

## Article

# Stereotyped L1 English Speakers: Attitude of US Southerners Toward L2-Accented English

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## Abstract

The present study investigates how US Southerners perceive second language (L2) speech by recruiting 170 undergraduate students who spoke Southern American English to listen to recordings of four speakers (US, Bangladeshi, Chinese, and Saudi Arabian) and evaluate their attributes. The listeners were grouped based on their ethnic affiliation: African American, Anglo-American, and Asian/Hispanic/multi-racial. A random half were primed, being asked questions about whether/how other people had negatively commented on their accents. Results showed no effect of priming on speech ratings. Moreover, whilst African American and Anglo-American listeners rated L2 speakers lower than the L1 speaker in almost all aspects, Asian/Hispanic/multi-racial listeners did not.

**Keywords:** language-based discrimination; speech perception; language attitude; multilingualism; standard vs. nonstandard language



Academic Editor: Abdessattar Mahfoudhi

Received: 20 August 2024

Revised: 23 May 2025

Accepted: 13 June 2025

Published: 23 July 2025

**Citation:** Ghanem, R., Miao, Y., Farhesh, S., & Ubaldo, E. (2025). Stereotyped L1 English Speakers: Attitude of US Southerners Toward L2-Accented English. *Languages*, 10(8), 178. <https://doi.org/10.3390/languages10080178>

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## 1. Introduction

Language is frequently perceived as a rule-governed system used as a medium of communication. This medium, however, is not equal across language varieties and speakers. Linguistic features in spoken discourse have been shown to cue social status, shape relationships, and set social norms, and such norms may affect what people choose to buy, like, read, listen to, or interact with. When it comes to standard versus nonstandard languages and language varieties within a given society, nonstandard and second language (L2) speakers of a language are often at a disadvantage (Daniels, 2018). Hence, the “medium of communication” goes beyond its potential framework and sets a line between dominant language users and non-dominant ones, and such boundaries may create crises, injustice, and biases (Dragojevic, 2017).

Accent has been generally defined as the phonological and intonation features of a spoken language (Lippi-Green, 1994). In a narrower sense, accent is used to describe the distinctive differences in the oral productions of first language (L1) and L2 groups caused by either social and/or geographical boundaries (Derwing et al., 2014) such as the variances in the speech patterns among New Yorkers, Chinese learners of English, Southerners, among numerous others. In L2 speech, accent refers to the deviation of the oral production from

the L1 speaker norm or standard. In more recent research, the term *accentedness* has been adopted due to the negative connotations associated with the term *accent* (Munro, 1993). *Accentedness* also denotes the degree to which speech deviates audibly from the “standard” norm of the community, usually the language variety of institutional power and social control. Research into the perception of L2 speech has consistently demonstrated that they are subject to negative stereotypes by L1 and even other L2 speakers of a language (Lev-Ari & Keysar, 2009; Kang & Rubin, 2009; Subtirelu, 2015). Oftentimes this negative perception has been attributed to an audible L1 influence on the target phonological features and structures which renders a speaker’s production accented. Despite the more recent view stipulating that all speech is characterized by a certain *accent* (Lippi-Green, 2012), those who speak with an audible L1 influence are frequently attributed with some negative trait when compared to those who speak a more standard variety of the language (Lindemann et al., 2014).

Throughout the last few decades, the effects of *accentedness* on a listener’s perception of the speaker have been thoroughly explored (see Dragojevic et al., 2020; Lindemann et al., 2014). The consequences resulting from a listener’s predisposition towards linguistic stereotyping have varied greatly, ranging from viewing the speaker as a less attractive individual to assuming their guilt in a serious crime. One thing, however, remains certain: nonstandard productions of a particular language can cue a negative reaction from L1 speakers of that language (Lev-Ari & Keysar, 2009; Paltridge & Giles, 1984). The recipients of these negative views can be both L1 and L2 speakers, as certain nonstandard L1 varieties (e.g., Southern American English, African American Vernacular English, etc.) have also been shown to be discriminated against (Niedzielski, 1999). In fact, even L2 speakers have exhibited negative preconceptions towards nonstandard American varieties (Alford & Strother, 1990). However, very few studies have been conducted to investigate nonstandard L1 speakers’ attitudes towards L2 speaker productions. Does an L1 speaker’s exposure to linguistic discrimination because of the variety they speak make them more or less amenable towards an L2 speakers?

## 2. Literature Review

### 2.1. Attitudes Towards Nonstandard Varieties

The 1960s witnessed a significant rise in the investigation of attitudes and perceptions associated with spoken features. Lambert et al. (1965) were the pioneers in the use of matched guise as well as other speech-related techniques to demonstrate that discrimination and prejudice, which are often associated with social factors, may percolate through language perception as well. Since then, research has revealed that nonstandard varieties are consistently viewed negatively whether in relation to the speaker’s credibility, social attractiveness, intelligence, social status, or other traits (Kristiansen, 2001; Lev-Ari & Keysar, 2009; Wilson & Bayard, 1992), although language attitudes are associated with individual differences (Dewaele & McCloskey, 2015).

