are likely to categorize a speaker on the basis of the highly salient attribute of his voice.

This categorization is a fundamental component of the stereotyping process and the relationship has been well documented in the research literature (Allport, 1954; Hamilton & Trolier, 1986; Stephan, 1989; Tajfel, 1978; Tajfel & Turner, 1979; Taylor & Fiske, 1978;
Given previous findings regarding the automatic activation of stereotypes, it is logical to assume that when a listener hears a clearly distinctive voice defined by its racial category, the listener may endorse cultural stereotypes based on the categorization of the speaker’s race. Investigating the consequences of stereotype activation as a result of vocal cues can be applicable to many different real-world situations, such as perceptions of individuals on the radio, and telephone conversations with unknown others such as telemarketers, customer service call lines, and phone interviews with potential employees (Chebat et al., 2007; Purnell, Idsardi, & Baugh, 1999).

Thus, the purpose of the current research was to examine whether identifying a voice as Black or White would be enough to activate associated stereotypes and affect perception. This research examined the person perception of Black and White voices by using previously tested evaluative domains (Hosoda et al., 2007) in conjunction with known stereotypes. Specifically, the following hypotheses were tested:

Hypotheses 1a-1h: Compared to White speakers, listeners would evaluate Black speakers more favorably on attributes related to social competence (H1a) and concern for others (H1b), but less favorably on intellectual competence (H1c), integrity (H1d), potency (H1e), non-threatening (H1f), motivation (H1g), and communication (H1h).

Researchers have also recognized that social categorization can lead to the activation of specific target-related affect (Hosoda et al., 2007). That is, affective reactions can result from cognitive schema activation and have been shown to negatively influence intergroup relations (Stephan & Stephan, 1985; Vanman & Miller, 1993). Research suggests that listeners experience more negative affect after hearing foreign-accented English speakers than standard American-accented English speakers (Cargile & Giles, 1997; Hosoda et al., 2007; Ryan & Bulik,
Since affect is an integral part of intergroup contact which often has a negative tone with such affective reactions as anxiety, uneasiness, and discomfort (e.g., Stephan & Stephan, 1985; Vanman & Miller, 1993), it can be reasonably expected that, if listeners can detect and categorize voices by race, Black speakers may induce more negative affect in social perceivers than White speakers. As no other study has examined the effects of various racial voices on the extent of affective reactions, this is the first hypothesis of its kind. Given these findings, the present study also tested the following hypothesis:

Hypotheses 2a-2b: Listeners would experience less positive affect (H2a) and more negative affect (H2b) as a result of hearing a Black speaker than a White speaker.

Pilot Study

Preliminary work was conducted to provide the voices for this study. First, a total of 43 undergraduate male volunteers (20 Blacks and 23 Whites) at the College of William and Mary participated in exchange for partial fulfillment of course credit or monetary compensation. All were native English speakers with an average age of 20.37 (±1.26). The participants were recorded in a sound-proof room using a stand-alone microphone and the software Sound Studio installed on Mac Pro computers. During the recording session the participants read two passages several times with the instructions to read the scripts as if giving instructions to a group of children. The first readings were of the following passage:

*Hello. This project is being conducted at William and Mary on voice. It appears to be a very simple design and I hope the results will help to support the researcher’s ideas.*
This passage was adapted from previous research because it contained a neutral statement that controlled for syntax, grammatical construction, vocabulary and reading ability (Coleman, 1976). Additionally, the passage was kept purposefully short to ensure that each voice was distinctly identified by race within several seconds of hearing the speaker. Two random orderings of the voices were compiled to avoid grouping of similar accents. Next, two undergraduate students of the College of William and Mary voluntarily and independently rated the voices by race and gender with a concordance rate of 89 percent. The number of speakers was narrowed down to the top 12 (six white voices and six black voices) which consisted of having the highest accuracy rates and the least amount of reading errors. Two random orderings of the voices, with each of the 12 voices repeated twice for a total of 24 recordings, were compiled again and tested in a blind group of 40 participants. From these, the four voices that were consistently identified by race were chosen for the first study. This study used the “verbal guise” technique which included more than one speaker per race condition. This controlled for individual idiosyncrasies of the speakers to allow true cognitive evaluations.

Along with the recording of the first passage, the original 43 speakers also recorded a second passage with the intent for future use. Each participant produced a longer reading of the following passage:

The procedure is actually quite simple. First you arrange items into different groups. Of course one pile may be sufficient depending on how much there is to do. If you have to go somewhere else due to lack of facilities that is the next step; otherwise, you are set. It is important not to overdo things. That is, it is better to do too few things at once than too many. In the short run this may not seem important but complications will easily
arise. A mistake can be expensive as well. After the procedure is complete, one arranges the materials into their appropriate places. Eventually, they will be used once more and the whole cycle will then have to be repeated. However, this is part of life.

This passage was chosen because it was relatively neutral without appearing “too boring” and also satisfied the requirement of length to allow listeners to have enough exposure to make accurate appraisals. Additionally, the passage was purposefully ambiguous to help in the cover story. This longer reading of the final four (two black and two white) volunteered voices was used in this study.

Study 1

Using theory and research on the areas of social cognition and language, the present study examined listeners’ cognitive and affective reactions to Black and White voices. This was accomplished by utilizing known positive and negative stereotypes of Blacks and Whites. Specifically, it was hypothesized that Black speakers would be evaluated more positively on attributes related to social competence (e.g., humorous, sociable) and concern for others (e.g., unselfish, humble), while White speakers would be evaluated more positively on attributes related to intellectual competence (e.g., intelligent, educated), potency (e.g., successful, assertive), motivation (e.g., ambitious, motivated), integrity (e.g., honest, reliable), non-threatening (e.g., safe, non-threatening), and communication.

Method

Participants

A total of 160 college students participated in the present study in exchange for course credit. The sample was diverse in terms of its ethnic composition: 65% White (n = 104), 10%
Black ($n = 16$), 7% Asian ($n = 11$), 1% Hispanic ($n = 2$), and 16% of mixed-ethnicity or race ($n = 26$). One participant did not mark their race or ethnicity. Sixty-five percent ($n = 104$) of the participants were female. Participants did not differ greatly in age which ranged from 18 years to 23 years ($M = 18.6, SD = 0.96$). Independent $t$-tests report no significant differences between the speaker groups in age, $t(157) = 0.42, p = .68$.

**Materials**

*Topic Survey.*—This measure was designed to assist in the cover story that participants were to listen as closely as possible to determine the topic of the discussion. They filled out the first page of the booklet, the topic survey, based on their assumptions and included only two questions: “What topic do you think the speaker was talking about and how did you come to this conclusion?” The true purpose was to capture the listener’s full attention in order to accurately gauge their cognitive and affective reactions to the speakers.

*Cognitive Reactions Questionnaire.*—A 26-item, 7 point bipolar adjective scale developed by Hosoda & et al. (2007) was adapted to measure participants’ cognitive reactions towards the speakers (see Appendix I). Eagly, et al.’s (1991) classification of personality attribute dimensions was used, with the bipolar adjectives categorized into seven dimensions; (a) Intellectual competence (3-items); (b) Potency (3-items); (c) Social Competence (3-items); (d) Motivation (3-items); (e) Concern for Others (5-items); (f) Integrity (3-items); (g) Non-threatening (4-items). Additionally, a 2-item, Likert-style measure on a 5-point scale was included that asked participants to indicate to what extent that they believed the speaker was a good communicator and to what extent they believed that the speaker exhibited good leadership ability.
**PANAS.** —The PANAS (Positive and Negative Affect Schedule) is an affective reactions measure adapted from Watson, Clark, and Tellegen (1988) (see Appendix II). It consisted of 10 adjectives associated with positive affective states (interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, and active) and 10 adjectives associated with negative affective states (distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, and afraid). Participants were asked to rate items on a scale from 1 to 5, based on the strength of the emotion they felt towards the speaker where 1 = "very slightly or not at all," and 5 = "extremely". Initial studies in development of the PANAS showed that the scales were highly internally consistent, ranging from .86 to .90 for the Positive Affect scale and .84 to .87 for the Negative Affect scale, and were largely uncorrelated (Watson, Clark, & Tellegen, 1988).

**Manipulation Checks**

*Identification Questionnaire.* Since the race of the voice was manipulated, the identification questionnaire was used to determine whether participants could accurately identify the speakers’ race. Additionally, for added support, participants were asked to state the speaker’s gender.

*Familiarity Questionnaire.* The Familiarity questionnaire was adapted from Brigham’s (1993) Interracial Contact questionnaire, but for purposes of this study, it was altered (see Appendix III). The purpose of the familiarity questionnaire was to gain a general knowledge of the positive and close interactions participants may have with Black people in their life. According to Brigham, interracial contact can lessen prejudice among majority-group members, so this questionnaire was designed to assess the relationship between racial attitudes and interracial contact experiences.
**Procedure**

The testing sessions took place in a classroom with a loud speaker situated above the participants’ heads. The audio recordings were manipulated from a computer seen only by the researcher and played over the loud speaker. The recorded voices were played twice for each condition, while the participants were instructed to only listen to determine the topic of the discussion and to form an impression of the speaker. In small groups ranging between five and ten students, participants were randomly assigned to hear only one of the four possible voices. The participants were told that the purpose of the experiment was to study the ability of people to decode the topic of a seemingly random procedure and to study the formation of first impressions based on an audio tape of a speaker. No information that could identify the race of the speakers (e.g., name) was included in the recording or given during the instructions. Participants were told they would be asked to complete several questionnaires after listening to the recording and they were strongly advised to listen closely to determine the topic of the speaker.

After the instructions, participants were asked to complete a consent form and were then provided with a booklet containing the questionnaires. The booklets contained an instruction sheet with several questionnaires to assess their reactions to the speaker, and lastly, a self-report demographic questionnaire. Once the questionnaires were completed, participants were provided with a written debriefing statement and thanked for their participation.

**Results**

**Manipulation Checks**

*Speaker Identification.*—One hundred percent of the participants \((n = 160)\) correctly identified the speakers as male. Ninety-one percent of the participants \((n = 82)\) in the White
male condition identified the speakers as White and 96% of the participants ($n = 78$) in the Black
male condition identified the speakers as Black.

Tests of Hypotheses

Cognitive reactions to the speaker.—Table 1 presents correlations for the measured
variables. As can be seen in Table 1, all of the variables concerned with cognitive reactions were
significantly correlated with those dealing with the affective reactions. As would be expected,
intellectual competence, potency, social competence, motivation, concern for others, integrity,
communication, and leadership were positively correlated with positive affect, and non-
threatening was negatively correlated with negative affect.

Table 2 shows descriptive statistics for the cognitive and affective outcomes as a function
of speakers’ race. Item scores were summed and averaged for each dimension with the higher
score indicating more favorable evaluations of the speaker. Hypotheses 1a through 1h predicted
that, compared to White speakers, listeners would evaluate Black speakers more favorably on
attributes related to social competence (H1a) and concern for others (H1b), but less favorably on
intellectual competence (H1c), integrity (H1d), potency (H1e), non-threatening (H1f), motivation
(H1g), and communication (H1h).

These hypotheses were partially supported (see Figure 2). Independent $t$-tests indicated
effects of speaker’s race on intellectual competence, $t(158) = 4.17, p <.001$, integrity, $t(157) =
2.20, p <.05$, potency, $t(158) = -2.54, p <.05$, being nonthreatening, $t(158) = 3.79, p <.001$,
motivation, $t(158) = 2.13, p <.05$, and communication, $t(158) = 2.39, p <.05$. However, there
were no significant differences in participants ratings of White speakers relative to Black
speakers on the dimensions of social competence, $t(158) = -1.21, p = .23$, and concern for others,
$t(158) = 0.83, p = .41$. 
Consistent with the hypotheses, White speakers were viewed as being more intellectually competent, \((M = 5.4, SD = 0.9)\), having more integrity, \((M = 5.2, SD = 0.9)\), having less potency, \((M = 4.1, SD = 0.9)\), being less threatening, \((M = 5.7, SD = 1.0)\), having more motivation, \((M = 4.6, SD = 1.1)\), and being better communicators, \((M = 3.1, SD = 0.8)\) than Black speakers, \((M = 4.7, SD = 1.1; M = 4.8, SD = 1.1; M = 4.5, SD = 0.9; M = 5.0, SD = 1.2; M = 4.3, SD = 1.0; M = 2.8, SD = 1.0; \) respectively).

Additionally, all scores were summed and averaged for a total Cognitive Reactions score with the higher score indicating the more positively the speaker was perceived on all dimensions. Independent \(t\)-tests indicated that White speakers \((M = 4.8, SD = 0.6)\) were evaluated more positively than the Black speakers, \((M = 4.6, SD = 0.7)\), \(t(158) = 2.24, p < .05\).

In summary, compared to Black speakers, White speakers were rated more positively on intellectual competence, motivation, integrity, being non-threatening, and communication but more negatively on potency. Furthermore, White speakers were overall rated more positively than the Black speakers.

**Affective reactions to the speaker.**—Hypotheses 2a-2b predicted that listeners would experience less positive affect (H2a) and more negative affect (H2b) as a result of hearing a Black speaker than a White speaker. However, results indicated that these hypotheses were not supported, as there were no significant differences on positive affect, \(t(158) = 0.26, p =.80\), or negative affect, \(t(158) = 0.31, p =.76\), between the Black and White speaker.

**Familiarity with Blacks.**—This questionnaire excluded several items from Brigham’s (1993) original measure. Questions 1, 3, 5, and 7 were not retained because the percentage of Black students within one participant’s school may be equal to that of another participant’s percentage, but if the total number of students is larger for the first participant than for the
second participant, theoretically, the first participant has a significantly lesser chance of interracial contact and a decreased chance of having other-race friends. Additionally, question 12 was eliminated because of its subjective quality. Therefore, the remaining items on the questionnaire were split into two groups to generate two separate scores. First, a Childhood Familiarity score was obtained by summing and averaging questions 2, 4, and 6. Second, an Adulthood Familiarity score was obtained by summing and averaging questions 8 (a, b, c, d, e), 9, 10, and 11. This final measure was examined as a possible predictor variable, but no significant effects were found.

Additional findings

Although not hypothesized, exploratory analyses were conducted to explore if there were possible gender or race differences by listeners. That is, a 2 (Speaker Race: White, Black) X 2 (Listener Gender: male, female) X 2 (Listener Race: White, non-White) analysis of variance (ANOVA) was conducted. Results indicated main effects of listener’s gender, $F(1,159) = 6.27, p < .05$. Therefore, simple main effect analyses were analyzed to explore these differences.