Listeners may be biased not only towards accented speech produced by L2 speakers but also towards L1 speakers who speak a variety that is different from their own (Gardner & Lambert, 1972). Giles (1971) demonstrated that British speakers did not rate American English highly in terms of correctness. Interestingly, L2 speakers have also been shown to use this form of ranking when it comes to L1 accents (Alford & Strother, 1990). Studies have revealed that L2 speakers prefer a standard American accent (e.g., Kang et al., 2024), even if they are unable to identify other more regional varieties (Kamisi & Dugan, 1997; Scales et al., 2006). Furthermore, research has exhibited that L1 speakers’ judgments might be colored by some of the information they receive about a speaker. For example, American English speakers from Michigan reported to hear vowel raising when they were told that

the speaker was Canadian, even though the speaker was in fact also a Michigan native (Niedzielski, 1999). Some listeners may even attribute personal and cultural characteristics to the speaker such as, friendliness, wealth, or credibility (Hiraga, 2005; Lev-Ari & Keysar, 2009; Roessel et al., 2020). It is therefore clear that listeners may form preconceptions about speakers even before they hear them speak, which can lead to negative attitudes towards their productions.

The reasons behind such attitudes have been systematically explored in the last few decades. Some studies have shown that attitudes toward languages might arise due to a variety of acoustic and sound quality features, such as speaking at the right volume (Gilbert et al., 1988). Speech rate has also been highlighted as a feature that may influence speech perception (Kang, 2010), and this perception can be further compounded by or interact with other speaker demographic information. For example, a female speaker who speaks at a slower pace might be considered as less intelligent than a male counterpart who speaks quickly (Cargile et al., 1994). Other linguistic features include features that cue a dialectal difference between the speaker and hearer (Niedzielski, 1999). Similarly, the consequences resulting from negative attitudes are also numerous. These repercussions are not simply bound to speakers' social attributes or tendency toward categorizing speakers as in-group or out-group (Heblich et al., 2015; Zahn & Hopper, 1985). Biased decisions hinging on speech productions might have much more detrimental effects on a speaker's fate. For instance, Dixon et al. (2002) asked participants to listen to an audio from a police officer interrogating suspects to guess who might be the real suspect. The listeners consistently rated the Birmingham-accented speaker as sounding more like a suspect. In their study exploring the role of accent on job interviews, Rakić et al. (2011) concluded that regional German accents, such as Bavarian, affect credibility and hireability. Additionally, United Nation officers sometimes rely on a telephone conversation to identify the country of origin of undocumented asylum seekers and determine their immigration status (Derwing et al., 2014). It is therefore clear that attitudes towards nonstandard varieties can have numerous reasons as well as a considerable number of detrimental effects on the speakers (Dragojevic, 2020).

## 2.2. L1 Listener Perceptions of L2 Speech

The concepts of World Englishes and English as a lingua franca have been extensively examined in the past few decades (Jenkins, 2006; Seidlhofer, 2009; Berns, 2008; Kachru et al., 2009). The main focus of this body of research has been on the mutual intelligibility of different varieties and the importance of acknowledging them (Jenkins, 2009; Kirkpatrick, 2014). Since English is being used by L2 speakers on a daily basis, it should no longer belong to the inner circle countries but to all of its users around the world. However, despite this strong call for change, speakers around the world still exhibit negative views towards L2 varieties of their L1.

A wide range of L2 speech studies employing L1 listeners have revealed that L2-accented speech productions are consistently perceived as inferior when compared to L1 productions (e.g., Roessel et al., 2018; Sullivan, 1991). For instance, accented productions were frequently rated lower in professional traits such as credibility and leadership skills (Lev-Ari & Keysar, 2009; Anisfeld et al., 1962), personality characteristics such as friendliness, likeability, and sense of humor (Anisfeld et al., 1962; Ryan & Carranza, 1975), social status (Nesdale & Rooney, 1996), and to some extent even in physical appearance such as height and attractiveness (Anisfeld et al., 1962). L2 speech research that investigates negative perceptions towards L2 speech often does so with a focus on *linguistic stereotyping* (i.e., judgments based on speech productions) and *reverse linguistic stereotyping* (judgments based on nonlinguistic features). For the purposes of this study, only research on linguistic stereotyping will be discussed.

### 2.2.1. Linguistic Stereotyping

Judgments and stereotypes occur due to the undeniable connection among language (e.g., Southern/Midwestern American varieties), ethnic background (e.g., Hispanic, Asian, etc.), and social power (upper vs. lower social class). L2 pronunciation researchers study such inequalities and stereotypes with a focus on linguistic stereotyping or profiling. Linguistic stereotyping occurs when a listener's perception of an utterance, even a brief one, is affected by nonstandard linguistic features (Rubin, 2002). These features may include a variation in the production of a vowel, vocabulary use, insertion or deletion of certain phonemes, or other speech-related features. Linguistic stereotyping stipulates that listeners judge and label speakers even after being exposed to a very short excerpt. This phenomenon was investigated early on by Lambert et al. (1960) in Quebec, who demonstrated that L1-accented speakers did not sound as intelligent as L1 speakers to listener judges. Subsequent studies exhibited a similar trend in their results. Listeners' perceptions prompt them to make inferences about a speaker's beliefs (such as hearing an Arabic-accented English and labeling it as a Muslim accent), social status (e.g., educated or uneducated), and personal characteristics such as perceiving one speaker as nicer than the other (Giles et al., 2006). Listeners might also reveal whether the speaker sounds as part of the in-group or out-group and whom they prefer to cooperate with or compete against (Heblich et al., 2015).