**Male and Female Listeners.**—Simple main effect analyses revealed that males and females did not differ significantly in their ratings for the White speakers, but found that females did evaluate Black speakers more positively on certain attributes than male listeners. The positively rated attributes were related to intellectual competence, $(M = 5.0, SD = 1.2$ vs $M = 4.3, SD = 0.9), t(75) = 2.33, p < .05$, motivation, $(M = 4.5, SD = 1.1$ vs $M = 4, SD = 1.0), t(75) = 2.03, p < .05$, concern for others, $(M = 4.7, SD = 0.9$ vs $M = 4.1, SD = 0.7), t(75) = 2.94, p < .01$, being non-threatening, $(M = 5.3, SD = 1.3$ vs $M = 4.6, SD = 1.1), t(75) = 2.50, p < .05$, and positive affect, $(M = 2.0, SD = 0.8$ vs $M = 1.7, SD = 0.6), t(75) = 2.09, p < .05$. 
Discussion

The purpose of the present study was to examine whether identifying a voice as Black or White would be enough to activate associated stereotypes and, in turn, affect person perception. This was tested by using previously tested evaluative domains (Hosoda et al., 2007) in conjunction with known stereotypes. Specifically, it was hypothesized that Black speakers would be evaluated more positively on attributes related to social competence and concern for others, while White speakers would be evaluated more positively on attributes related to intellectual competence, potency, motivation, integrity, and non-threatening. Results of the present study indicate that participants were able to correctly identify the race of the speaker in most cases. Additionally, speaker’s race had important consequences for person perception. That is, although the content of the speech was the same, participants consistently endorsed negative stereotypes about the Black speakers (e.g., ignorant, lazy, dishonest, dangerous). It was found that compared to Black speakers, White speakers were rated more positively on intellectual competence, motivation, integrity, being non-threatening, and communication but more negatively on potency. No differences were found on the attributes related to social competence and concern for others.

Results also indicated that female participants endorsed less negative stereotypes about the Black speakers than male participants. This finding is not surprising and supports research indicating that females are less prejudiced than males and are less likely to endorse negative stereotypes (Cowan & Hodge, 1996; Herek, 1998). Researchers have suggested that women may be less prejudiced because they are members of a non-dominant group and are more likely to have experienced prejudice. This, in turn, may lead them to have greater empathy towards stereotyped groups and identify with targets of prejudice (Cowan & Hodge, 1996).
Unfortunately, many cultural stereotypes are part of the socialization process that appears to begin in early childhood (Ehrlich, 1973). Negative stereotypes primarily remain because they reflect current social circumstances in which Blacks are overrepresented in crime, low educational achievement, unemployment, and the lower socio-economic classes. Stereotypes are not easy to change and even when the overt expression of stereotypes have become socially unacceptable, unconscious associations and biases can persist (Dovidio & Gaertner, 1986; Greenwald & Banji, 1995). However, biases can be reduced by exposing people to counter-stereotypic examples (Power, Murphy, & Coover, 1996). One example of this is the media with its strong cultural influence on societal opinion. Positive messages can directly challenge negative stereotypes of Blacks.

An unexpected finding that emerged from the present study is that participants rated Black speakers as more potent than White speakers. This surprising finding that Black speakers are seen as having more potency through power and dominance, may be in part, attributable to our changing culture in which a multiracial male, the current United States president, can be voted into office on the premise of his leadership capabilities. As this study was conducted during the presidential elections, in which a positive, potent minority was depicted often in the media, this may have served as a salient exemplar for the Black male category, which led to a more positive evaluation of the Black male target on the dimension of potency.

Although the media in this case may have served to reverse the polarity of a negative stereotype, this method is not easily manipulated. Another method for combating negative cultural stereotypes is through a process known as perspective taking. Research has shown that taking the perspective of a stigmatized out group member can reduce negative attitudes held about that individual (Batson, Polycarpou, Harmon-Jones, Imhoff, Mitchener, Bednar, et al.,
1997; Eisenberg, Carlo, Murphy, & Van Court, 1995; Eisenber, Zhou, & Koller, 2001; Galinsky & Moskowitz, 2000; Weyant, 2007). According to Weyant (2007), “perspective taking involves attempts to imagine oneself in the shoes of another and may entail efforts to think from the other person’s point of view, to envision oneself in the other person’s circumstances, and to feel what the other person is feeling.” This perspective taking reduces stereotypes by blurring distinctions typically made between perceptions of self and members of an out group (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000).

In Weyant’s (2007) study, participants heard an audio recording of either a native or non-native speaker of English and then wrote a paragraph about the speaker either with instructions to take the speaker’s perspective or with no perspective-taking instructions. It was found that participants rated the native English speaker more highly than the non-native speaker, but in the perspective taking-condition, the non-native speaker was rated more highly than the non-native speaker in the no perspective-taking condition.

Based on this research, Study 2 was designed to replicate the findings of Study 1 while simultaneously examining the influence of a perspective-taking condition on the activation stereotypes. It was hypothesized that participants hearing a Black speaker in a perspective-taking condition compared to a non-perspective-taking condition, would rate the Black speaker more positively. Additionally, based on the available evidence and support in the research literature, it was expected that there would be no differences between the perspective-taking condition and the non-perspective-taking condition for White speakers.

Another goal of Study 2 was to study the potential effects of stereotype activation on behavior. The findings from the first study demonstrated that social perceivers quickly formed an impression about the target individuals, and this impression was mostly consistent with the
stereotypes about that individual’s racial group. That is, Black male individuals were rated as being more threatening, having less intellectual competence, motivation, and integrity, and were seen as poor communicators. Participants evaluated the speakers in this study with a pencil and paper questionnaire of trait adjectives, which was an explicit measure requiring the participant to rate the speaker based on the impression of the voice. Therefore, although this study indicated that participants were categorizing the targets, which led to stereotype-consistent judgments about the individuals, it did not examine the effect that this stereotype activation may have on potential behavior.

Past research has found that the activation of stereotypes that lead to automatic associations of target individuals, (see Bargh, 1994, for a review), can have consequences for person perception that also affect behavioral tendencies, even when the individual is not aware of the perceptual process (Bargh, 1989; Strack & Hannover, 1996). For example, in Bargh, Chen, and Burrows’ (Study 2; 1996) study, when participants were primed with an elderly stereotype, they were observed to move more slowly down the hallway when leaving the experiment than did control participants, which was consistent with the content of that stereotype.

Therefore, another goal of the second study was to replicate the findings of Study 1 while simultaneously examining the influence of stereotype activation on an implicit behavioral measure.

One way to achieve an implicit behavior prompted by stereotype activation is using seating distance as a measuring tool. Seating distance has been used to examine the implicit behavior of participants primed with the stereotype of skin heads in relation to the seating position of a skin head (Macrae, Bodenhausen, Milne, & Jetten, 1994), to examine how close individuals would sit to another person when primed with independent or social primes (Holland,
Roeder, van Baaren, Brandt, & Hannover, 2004) and to examine the influence of race and sex on physical distances (Hendricks & Bootzin, 1976).

Although Hendricks and Bootzin’s (1976) study found that both White and Black participants sat further away from a Black confederate than a White confederate, this study is somewhat outdated by the changing culture. However, the results from the present study suggest that negative stereotypical traits are still endorsed which could influence a similar implicit behavior. While the present study demonstrated the automatic activation of stereotypes, it is still unclear if this would lead to an individual to sit further away from the target when negatively stereotyped.

Study 2

Overview

A second study was designed to accomplish two goals. First, this study examined the automatic activation of stereotypes of Black and White voices by means of an explicit measure (i.e., the Cognitive Reactions questionnaire), and an implicit behavioral measure (i.e., seating distance). Second, this study manipulated perspective-taking in order to examine this as a moderating variable.

Specifically, the following hypotheses were tested:

Hypotheses 1a-1h: In the non-perspective-taking condition, listeners would evaluate the Black speaker more favorably on the attribute related to potency (H1a) when compared to the White speaker, and listeners would evaluate the White speaker more favorably on attributes related to intellectual competence (H1b), integrity (H1c), motivation (H1d), non-threatening (H1e), and communication (H1f) when compared to the Black speaker. Additionally, it was not
expected that there would be differences between the Black and White speaker on attributes related to social competence (H1g) and concern for others (H1h).