Categorizing speakers by relying on their speech productions has been explored in a variety of contexts, and yet similar results consistently emerge. Ryan et al. (1977) examined L1 speakers' reactions toward Spanish accented English and showed that Spanish accented speakers sound less intelligent to L1 speakers. Lindemann (2003) investigated Midwestern undergraduate students' perceptions and demonstrated that L1 participants find themselves having a superior social status in comparison to L2 speakers (here Korean-accented English speakers). Moreover, speech-linked stereotypes are not limited to a speaker's mental acuity. Ethnicity, social status, likeability, physical appearance (e.g., height and skin color), academic status, and many more similar judgments are made by listeners right after listening to a speech sample (Kang & Rubin, 2009). Accentedness seems to affect the perception of speakers' credibility even when they are delivering pre-prepared prompts. In Lev-Ari and Keysar's (2009) study, 30 L1 speakers of American English rated the truthfulness in trivia statements read by L1 speakers and L2 speakers with mild and heavy accentedness. In line with previous findings, the L1 listeners rated the accented speakers as less credible than the L1 speakers. Statements read by speakers with heavy accents received the least veracity rating, which was attributed to increased cognitive processing. L1-accented speech has been perceived to be ridiculous, frightening, insulting, among other negative descriptions (Hill, 2008; Rubin & Smith, 1990; Shuck, 2004), and even speakers of English varieties, such as non-white varieties, are stereotyped as unpleasant (Lippi-Green, 2012).

When speech-based stereotypes go this far, the so-called 'nonstandard' speakers might lose basic rights, such as getting treated fairly in the job market. For instance, in Germany, Bavarian accent (a regional German accent) job applicants have been shown to receive fewer employment chances (Rakić et al., 2011). In addition, international teaching assistants quickly receive the "poor teacher" label by many undergraduate students. The "Oh No! I have an international professor" syndrome is widely known by American and even L2 undergraduate students and international teaching assistants (Kang & Rubin, 2009). Moreover, students occasionally tend not to demonstrate explicit discrimination, but implicitly and subtly reproduce and reinforce the standard language ideology in evaluating their international teaching assistants (Subtirelu, 2015).

### Linguistic Stereotyping and Priming

Research in applied and social psychology has explored the concept of stereotyping and its malleability (e.g., [Stein et al., 2012](#); [Taylor Reid et al., 2019](#)). The idea is that while stereotypes are relatively consistent in an adult's mind, there is always room or possibility for change and/or reduction of those perceptions ([Dragojevic, 2017](#); [Garcia-Marques et al., 2006](#)). Several factors can aid in the reconsideration or modification of the stereotype, one of which is priming the individual (see [Santos et al., 2012](#)). One form of priming that has been evaluated in relation to stereotype shifts is construct priming, whereby a subliminal and seemingly unrelated prime is provided to the participants in order to shift their (often negative) views on a particular group of individuals ([Elgendi et al., 2018](#)). Construct priming has been demonstrated to be occasionally effective on shifting stereotypes, especially when the concept of stereotype malleability is adopted ([Santos et al., 2012](#)).

However, concept stereotyping may also have adverse and almost reverse effects on the participants' perception of the out-group individuals. This occurrence has been shown to be especially relevant when priming includes images and/or concepts that relate to the in-group ([Steele & Ambady, 2006](#)). In other words, when individuals are primed by showing them concepts that relate to the group they already belong to, this might push them to shun individuals who do not belong to their group in a more aggressive manner. To the knowledge of the authors, this particular form of priming has never been introduced in linguistic stereotyping studies or psychological experiments that investigate the effect of construct priming on language in/out-groups. Since results have not been consistent, it would be quite beneficial for areas of language and social psychology to explore the effect of concept priming specifically on linguistic stereotyping. Studies in this line could also provide empirical support to build on the existing evidence that stereotyping and attitudes can be changed through intervention approaches, paving ways for future studies seeking to change people's attitude and perception using a structured approach (e.g., [Kang et al., 2015](#); [Miao et al., 2023](#)).

### Linguistic Stereotyping and Race

Results from the large number of studies on L1 perceptions towards L2-accented speech samples reflect an unfavorable social judgment toward L2 speakers ([Lindemann et al., 2014](#)). While these investigations shed a light on the general attitude of the L1 speakers towards L2 speakers, there is a paucity on how the different linguistic groups of L1 speakers share or differ in their judgments. Specifically, one group of speakers which is often underrepresented in studies into linguistic stereotyping is L1 speakers who speak nonstandard varieties, particularly those that are often marginalized or viewed as inferior (e.g., AAVE, Southern, Appalachian, etc.).

The few studies that have explored linguistic stereotyping through a racial lens have demonstrated that the listeners' (and sometimes speakers') race does have an effect on their perceptions of an oral production. [Anisfeld et al. \(1962\)](#) reported that their undergraduate gentile subjects in a Canadian university rated the Jewish-accented guise as less favorable than the English guise in all 14 traits evaluated, which included professional traits, personality characteristics, and physical qualities. The consistent ratings obtained by the L2 speakers suggest the devaluation of speakers' personal traits when they speak in an L2-accented variety, and speak volumes about the derogatory stereotypes (e.g., lower social status, less educated) associated with such L2-accented speeches. The findings in this study were later corroborated by similar research such as [Sullivan \(1991\)](#) where White speakers from Chicago rated the L1 speakers speech higher in all traits than the accented productions from four different groups: Chinese, German, Polish, and Mexican. However, one interesting finding from this study is that there seems to be an ethnic bias from the L1

raters as they tend to favorably rate some group of L2 speakers over the others. German speech samples were consistently rated positively in social and physical traits compared to the other three L2 groups. Chinese and Mexican speech samples were consistently placed in the bottom of the ranking expect for one construct (dynamism) showing social favorability of one L2 group over the others.

Additionally, a wide range of studies in the contexts of English-speaking countries (e.g., Canada, the US, etc.), have investigated the evaluations of mixed groups of L1 speakers to regional or social variants and L2 backgrounds (Alford & Strother, 1990, 1992; Anisfeld et al., 1962; Dewaele & McCloskey, 2015; Giles, 1971; Ruivivar & Collins, 2019; Ryan & Carranza, 1975; Sullivan, 1991; Tucker & Lambert, 1969). However, only few studies have employed an exclusive cohort of L1 speakers who use either a stereotyped and/or stigmatized variety to evaluate L2-accented speech to date. Ryan and Giles's (1982) study is one exception where Southwestern listeners were asked to rate French-accented and Spanish-accented speakers. Contrary to previous studies, no significant differences were found in the listeners' attribution of positive ratings (including credibility) between the SAE (Standard American English) speakers and the L2 speakers. One surprising finding was that the Spanish-accented speakers received higher character ratings and the French-accented speakers received higher expertise ratings compared to the SAE speakers. These findings began a new conversation in relation to ratings attributed to L2 productions by L1 listener groups who are linguistically stereotyped themselves. However, Ryan and Giles (1982) study has not been since replicated, and many questions related to nonstandard L1 speakers' judgments remain unanswered. Overall, because language is at the intersection of and intimately related to one's demographic and social backgrounds such as race (Lippi-Green, 2012), we believe that the investigation in this line will provide better understanding of language attitude and speech perception at large.

In response to the dearth in the number of studies that explore groups of L1 listeners who are themselves linguistically stereotyped, this paper employs three groups of listeners (Southern White, Southern African American, and Southern multi-racial) to determine their evaluations of L2 English speakers from Bangladesh, China, and Saudi Arabia. The paper seeks to determine whether facing linguistic profiling increases or decreases listeners' views towards nonstandard varieties, specifically L2-accented speech. To address the issues stated above, the study explored the following research questions:

1. To what degree does priming affect linguistically marginalized L1 speakers' perceptions of L2 speech?
2. To what extent do three race groups (African American, Caucasian American, and multi-racial) rate L2 speakers' differently?
3. How do the three groups' ratings fit the overall trend of L1 speakers' perceptions of L2 speech?

### 3. Methodology

#### 3.1. Participants

##### 3.1.1. Speakers

Four female speakers were recruited in the study. The research team selected all female participants to control for the potential influence of speakers' gender on the results (Gass & Varonis, 1984). All speakers were graduate students in a doctoral program in Applied Linguistics at a public university in the Mid-South. Three of them were highly proficient L2 speakers of English, whose L1s were Arabic, Bangla, and Mandarin Chinese, respectively. They were asked to send a brief recording of their voice, which was then selectively screened by a panel of three linguistic experts. This screening controlled for variations in voice quality, age, and educational background. The panel rated the selected

speakers as highly intelligible yet with an audible L1 influence. The fourth speaker was a Caucasian American who was born/raised (e.g., early immigrants) in a midwestern state in the United States. All speakers had prior experience teaching English at the university level and had earned their master's degrees in English. Knowledge of the speakers' chronological age, age of onset, and duration of the exposure to English would provide additional insights in this particular speaker sample, although this information was unfortunately not collected. Future research could provide a more comprehensive description of its speaker participants.

### 3.1.2. Listeners

A total of 140 listeners took part in the experiment. Listener participants were male ( $n = 62$ ) and female ( $n = 78$ ) undergraduate students enrolled in first-year composition classes at the same university as the speakers. While all interested students were allowed to participate in the survey, only those who self-identified as being born and raised in the southern region of the US (e.g., Tennessee, Mississippi, Alabama, Kentucky, and Texas) were included in the final data set. Their ages ranged from 18 to 26, and they were of mixed racial backgrounds. The participants were asked to identify their own racial backgrounds, which resulted in grouping listeners into three racial categories: African American ( $n = 66$ ), Caucasian American ( $n = 51$ ), and multi/bi-racial ( $n = 23$ ).