Hypotheses 2a-2b: In the perspective-taking condition, listeners would evaluate the Black speaker more favorably on all the measured cognitive attributes (i.e., intellectual competence, social competence, integrity, motivation, non-threatening, potency, concern for others, and communication) compared to the Black speaker in the non-perspective-taking condition (H2a). Additionally, it was not expected that there would be differences on the evaluations between the perspective-taking condition and the non-perspective-taking condition for the White speaker (H2b).

Hypotheses 3a-3c: Overall, compared to the White speaker, listeners would have a greater seating distance from the Black speaker (H3a). Additionally, in the non-perspective-taking condition, listeners would have a greater seating distance from the Black speaker than in the perspective-taking condition (H3b) and it was not expected that there would be differences in seating distance between the perspective-taking condition and the non-perspective-taking condition for the White speaker (H2c).

Hypotheses 4: Consistent with Study 1, there would be no differences in listeners’ affective reactions to the Black speaker and the White speaker.

Method

Participants

Approximately 160 participants were recruited from the undergraduate pool who took part in exchange for course credit. Several participants were eliminated for various reasons. Recognition of any voice led to the elimination of two participants. Interruptions during the study (e.g., a third party presence not accounted for during other experiments, sickness, not
following directions, and recognition of the study design from Study 1) led to the elimination of seven participants. Guessing an aspect of the study design (e.g., race, stereotypes, seating distance) led to the elimination of three participants. Lastly, participants who did not appear to follow the directions of the perspective-taking or non-perspective-taking conditions led to the elimination of 14 and 23 participants respectively. After eliminating participants for reasons listed above, the final analyses were conducted with 111 participants (female, 73; male, 36; White, 86; non-White, 23).

The sample was diverse in terms of its ethnic composition: 77.5% White (n = 86), 6.3% Black (n = 7), 6.3% Asian (n = 7), 2.7% Hispanic (n = 3), and 5.4% of mixed-ethnicity or race (n = 6). Two participants did not mark their race or ethnicity. Sixty-six percent (n = 73) of the participants were female. Participants did not differ greatly in age which ranged from 18 years to 22 years (M = 18.9, SD = 1.02). Independent t-tests report no significant differences between the speaker groups, t(109) = -1.05, p = .30, or condition groups in age, t(109) = -0.10, p = .92.

Materials

Audio Recordings.—The audio recordings were the same recordings used in Study 1, but only two of the four voices (one White male, one Black male) were chosen based on the length of the passage (41 seconds).

Writing Task.—The writing task was entitled “A Day in the Life of the Speaker” and directed participants to write a paragraph about what procedure the speaker was talking about and how it could be part of the speaker’s daily life. With half of the participants, the instructions also included a request that participants try to view things from the perspective of the speaker as if they were “walking in his shoes.” To bolster this manipulation, the instructions also directed
participants to write in the first person; for example, using “I” and “me” when referring to he or
him. The other half of participants were given no perspective-taking instructions.

_Psychological Distress Measure._—Participants used a 7-point scale from 1 (not at all) to
7 (extremely) to rate their level of stress, anger, calm (reverse scored), and anxiety to the meeting
the speaker (see Appendix IV).

_Identification Questionnaire._—The identification questionnaire asked participants about
the speaker’s gender and race. Additionally, voice could be an indicator of a person’s
attractiveness (Zuckerman, Larrance, Spiegel & Klorman, 1981) and the intensity of the voice
can influence positive or negative identification (Chebat et al., 2007), which can both affect the
social perceiver’s perception of the speaker. As a control measure, the identification
questionnaire asked about the participants’ perceived favorability and likeability of the target
voice. This measure also included a question asking participants if they recognized the speaker
and, if so, asked them to indicate the name of the speaker.

_Internal and External Motivation to Respond Without Prejudice Scales._—This 10-item
measure asked participants to indicate their agreement with statements on a 7-point scale ranging
from 1 (strongly disagree) to 7 (strongly agree) (see Appendix V). The IMS assesses personal
motivation to respond without prejudice and includes items such as “I attempt to act in
nonprejudiced ways toward Black people because it is personally important to me” and “Being
nonprejudiced toward Black people is important to my self-concept.” The EMS focuses instead
on external pressure to respond without prejudice and includes items such as “If I acted
prejudiced toward Black people, I would be concerned that others would be angry with me” and
“I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from
others.”
Attitude Towards Blacks scale.—The ATB is an explicit measure of race bias in which participants indicate their agreement with statements on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree) (see Appendix VI). Sample ATB items include “Black and white people are inherently equal” and “It would not bother me if my new roommate was black.”

Feeling Thermometer Scale.—Participants were asked to indicate the “warmth or positivity” versus the “coolness or negativity” of their feelings associated with different ethnic groups (see Appendix VII). The groups that were rated included Whites and Blacks as target categories. Ratings were assessed with 7-point scales ranging from 1 (very cold) to 7 (very warm) or 1 (very positive) to 7 (very negative).

Procedure

Each participant was randomly assigned to hear one of two pre-recorded audio recordings of either a Black speaker or a White Speaker. Additionally, participants were assigned to either the perspective-taking condition or the non-perspective-taking condition.

Participants individually completed this study. On entering the laboratory they first signed a consent form, then were informed that they would hear an audio recording and that the purpose of the study was to assess their attitudes and motivation towards a speaker based on the voice that they hear. Additionally, they were told that they would hear the same exact passage twice and to listen closely to the speaker to determine the topic of the passage.

Once the recoding played twice, the participants were given a response booklet with the Writing Task, which they had 10 minutes to complete. The experimenter left the room and returned eight to 10 minutes later. At the end of the writing task, the participants were told that they would now have the opportunity to meet the speaker and discuss the procedure with them. The experimenter instructed the participant to follow them to an adjacent room. This room was
designated as the room for meeting the speaker. Upon entering, the participant saw only two chairs in an otherwise empty room. The dimensions of the room were 16 feet by 12.5 feet. One chair was stationary in the center of the room, while the second chair was in the furthest corner of the room from the point of entry (see picture in Figure 5).

The experimenter informed the participant that the center chair was reserved for the speaker and to go ahead and move the remaining chair to where they felt comfortable. Once the participant moved the chair, the experimenter handed the participant a second response booklet with a psychological distress measure and an identification questionnaire and asked the participant to complete it before the speaker arrived which would be in approximately five minutes. The experimenter exited the room at that time.

Once three to five minutes had elapsed, the experimenter returned and stated that the speaker was being “held-up” and that to keep the study going on time, asked that the participant complete the third response booklet, which contained the Cognitive Reaction questionnaire, the PANAS, and a self-report demographics questionnaire. The participant was asked to complete these measures based on their impression of the voice that they heard. Again, the experimenter left the room. After eight to 10 minutes, the experimenter returned and told the participant that it appeared that the speaker became sick and that the participant would be moved to a waiting room to wait and see if the speaker would be able to attend. At this time, the second and third response booklets were collected.

Once the participant was moved to the waiting room, the experimenter then measured the distances between the two chairs. This was done by measuring the furthest point between the seats of the two chairs and measuring the closest point between the seats of the two chairs, and then recording these distances in inches. The experimenter then returned to the waiting room
and informed the participant that the speaker would not be able to make it. The participant was then probed about their suspicions of the experiment and then received a written debriefing statement. After the participant had read the debriefing statement, the experimenter then asked if the participant would fill out some additional questionnaires as a favor to another researcher since there was some time left in the study. Not one participant declined. This booklet of questionnaires included the Internal and External Motivation to Respond without Prejudice scales, the Attitude Towards Blacks scale, the Feeling Thermometer Scale adapted from Gawronski, Peters, Brochu, and Strack (2008) and the Familiarity questionnaire. Once the booklet was completed, the participants were thanked for their participation.