## 3.2. Instruments

### 3.2.1. Background Questionnaire

The background questionnaire collected general information from listener participants before participating in the study and rating the speakers. It included questions about their age, gender, race, and their exposure to L1-accented speech at home and in their community. Both primed and unprimed groups responded to all background questionnaire items. The questionnaire was also used to group participants according to their reported racial backgrounds.

### 3.2.2. Speech Files

The speakers were randomly assigned to read one of the four pre-selected passages about the National Civil Right Museum, Belz Museum, Graceland, and Sun Studio, all tourist attractions in the city of Memphis. The texts were adapted from a travel guide of [travel.usnews.com](https://travel.usnews.com) and were almost the same in structure, information discussed (i.e., description of the place, reviews from people, operating hours, and ticket prices), and length (word count ranged between 132 and 134 words). The recording took place in a quiet place and the speakers used headsets to control for volume, clarity, and overall sound quality. They were asked to read the assigned passages at a normal pace several times, and the researchers selected their best recording without self-corrections and unnatural pauses. To do this, the researchers listened to the recordings several times and selected the ones they believed were the most natural. The research team is aware that this would introduce some subjectivity. Therefore, future study could build upon the current approach and develop and validate a more stringent set of criteria. It took about one minute for the speakers to read the passages. A group of graduate students in applied linguistics with diverse first language backgrounds verified the intelligibility and comprehensibility of the recorded speech files. The students rated each sound file on a scale of 1 to 9 and only those with a (unanimous) score of 7 or above were selected by the researchers for the study.

### 3.2.3. Priming

Priming is a technique that was used in this study to direct listeners' attention toward their own nonstandard variety. To prime students, we cued the primed group (50% of the

participants) to reflect on their own accentedness. Some of the priming questions included having the primed listeners revisit possible instances where somebody made a positive or negative remark regarding the way they spoke English, asking them questions regarding whether they ever felt the need to adjust the way they speak because of not sounding comprehensible, and enquiring about the English variety they spoke. The unprimed group received no cues to reflect on their own accentedness. Due to logistical reasons, the exact wording of the questions is not presented, although future research is encouraged to include this information verbatim to improve the replicability of the study.

#### 3.2.4. Speech Evaluation Instrument (SEI)

The speech evaluation instrument used in the study was adapted from Zahn and Hopper's (1985) study. A bipolar rating scale was constructed by pairing the eight positive and negative adjectives indicating personality traits. Half of the items included were assigned to the construct of superiority: (1) educated–uneducated; (2) intelligent–unintelligent; (3) rich–poor; and (4) clear–unclear, and the remaining items measured the construct of social attractiveness: (5) nice–awful; (6) kind–unkind; (7) likeable and unlikeable; and (8) friendly–unfriendly. The ratings were placed on a seven-point Likert scale, and listeners chose their response for each construct by dragging the needle towards their preferred scale.

#### 3.3. Procedure

With the consent of the class instructors, the researchers visited freshman English composition classes to recruit student listeners interested in participating in the study. The participants were informed that the survey aims to evaluate the productions of people who speak English as an L1 or L2 in the United States. After providing their consent to participate, they individually completed the online survey using their mobile phones/laptop in a single 20-min session in their classrooms.

The participants received the survey link through Qualtrics (version number unknown), a web-based software for creating and distributing surveys. They were first instructed to complete the section about their personal background and wait for the instructions before heading to the next section. This was done in order to provide the primed group with more time to complete the additional questions. Through the Qualtrics randomizer function, half of the participants received the background questions asking them of their age, gender, and race (the unprimed group), while the other half received the background questionnaire in addition to the priming questions asking them to reflect their own and other people's views of their spoken variety (the primed group). Participants were not informed that they will be placed in one of two groups.

After completing the background section, both groups of participants were told that they will listen to four short speech recordings to be played on the classroom speakers and then evaluate each speaker online on their mobile device. A sample speech file was first played to check the volume preference of the students and ensure the audibility of files. Each class listened to a randomized order of speakers to counterbalance potential order effects. The researchers played each recording one at a time and gave the students up to two minutes to complete the eight-item online speech evaluation survey for each speaker right after listening. Incomplete surveys were removed from the data analysis, resulting in the current number of participants.

## 4. Results

The first research question explored the effects of priming on marginalized L1 listeners' perceptions of L2 speech. Tables 1 and 2 below illustrate descriptive statistics of the four speakers as rated by both primed and unprimed listeners. As both Tables demon-

strate, the results indicate that the primed group consistently rated participants lower than the unprimed group based on descriptive statistics, except for the SAE speaker's social attractiveness measure.

**Table 1.** Descriptive statistics of superiority ratings by primed and unprimed groups.

|                              | Priming  | N  | M    | SD   | SE   |
|------------------------------|----------|----|------|------|------|
| Superiority: Arabic Speaker  | unprimed | 72 | 5.04 | 0.97 | 0.11 |
|                              | primed   | 68 | 4.99 | 1.03 | 0.12 |
| Superiority: Bangla Speaker  | unprimed | 72 | 5.62 | 0.95 | 0.11 |
|                              | primed   | 68 | 5.35 | 1.05 | 0.13 |
| Superiority: Chinese Speaker | unprimed | 72 | 5.67 | 1.09 | 0.13 |
|                              | primed   | 68 | 5.51 | 1.07 | 0.13 |
| Superiority: SAE Speaker     | unprimed | 72 | 6.17 | 0.92 | 0.11 |
|                              | primed   | 68 | 6.13 | 0.90 | 0.11 |

**Table 2.** Descriptive statistics of social attractiveness ratings by primed and unprimed groups.

|                                        | Priming  | N  | M    | SD   | SE   |
|----------------------------------------|----------|----|------|------|------|
| Social Attractiveness: Arabic Speaker  | unprimed | 72 | 5.20 | 1.21 | 0.14 |
|                                        | primed   | 68 | 5.00 | 1.38 | 0.17 |
| Social Attractiveness: Bangla Speaker  | unprimed | 72 | 5.82 | 1.11 | 0.13 |
|                                        | primed   | 68 | 5.42 | 1.19 | 0.14 |
| Social Attractiveness: Chinese Speaker | unprimed | 72 | 5.25 | 1.31 | 0.15 |
|                                        | primed   | 68 | 4.92 | 1.32 | 0.16 |
| Social Attractiveness: SAE             | unprimed | 72 | 5.92 | 1.20 | 0.14 |
|                                        | primed   | 68 | 6.11 | 0.99 | 0.12 |

Two  $2 \times 4$  Repeated Measures ANOVAs were conducted in order to determine whether there were any significant differences in the SEI ratings (for both social attractiveness and superiority) for all four speakers among the two separate groups of primed and unprimed listeners. Preliminary analysis was performed to ensure that the assumptions were met. Results suggested both listener groups showed significant differences among the speakers for both the unprimed group  $F(3, 284) = 12.2, p < 0.001$  and primed group  $F(3, 268) = 12.3, p < 0.001$ . Tukey's post hoc analyses revealed that the SAE speaker received statistically higher ratings than the other three speakers from the unprimed group, with the SAE speaker scoring significantly higher than the Arabic ( $p < 0.001$ ), Bangla ( $p = 0.005$ ), and Chinese speaker ( $p = 0.013$ ) on Superiority constructs, and significantly higher than the Arabic ( $p = 0.003$ ) and Chinese speaker ( $p = 0.006$ ) on Social Attractiveness measures as well. The primed group ratings exhibited similar trends, with the SAE speaker scoring significantly higher than the Arabic ( $p < 0.001$ ), Bangla ( $p < 0.001$ ), and Chinese speaker ( $p = 0.02$ ) on Superiority, and significantly higher than the Arabic ( $p < 0.001$ ), Bangla ( $p = 0.07$ ), and Chinese speaker ( $p < 0.001$ ) on Social Attractiveness measures as well. The only surprising finding is that the unprimed group did not score the SAE speaker significantly higher than the Bangla speaker when it came to social attractiveness. In fact, both these speakers received relatively high scores, with the Bangla speaker earning an average of 5.82 and the SAE speaker earning a 5.92.

Further analyses in the form of independent  $t$ -tests were performed in order to determine whether the primed and unprimed groups rated the four speakers differently. Results demonstrated that priming did not have a significant effect on most ratings, although the

social attractiveness rating of the Bangla speaker was significantly lower for the primed group than the unprimed listeners:  $t(142) = 2.48, p = 0.014$  (Cohen's  $d = 0.38$ ).

The second research question investigated the differences among three racial groups' (African American, Caucasian American, and multi-racial) ratings of the four speakers. Two Repeated Measures ANOVAs were performed with the superiority ratings as the dependent variable for the first analysis and the social attractiveness ratings as the dependent variable for the second analysis. Results revealed that there was a near significant difference among the group ratings for superiority,  $F(8, 136) = 1.24, p = 0.051$ , and a significant difference in the manner the three groups rated speakers for social attractiveness,  $F(8, 136) = 6.07, p < 0.001$ . Post hoc Tukey tests, however, showed no significant differences in the average ratings among the three groups for any of the four speakers regarding superiority or social attractiveness. Descriptive statistics of listener ratings by racial groups are presented in Tables 3 and 4.