Results

Manipulation Checks

Speaker Identification.—Ninety-nine percent of the participants (n =110) correctly identified the speakers as male. Ninety-seven percent of the participants (n = 59) in the White male condition identified the speakers as White and 92% of the participants (n = 52) in the Black male condition identified the speakers as Black.

Speaker Likeability.—This was a control measure to estimate the perceived likeability of the speaker before completing the evaluations of the speaker. The two items were summed and averaged with the lower score indicating the more likeable the participants perceived the speaker. Results from an independent samples t-test indicated that the only significant difference occurred between the perspective conditions. Participants rated the speaker more favorably in the perspective-taking condition, (M = 3.2, SD = 1.1), than in the non-perspective-taking condition, (M = 3.6, SD = 1.0), t(108) = -2.07, p < .05.
Writing Task.—In the perspective-taking conditions participants were asked to write about a day in the life of the speaker as if they were the speaker and were specifically instructed to do so by using first-person pronouns. In comparison conditions, participants were asked to write about a day in the life of the speaker without the perspective-taking instructions. Word counts of paragraphs show that some participants did not follow the instructions. Therefore, participants in the perspective-taking condition with a ratio of first person pronouns to total word counts that did not exceed 5.0% were eliminated from the data analyses. Participants in the non-perspective-taking condition with a ratio of first person pronouns to total word counts that exceeded 2.0% were also eliminated from the data analyses. This resulted in a total elimination of 37 participants (perspective-taking, 14; non-perspective-taking, 23).

In the remaining data set, no participant in the perspective-taking condition used less than 5.0% of his or her total words as first person pronouns with an average usage of 8.0%. Also, no participant in the non-perspective-taking condition used more than 2.0% of his or her total words as first person pronouns with an average usage of 0.01%.

Tests of Hypotheses

Cognitive reactions to the speaker.—Table 4 presents Pearson correlations for the measured variables. As can be seen in Table 4, all of the variables concerned with cognitive reactions were significantly correlated with those dealing with the affective reactions. As would be expected, intellectual competence, potency, social competence, motivation, concern for others, integrity, and leadership were positively correlated with positive affect. Additionally, non-threatening had a negative relationship with negative affect, although this was not a significant correlation (\( p = .22 \)).
Hypotheses 1a through 1h predicted that in the non-perspective-taking condition, listeners would evaluate the Black speaker more favorably on the attribute related to potency (H1a) when compared to the White speaker, and listeners would evaluate the White speaker more favorably on attributes related to intellectual competence (H1b), integrity (H1c), motivation (H1d), non-threatening (H1e), and communication (H1f) when compared to the Black speaker. Additionally, there were no expected differences to occur between the Black and White speaker on attributes related to social competence (H1g) and concern for others (H1h).

These hypotheses in the non-perspective-taking condition were only partially supported (see Figure 4) in that the White speaker was evaluated more favorably on intellectual competence ($M = 5.3, SD = 0.7$) when compared to the Black speaker ($M = 4.6, SD = 0.8$), $t(49) = 3.44, p < .001$, and no significant differences were found between the Black and White speaker on social competence ($M = 4.0, SD = 1.1$ vs $M = 4.2, SD = 0.9$), $t(49) = 0.42, p = .67$. However, the rest of the hypotheses were not supported. Specifically, the Black speaker was rated more favorably on concern for others, ($M = 4.8, SD = 0.8$), than the White speaker, ($M = 4.4, SD = 0.6$), $t(49) = -2.05, p < .05$. However, the Black speaker was not rated more favorably on potency ($M = 4.4, SD = 0.8$), when compared to the White speaker ($M = 4.3, SD = 0.7$), $t(49) = -0.23, p = .82$, and in fact there were no significant differences. Additionally, there were no significant differences between ratings of the White speaker on attributes related to integrity ($M = 4.8, SD = 0.8$), motivation ($M = 4.8, SD = 0.6$), non-threatening ($M = 5.3, SD = 1.0$), or communication ($M = 3.2, SD = 0.8$) when compared to the Black speaker ($M = 4.8, SD = 0.8; M = 4.3, SD = 1.1; M = 5.0, SD = 1.1; M = 3.1, SD = 0.8$; respectively; all $t$ values < 2.00, all $ps > .05$).
Lastly, all scores were summed and averaged for a total Cognitive Reaction score with the higher score indicating the more positively the speaker was perceived on all dimensions. Independent $t$-tests indicated that there were no significant differences for the Black speaker or the White speaker between the perspective conditions.

In summary, in the non-perspective-taking condition, the White speaker was rated more positively than the Black speaker only on intellectual competence and the Black speaker was rated more positively than the White speaker on concern for others. Beyond that, no significant differences were found between the White speaker and the Black speaker on motivation, integrity, potency, social competence, non-threatening, and communication.

Hypotheses 2a-2b: In the perspective-taking condition, it was predicted that listeners would evaluate the Black speaker more favorably on all the measured cognitive attributes (i.e., intellectual competence, social competence, integrity, motivation, non-threatening, potency, concern for others, and communication) compared to the Black speaker in the non-perspective-taking condition (H2a). Additionally, there were no expected differences to occur on the evaluations between the perspective-taking condition and the non-perspective-taking condition for the White speaker (H2b).

Independent $t$-tests did not find support for Hypothesis 2a. No significant differences were found on the evaluations for the Black speaker between the perspective-taking condition and the non-perspective-taking condition, all ($t$ values $< 2.00$, all $p$s $> .05$). However, independent $t$-tests did support Hypothesis 2b in that no significant differences were found for the White speaker in the perspective-taking or the non-perspective-taking conditions, (all $t$ values $< 2.00$, all $p$s $> .05$).
In summary, the cognitive evaluations for the Black and White speaker did not vary by either the perspective-taking or the non-perspective taking conditions.

*Seating Distance to the Speaker.*—Hypotheses 3a through 3c predicted that listeners would have a greater seating distance from the Black speaker (H3a) than the White speaker. Additionally, in the non-perspective-taking condition, listeners would have a greater seating distance from the Black speaker than in the perspective-taking condition (H3b) and there were no expected differences to occur in seating distance between the perspective-taking condition and the non-perspective-taking condition for the White speaker (H3c).

These hypotheses were only partially supported. No significant differences emerged with independent $t$-tests on the seating distances for listeners between the Black ($M = 60.82, SD = 15.7$) and White speaker ($M = 62.63, SD = 15.7$), $t(109) = 0.65, p = .52$. Additionally, there were no significant differences between the perspective-taking ($M = 62.38, SD = 16.1$) and non-perspective-taking conditions for the Black speaker ($M = 58.86, SD = 15.2$), $t(50) = 0.80, p = .43$. However, results indicated that Hypothesis 3c was supported. As expected, there were no significant differences between the perspective-taking ($M = 59.51, SD = 10.0$) and non-perspective-taking conditions for the White speaker ($M = 66.07, SD = 16.1$), $t(57) = -1.90, p = .06$. In summary, participants’ seating distances did not vary by the speaker’s race or the perspective condition.

*Affective reactions to the speaker.*—Hypotheses 4 predicted that listeners would experience no differences in affective reactions between the Black and White speakers. Independent $t$-tests supported this hypothesis. No significant differences were found on positive affect, $t(109) = -0.62, p = .54$, or negative affect, $t(109) = -.029, p = .78$, between the Black and White speaker.
Psychological Distress Measure.—Item scores were summed (Calm was reverse scored) and averaged with the higher score indicating the greater the distress felt by the participant prior to meeting the speaker. Reliability statistics indicated that the measure yielded a Cronbach’s alpha of .78. This measure was examined as a possible outcome variable. A 2 (speaker’s race: Black, White) x 2 (perspective condition: non-perspective-taking, perspective-taking) univariate analysis of variance was conducted with the distress average as the dependent variable. This yielded no main effect of speaker’s race, \( F(1, 111) = 2.40, p = .12 \), and no main effect of perspective taking condition, \( F(1, 111) = 0.74, p = .43 \).

However, there was a marginally significant interaction of speaker’s race and perspective condition, \( F(1, 111) = 3.87, p = .07 \). Simple main effect analyses indicated that overall, females felt more distress before meeting any speaker (\( M = 3.2, SD = 1.1 \)), than males (\( M = 2.4, SD = 1.2 \)), \( t(58) = 2.73, p < .01 \), and specifically, females felt more distress before meeting the Black speaker (\( M = 2.9, SD = 0.9 \)), than males (\( M = 2.3, SD = 1.1 \)), \( t(50) = 2.16, p < .05 \). Additionally, females in the perspective-taking condition felt more distress before meeting the Black speaker (\( M = 3.0, SD = 1.0 \)), than males did (\( M = 2.0, SD = 1.1 \)), \( t(27) = 2.51, p < .05 \).

Prejudice Measures

Familiarity with Blacks.—As before, this measure generated two scores. The first, a Childhood Familiarity score, was obtained by summing and averaging items 2, 4, and 6, and second, an Adulthood Familiarity score, was obtained by summing and averaging items 8, 9, 10, and 11.

Internal and External Motivation to Respond Without Prejudice Scales.—The first five items were summed and averaged for an Internal Motivation to Respond without Prejudice score (IMS) with the higher score indicating the more internal motivation the participant has to
respond without prejudice. Additionally, the last five items were summed and averaged (item 7 reverse scored) for an External Motivation to Respond without Prejudice score (EMS) with the higher score indicating the more external motivation the participant has to respond without prejudice.

**Attitudes Towards Blacks Scale.**—Item scores were summed (items 1, 2, 5, 8, 9, 10, 13, 14, 16, and 19 reverse scored) and averaged with the higher score indicating a higher prejudice level.

**Feeling Thermometer Scale.**—Item scores were summed (Positive-Negative reverse scored) and averaged for both Whites and Blacks with the higher score indicating a more positive feeling towards the intended racial group.

These measures were examined as possible predictor variables. Regressions were run predicting each dependent variable from the predictor variables (i.e., speaker’s race, perspective condition, and the prejudice measures). None of the prejudice measure contributed a significant amount of variance, however, one regression model indicated significance. A regression analysis was conducted that regressed intellectual competence on the perspective taking condition, the speaker’s race, and Childhood Familiarity. It was found that 14% of the variance of intellectual competence is explained by condition, the speaker’s race, and Childhood Familiarity.

**Additional findings**

**Black and White Speaker.**—Independent $t$-tests revealed that the White speaker was rated more positively (see Figure 5) on attributes related to intellectual competence, ($M = 5.3, SD = 0.8$), $t(109) = 3.01, p < .05$, motivation, ($M = 4.7, SD = 0.9$), $t(109) = 2.11, p < .05$, and non-threatening, ($M = 5.5, SD = 1.0$), $t(109) = 2.66, p < .01$, than the Black speaker, ($M = 4.8, SD = ...
1.0; $M = 4.4$, $SD = 1.0$; $M = 5.0$, $SD = 1.2$; respectively). Additionally, the White speaker was overall rated more positively as evident by the significantly higher score on the Cognitive Reactions questionnaire, ($M = 4.8$, $SD = 0.6$), $t(109) = 2.02$, $p < .05$, when compared to the Black speaker ($M = 4.5$, $SD = 0.7$).

Discussion

In the first study it was established that social perceivers were able to correctly identify a speaker’s race and this had important consequences for person perception as indicated by the activation of cultural stereotypes measured by the Cognitive Reactions questionnaire. Based on this, the present study was designed to accomplish two goals. First was to examine the automatic activation of stereotypes of Black and White voices by means of an explicit measure (i.e., the Cognitive Reactions questionnaire), and an implicit behavioral measure (i.e., seating distance). Second, this study manipulated perspective-taking in order to examine this as a moderating variable.

It was found that in the non-perspective-taking condition, the White speaker was seen as having higher intellectual competence and the Black speaker was seen as having more concern for others. For the rest of the dimensions, no differences were found between the Black and White speakers. The fact that the non-perspective-taking condition was theoretically a replication of Study 2, it was disappointing to find that only one dimension appeared to remain the same. However, it should be noted that the dimension of potency on the Cognitive Reactions questionnaire had a very low reliability alpha level in Study 2, which may have contributed to the contradictory findings.

Next, it was found that the evaluations of the Black speaker did not vary by either perspective-taking condition and the evaluations of the White speaker did not vary by either
perspective-taking condition. The findings of the Black speaker were not in accordance with previous research that predicted more favorable evaluations of the out group member in the perspective-taking condition compared to the non-perspective-taking condition. However, this same research has consistently found no differences in evaluations for the in-group, and that was supported (Batson et al., 1997; Eisenberg, Carlo, Murphy, & Van Court, 1995; Eisenber, Zhou, & Koller, 2001; Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000; Weyant, 2007).

Third, it was found that participants’ seating distances did not vary by the speaker’s race or the perspective condition, and lastly, it was found that listeners experienced no differences in affective reactions between the Black speaker and the White speaker.

Results of the present study supported few of the previous findings. The results indicated that participants were able to correctly identify the race of the speaker in most cases and again, this had important consequences for person perception. As before, the content of the speech was the same and participants consistently endorsed negative stereotypes about the Black speaker (e.g., ignorant, uneducated, threatening) on the explicit measure, but this was not found on the implicit measure of seating distance.

Furthermore, it was disappointing to find that the manipulation of the perspective-taking conditions did not increase the positive evaluations of the Black speaker in the perspective-taking condition compared to the non-perspective-taking condition. Nor did the evaluations between the White speaker and the Black speaker in the perspective-taking condition show more positive attributions. Previous research has shown that the manipulation of perspective-taking condition has helped to reduce stereotypes by blurring distinctions typically made between perceptions of self and members of an out group (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000), but for this study, the manipulation failed. In fact, the significant difference found was
that the Black speaker was seen as having less intellectual competence, less motivation, and being more threatening than the White speaker regardless of perspective taking condition. However, it is interesting to note that there was a significant increase of likeability towards both speakers in the perspective-taking condition compared to the non-perspective-taking condition, but this did not affect the overall evaluations.

Surprisingly, an interesting finding is that, although participants still rated the Black speaker as more threatening than the White speaker, the seating distances between the White and Black speakers did not significantly differ by speaker’s race or the perspective condition. It is possible that since the Black speaker was seen as having more concern for others, even if only in the non-perspective-taking condition, that this favorable evaluation offset the manipulation of the implicit behavior measure.

Furthermore, Study 2 did not replicate Study 1’s findings in that males and females differed in their evaluations of the Black and White speaker. It is possible that because overall, females felt more distress before meeting the speaker and filling out the cognitive evaluations than males, that this may have altered females’ person perceptions of the Black speaker.

**General Discussion**

In sum, the present studies make clear that in our multiracial society, race is a readily recognizable cue for racial group membership and may be associated with person perceptions of and judgments about a speaker. More importantly, person perceptions of Blacks still include the social stereotypes associated with the perceived racial identity of individuals by vocal cues. However, there are some limitations to running a study of this kind.