**Table 3.** Group differences in superiority ratings.

|                          |         | <i>N</i> | <i>M</i> | <i>SD</i> | <i>SE</i> |
|--------------------------|---------|----------|----------|-----------|-----------|
| Southern Caucasian Group | Arabic  | 66       | 5.14     | 1.06      | 0.13      |
|                          | Bangla  | 66       | 5.53     | 1.08      | 0.13      |
|                          | Chinese | 66       | 5.67     | 1.23      | 0.15      |
|                          | SAE     | 66       | 6.20     | 0.91      | 0.11      |
| African American Group   | Arabic  | 51       | 4.93     | 0.96      | 0.13      |
|                          | Bangla  | 51       | 5.29     | 0.85      | 0.12      |
|                          | Chinese | 51       | 5.40     | 0.93      | 0.13      |
|                          | SAE     | 51       | 6.13     | 0.86      | 0.12      |
| Multi-Racial Group       | Arabic  | 23       | 4.85     | 0.86      | 0.18      |
|                          | Bangla  | 23       | 5.79     | 1.04      | 0.22      |
|                          | Chinese | 23       | 5.77     | 0.92      | 0.19      |
|                          | SAE     | 23       | 6.03     | 1.03      | 0.21      |

**Table 4.** Group differences in social attractiveness ratings.

|                          |         | <i>N</i> | <i>M</i> | <i>SD</i> | <i>SE</i> |
|--------------------------|---------|----------|----------|-----------|-----------|
| Southern Caucasian Group | Arabic  | 66       | 5.03     | 1.29      | 0.16      |
|                          | Bangla  | 66       | 5.68     | 1.22      | 0.15      |
|                          | Chinese | 66       | 5.03     | 1.29      | 0.16      |
|                          | SAE     | 66       | 6.08     | 1.21      | 0.15      |
| African American Group   | Arabic  | 51       | 5.21     | 1.33      | 0.19      |
|                          | Bangla  | 51       | 5.39     | 1.11      | 0.16      |
|                          | Chinese | 51       | 4.77     | 1.30      | 0.18      |
|                          | SAE     | 51       | 6.05     | 0.90      | 0.13      |
| Multi-Racial Group       | Arabic  | 23       | 5.08     | 1.28      | 0.27      |
|                          | Bangla  | 23       | 6.00     | 1.01      | 0.21      |
|                          | Chinese | 23       | 5.37     | 0.97      | 0.20      |
|                          | SAE     | 23       | 5.71     | 1.20      | 0.25      |

The third research question explored the ways in which the groups rated each speaker and the extent to which the ratings fit the overall trend of L1 listeners' perceptions of L2 speech. Paired sample  $t$ -tests were conducted across the ratings for each speaker within the three racial groups. The African American and Caucasian American group ratings conformed with the general trend, with the SAE receiving significantly higher ratings. The multi-racial group, however, showed slightly different results. Even though the SAE speaker did receive the highest rating for superiority measures, it was not significantly

higher than the Bangla,  $t(50) = -1.2$ ,  $p = 0.235$ , or Chinese speakers,  $t(50) = -1.78$ ,  $p = 0.086$ . More importantly, the multi-racial group demonstrated a rare occurrence when rating for social attractiveness and provided the Bangla speaker ( $M = 6.0$ ) with a higher average rating than the SAE speaker ( $M = 5.71$ ). One consistent finding among all three groups is that the Arabic speaker received significantly lower ratings for both superiority and social attractiveness measures from all three ethnic groups.

## 5. Discussion

This study sought to explore three areas related to L1 speakers of a nonstandard variety of English: (1) the effect of priming on listeners' perceptions, (2) the effect of racial group membership on the SEI ratings, and (3) the extent to which different groups of listeners fit the overall trend of L1 listeners' perception of L2 speech.

The first question investigated whether priming had any effect on ratings given by the primed listeners. Studies have demonstrated that priming a group of individuals may have an opposite effect on the participants, pushing them to converge more with their in-group and shun individuals from other groups in a more drastic manner. The participants in this study were exposed to concept priming, specifically by priming them with memories and images that align with their Southern dialect. What the results of this study have shown is that concept priming for a group of linguistically disadvantaged speakers did not yield results that align with stereotype malleability, but rather cemented (or perhaps awakened) the negative preconceptions L1 speakers hold against accented L2 speakers. This is shown by the consistently lower ratings that the primed group allocated to all three L2 speakers when compared with the unprimed group. In terms of the mixed findings on the relationship between priming and speech perception across studies (e.g., [Taylor Reid et al., 2019](#)), future replication studies are needed for better understanding of this issue with implications for the malleability of language attitudes.

Moreover, results demonstrated that the SAE speaker was rated as the most superior and the most socially attractive speaker, irrespective of listeners' background. More so, there were significant differences among all the comparisons between the SAE speaker and the three other speakers with the primed group. That applies to both superiority and social attractiveness constructs. The findings corroborated previously reported findings in earlier studies where most of the time SAE-accented speaker remains to be the most superior and most socially attractive speaker (e.g., [Lindemann et al., 2014](#); [Sullivan, 1991](#)). These may suggest that even individuals who use (or with a speech trace of) a stereotyped language variety subscribe to the hegemonic model of standard language ideology (see [Lippi-Green, 2012](#); [MacSwan, 2020](#)) which has become indexical of upper social class and/or higher educational attainment. In fact, [Alvarez and Kolker \(1987\)](#) reported that speakers of nonstandard accent (try to) switch to the standard language model when leaving their region for professional growth purposes. The main reason for such intentional "accent" switch is to avoid being negatively judged or risk putting their professional qualities and intellectual abilities into question ([Alvarez & Kolker, 1987](#), as cited in [Dent, 2004](#)). This echoed the findings in the [Kang et al. \(2024\)](#) study where L2 English learners showed strong preference for the inner circle models of English (e.g., American English).