Surprisingly, for some variables, there was a lack of consistency between Study 1 and Study 2, though the methods were similar. However, one explanation for the lack of devaluation
of the Black speaker on certain dimensions in the second study compared to the first study may be the differences in the experimental design. First, there were slight differences in the writing tasks between the two studies. Although it was expected for the writing task to differ in the perspective-taking condition in Study 2, Study 1’s writing task and Study 2’s non-perspective-taking condition instructions might not have been comparable enough to produce the expected results. Second, in Study 1, the participants filled out the questionnaires immediately after hearing the speaker’s voice, while in Study 2, the participants changed rooms and waited for the speaker to arrive before completing the questionnaires with the Cognitive Reactions measure. These differences posed potential problems for the study, in that the design may have inadvertently interfered with the normally effective measures of the first study.

Taken together, the two studies presented here have made it clear that social perceivers are able to easily categorize the race of speakers in a short period of time. Furthermore, this research also suggests that the identification of an individual’s race activates specific stereotypes, which can, in turn, affect person perception. Determining which cues listeners use to identify a speaker’s race is experimentally difficult, and therefore makes the task of reducing stereotypes even more difficult. Unfortunately, even with how far we have come, these stereotypes are still dominant within our culture and have long-term implications for many areas: business, interpersonal attraction, education, racial and group oppression.

Limitations

Impression formation is a subjective process, influenced by gender, cultural values, and personal experiences. Also, there is always the possibility of individual differences between listeners (Kramer, 1964). Beyond this, there are several potential limitations of the present
study’s findings and lack of findings to include the setting of the studies, the nature of participants, the number of speakers and the script.

*Setting of study and nature of participants.*—An explanation for the lack of differences found in the implicit behavioral measure might be the set up of the experimental room intended to measure seating distance. It is possible that the college student participants may have been aware of the study’s hypotheses and this may have affected their behavior.

*Number of Speakers and Script.*—The first study utilized two speakers for each racial category, which reduced the idiosyncrasies between the speakers, however, time constraints coupled with the number of participants for the second study led to the use of only one speaker for each racial category. One speaker per experimental condition is not truly a representative sample of race as the specific aspects of the speaker could also influence listeners’ judgments. This limits internal validity; it is not known whether the lack of differences in listeners’ cognitive and affective reactions was related to a speaker’s race or a speaker’s idiosyncrasies.

Also, one might argue that the topic of the scripts followed by the speakers in the study influenced listeners’ judgments. Every speaker read a standard statement, but no message is content-free. Additionally, individual cues could be controlled for in the prepared readings, but this does not represent the sort of speech found in real-life situations.

Although these limitations may pose as obstacles to this type of research, several questions are raised which may motivate additional research on listeners’ cognitive reactions to Black and White voices. For instance, the current study did not support the notion that perspective taking may be an approach to reducing negative stereotyping. Further research using various types of perspective-taking exercises may help to establish better methods towards the reduction of stereotyping.
Conclusion

As indicated in this and previous research, stereotypes are not easy to change and will probably persist until there is true educational, economical, and employment equity between all groups of our multiracial society. We still need to gain a greater understanding about the ways in which stereotypes and prejudice are established and manipulated within our daily lives, and hopefully, this knowledge will take us one step closer to knowing how to change them.

However, this research demonstrated that stereotyping is a multi-dimensional model, in that it uses a variety of cues, both physical and vocal, to contribute to this process. Understanding that stereotype activation can occur through identification of voice alone can have implications for interactive media and computer programs using voices, the telemarketing and advertising fields, as well as for application for a job through a phone interview. This research adds to two different bodies of literature, specifically, these studies provide us with more information about stereotyping and person perception and this research also contributes to the literature on language and audio. Perhaps this study will bridge a gap that did not readily exist before, which will lead to future studies on the relationships between variables in each area of research.
References


Bayton, J. A. (1941). The racial stereotypes of Negro college students. *Journal of Abnormal and


between different forms of racial prejudice: A cognitive consistency perspective.


Thomas, E. R. & Reaser, J. (2004). Delimiting perceptual cues used for the ethnic labeling of
African American and European American voices. *Journal of Sociolinguistics, 8*, 54-87.


Table 1

*Intercorrelations among Measured Variables for Study 1*

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</tr>
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<td>.42**</td>
<td>.23**</td>
<td>.49**</td>
<td>.22**</td>
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<td></td>
</tr>
<tr>
<td>9. Leadership</td>
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<td>.56**</td>
<td>.49**</td>
<td>.41**</td>
<td>.23**</td>
<td>.41**</td>
<td>.10</td>
<td>.55**</td>
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<td>.44**</td>
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*Note.*—Numbers in boldface are Cronbach alpha reliability estimates. *p<.05; **p<.01
Table 2

*Mean Cognitive and Affective Reactions to Speakers as a Function of Speakers’ Race for Study 1*

<table>
<thead>
<tr>
<th>Measure</th>
<th>White Speakers (n = 82)</th>
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<td>Social competence</td>
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</tr>
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</tr>
<tr>
<td>Communication</td>
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<td>0.8</td>
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<td>Leadership</td>
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*p < .05; *p < .01, ***p < .001
Table 3

*Intercorrelations among Measured Variables for Study 2*

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<tr>
<td>2. Potency</td>
<td>.42**</td>
<td>.36</td>
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<td></td>
<td></td>
<td></td>
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<td>3. Social competence</td>
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<td>.35**</td>
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<td>7. Non-threatening</td>
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<td>.50**</td>
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<td>8. Communication</td>
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<td>11. Negative affect</td>
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*Note.*—Numbers in boldface are Cronbach alpha reliability estimates. *p<.05; **p<.01
Table 4  
*Mean Cognitive and Affective Reactions to Speakers as a Function of Speakers’ Race for Study 2*

<table>
<thead>
<tr>
<th>Measure</th>
<th>White Speakers (n = 59)</th>
<th>Black Speakers (n = 52)</th>
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<td>Social competence</td>
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</tr>
<tr>
<td>Motivation</td>
<td>4.7*</td>
<td>0.9</td>
</tr>
<tr>
<td>Concern for others</td>
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<tr>
<td>Integrity</td>
<td>4.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Non-threatening</td>
<td>5.5**</td>
<td>1.0</td>
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<td>Communication</td>
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<td>0.8</td>
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<td>Positive affect</td>
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</tr>
<tr>
<td>Negative affect</td>
<td>1.2</td>
<td>0.3</td>
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</table>

*p<.05; **p<.01
Figure 1. The Cognitive Reactions questionnaire consisted of trait adjectives that were either stereotypic of Blacks (and counterstereotypic of Whites; A and C) or stereotypic of Whites (and counterstereotypic of Blacks; B and D). Within each set of stereotypic items, some were positively valenced (A and B), and some were negative in valence (C and D).
### Figure 1

<table>
<thead>
<tr>
<th>Positive Stereotypic of Blacks</th>
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<td>Successful</td>
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<td>Entertaining</td>
<td>Ambitious</td>
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<td>Educated</td>
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<td></td>
<td>Competent</td>
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<td></td>
<td>Motivated</td>
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<tr>
<td></td>
<td>Assertive</td>
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<table>
<thead>
<tr>
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<th>Negative Stereotypic of Whites</th>
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</tr>
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<td>Not Ambitious</td>
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<td>Violent</td>
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</table>
Figure Caption

*Figure 2.* Mean score of listeners as a function of speaker’s race (White and Black) in Study 1.

The asterisk indicates significant differences between groups.
Figure 2

Mean Scores

Variable

Intellect Comp

Potency

Motivation

Integrity

Nonthreatening

White Voices

Black Voices

*
Figure Caption

Figure 3. This is a picture of the experimental room used in measuring seating distances as seen from the perspective of the participant entering the room.
Figure 3
Figure Caption

*Figure 4.* Mean score of listeners as a function of speaker’s race (White and Black) in the non-perspective-taking condition in Study 2. The asterisk indicates significant differences between groups.
Figure Caption

*Figure 5.* Mean score of listeners as a function of speaker’s race (White and Black) in Study 2. The asterisk indicates significant differences between groups.
Figure 5

Mean Scores

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<tr>
<td>Non-threatening</td>
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* indicates significance.
Appendix I

**COGNITIVE REACTIONS QUESTIONNAIRE**

Using the following scales, please circle the number that best corresponds to your impression of the voice.

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<th>Intelligent</th>
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24. Greedy Neutral Generous
   1  2  3  4  5  6  7

25. Violent Neutral Nonviolent
   1  2  3  4  5  6  7

26. Weak Neutral Strong
   1  2  3  4  5  6  7

27. Circle the number that best indicates to what extent you believe that the speaker is a good communicator.

   Very slightly or not at all  A little  Moderately  Quite a bit  Extremely
   1  2  3  4  5

28. Circle the number that best indicates to what extent you believe that the speaker has good leadership ability.

   Very slightly or not at all  A little  Moderately  Quite a bit  Extremely
   1  2  3  4  5
Appendix II

**PANAS**

**Directions**

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer next to that word. **Indicate to what extent is your strength of the emotion you felt towards the speaker.**

Use the following scale to record your answers.

(1) = Very slightly or not at all  (2) = A little  (3) = Moderately  (4) = Quite a bit  (5) = Extremely

<table>
<thead>
<tr>
<th></th>
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<th>Moderately</th>
<th>Quite a bit</th>
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<td>20.</td>
<td>Afraid</td>
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Appendix III

For the following items, please give your best estimates. It is important to try to be as accurate as possible.

For the first set of questions, you will be asked about your past experiences with members of a minority group.

1. Estimate the approximate percentage of Black children in your elementary school. _______%

2. How many Black friends did you have in elementary school? _______

3. Estimate the approximate percentage of Black students in your middle school. _______%

4. How many Black friends did you have in middle school? _______

5. Estimate the approximate percentage of Black students in your high school. _______%

6. How many Black friends did you have in high school? _______

7. Estimate the percentage of Black families in the neighborhood in which you grew up. _______%

Now, think of your current experiences. The next set of questions will involve your current everyday experiences with members of a minority group.

8. In an average week, how many Black people do you have conversations with in the following five conversations?
   a. On campus _______

   b. In recreational activities _______
c. At your job ______

d. In stores ______

e. In dorms or apartment complexes ______

9. Think about your 10 closest friends. How many of your 10 closest friends are Black? ______

10. How many Blacks do you know on a mutual first-name basis? ______

11. How many people have you dated that are Black? ______

12. Comparing yourself to classmates of your own race, how would you rate the extent of your contact with Blacks, compared to that of the average same-race person at your school?

   1  2  3  4  5  6  7
   much less  much more
   contact    contact
Appendix IV

**PSYCHOLOGICAL DISTRESS**
Using the following scales, please circle the number that best rates the current level of your feelings towards meeting the speaker.

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<td><strong>3. Calm</strong></td>
<td>1 2 3</td>
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<td><strong>4. Anxiety</strong></td>
<td>1 2 3</td>
<td>4 5 6</td>
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Appendix V

Instructions: The following questions concern various reasons or motivations people might have for trying to respond in nonprejudiced ways toward Black people. Some of the reasons reflect internal-personal motivations whereas others reflect more external-social motivations. Of course, people may be motivated for both internal and external reasons; we want to emphasize that neither type of motivation is by definition better than the other. In addition, we want to be clear that we are not evaluating you or your individual responses. All your responses will be completely confidential. We are simply trying to get an idea of the types of motivations that students in general have for responding in nonprejudiced ways. If we are to learn anything useful, it is important that you respond to each of the questions openly and honestly. Please give your response according to the scale below.


   1  2  3  4  5  6  7
   strongly disagree  strongly agree

2. I try to hide any negative thoughts about Black people in order to avoid negative reactions from others.

   1  2  3  4  5  6  7
   strongly disagree  strongly agree

3. If I acted prejudiced toward Black people, I would be concerned that others would be angry with me.

   1  2  3  4  5  6  7
   strongly disagree  strongly agree

4. I attempt to appear nonprejudiced toward Black people in order to avoid disapproval from others.

   1  2  3  4  5  6  7
   strongly disagree  strongly agree
5. I try to act nonprejudiced toward Black people because of pressure from others.

1  2  3  4  5  6  7

strongly disagree  strongly agree

6. I attempt to act in nonprejudiced ways toward Black people because it is personally important to me.

1  2  3  4  5  6  7

strongly disagree  strongly agree

7. According to my personal values, using stereotypes about Black people is OK.

1  2  3  4  5  6  7

strongly disagree  strongly agree

8. I am personally motivated by my beliefs to be nonprejudiced toward Black people.

1  2  3  4  5  6  7

strongly disagree  strongly agree

9. Because of my personal values, I believe that using stereotypes about Black people is wrong.

1  2  3  4  5  6  7

strongly disagree  strongly agree

10. Being nonprejudiced toward Black people is important to my self-concept.

1  2  3  4  5  6  7

strongly disagree  strongly agree
Appendix VI

Attitudes Towards Blacks

1. If a Black person were put in charge of me, I would not mind taking advice and direction from him or her.

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2. If I had a chance to introduce Black visitors to my friends and neighbors, I would be pleased to do so.

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3. I would rather not have blacks live in the same apartment building I live in.

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4. I would probably feel somewhat self-conscious dancing with a Black person in a public place.

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5. I would not mind it at all if a Black family with about the same income and education as me moved in next door.

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6. I think that Black people look more similar to each other than White people do.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree

7. Interracial marriage should be discouraged to avoid the “who-am-I?” confusion which the children feel.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree

8. I get very upset when I hear a White person make a prejudicial remark about Black people.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree

9. I favor open housing laws that allow more racial integration of neighborhoods.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree

10. It would not bother me if my new roommate was Black.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree

11. It is likely that Blacks will bring violence to neighborhoods when they move in.

    1  2  3  4  5  6  7
stronlly disagree  strongly agree
12. I enjoy a funny racial joke, even if some people might find it offensive.

1 2 3 4 5 6 7

strongly disagree strongly agree

13. The federal government should take decisive steps to override the injustices Blacks suffer at the hands of local authorities.

1 2 3 4 5 6 7

strongly disagree strongly agree

14. Black and White people are inherently equal.

1 2 3 4 5 6 7

strongly disagree strongly agree

15. Black people are demanding too much too fast in their push for equal rights.

1 2 3 4 5 6 7

strongly disagree strongly agree

16. Whites should support Blacks in their struggle against discrimination and segregation.

1 2 3 4 5 6 7

strongly disagree strongly agree

17. Generally, Blacks are not as smart as Whites.

1 2 3 4 5 6 7

strongly disagree strongly agree
18. I worry that in the next few years I may be denied my application for a job or a promotion because of preferential treatment given to minority group members.

1 2 3 4 5 6 7

strongly disagree strongly agree

19. Racial integration (of schools, businesses, residences, etc.) has benefited both Whites and Blacks.

1 2 3 4 5 6 7

strongly disagree strongly agree

20. Some Blacks are so touchy about race that it is difficult to get along with them.

1 2 3 4 5 6 7

strongly disagree strongly agree
Appendix VII

**FEELING THERMOMETER SCALE**

Using the following scales, please circle the number that best corresponds to your feelings associated with different ethnic groups

### 1. Whites

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<table>
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<th>Very Positive</th>
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<th>Very Negative</th>
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### 2. Blacks

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Author Note

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