The second research question explored listener perception in relation to their racial background. That is, we were interested in the extent to which listener perception differed according to listener racial background. Results of the study indicated no significant differences between the three racial groups (African American, Caucasian American, and multi-racial) in their perception of L2 speech, meaning that listener perception, at least based on data in our sample, was not related with listener racial background. This, coupled with the fact that listeners tended to negatively evaluate L2 speech as found in the present study,

tentatively suggested that linguistic stereotyping is an overarching, societal phenomenon (Lippi-Green, 2012). That is, it may not be easily mitigated by a stand-alone demographic variable. However, it is important to mention that the hierarchy imposed on the speakers (i.e., which speaker was viewed more or less favorably) did differ across the three groups, and this will be addressed in the discussion of the third research question. Given that no precursor studies investigated listener racial background in relation to listener speech perception, it is difficult to make comparisons across studies or draw any conclusions. Therefore, this finding should be treated with caution, and future replication studies could build on the findings of the current study.

The third research question investigated whether the ratings provided by each of the three ethnic groups aligned with results from other studies into linguistic stereotyping. The first two groups (European Southern American and African American Southern) both showed proclivity towards linguistic stereotyping by rating the SAE speaker significantly higher than the other three speakers for both superiority and social attractiveness. This result is consistent with the literature that has revealed that L1 speakers tend to have negative perceptions towards an accented speaker (Dragojevic, 2017). In such cases, a speaker's phonological features affect other aspects of their lives, which in this experiment, were the listeners' views towards their superiority (e.g., education, intelligence) and their social attractiveness (e.g., kindness and likeability). The mixed ethnic group, however, demonstrated different trends. The differences between the SAE speaker and two of the L2 speakers did not yield any significant differences. In addition, the Bangla speaker received the highest rating for social attractiveness, even higher than the L1 speaker. These findings suggest that this group of listeners seems to veer away from the mainstream findings in the literature that SAE-accented speaker is the most socially attractive when compared with regionally-accented and foreign-accented speeches (e.g., Lindemann et al., 2014; Nesdale & Rooney, 1996). In fact, some studies have pointed out that FL-accented English speakers are perceived as nice and attractive, albeit not as highly ranked as an L1 speaker (e.g., Ryan et al., 1984). One aspect that could be further explored in this interpretation is the benefit of exposing such listener groups to speakers who speak with a "nonstandard" accent such as their immigrant family members, relatives outside the US, and community members of their ethnic group, as well maintenance of a home language other than English (Fan, 2014; Goto & Takeuchi, 2002; Toppelberg & Collins, 2010; Xia et al., 2013). The survey results among bi(multi)racial and multilingual people towards minority ethnic groups suggest more openness and a more understanding attitude to people of other cultures and races (Dewaele & McCloskey, 2015). The multi-racial group was perhaps the only group that focused on the Bangla speaker's intelligibility more than the L1 influence in her speech.

The unanimity of ratings picking the Arabic-accented speaker as the least superior in both the unprimed ( $M = 5.20$ ) and primed group ( $M = 5.03$ ) and the fact that even the mixed racial group rated her significantly lower than the SAE speaker are both highly suggestive of the ideology spawned largely by the negative portrayal of men and women from the Arab-speaking countries in Western media (Nawar, 2007; Niedt, 2011). Arab women are stereotyped as extremist and anti-West. More so, these women are unfairly linked to the incorrect notion that they are uneducated, stay at home as full-time mother/wife, and are passive (Sebti, 2016). Even when women of Arab descent shun the hijab, they seem to be identified and linked to their ethnic affiliation based on their speech patterns i.e., production of pharyngeal and uvular consonants which could trigger negative evaluation affecting communication (Niedt, 2011). In the construct of social attractiveness, the Mandarin-accented speaker was consistently rated as the least socially attractive by both the unprimed and primed listeners (not by the mixed ethnic group, though). This finding is consistent

with other studies that have demonstrated that Mandarin-accented speakers are often perceived as less attractive in some contexts, such as the classroom (e.g., [Cargile, 1997](#)).

## 6. Implications

The broad implication of the present research is that even a short priming has the potential to influence L1 speakers' perceptions, and it is fair to assume that perhaps more extensive training, such as familiarizing L1 speakers with features of L2 speech (see [Yaw, 2022](#)), would have more effective long-term outcomes. Implicit and explicit instruction are two training techniques that educators can apply to help L1 speakers beat language-based discrimination and build a more positive inclination toward L2 speech. That is, these training approaches could be used to help improve intercultural communication between L1 and L2 English speakers of different varieties from the listeners' standpoint. The target students could include L2 English learners in a classroom incorporating diverse English accents ([Miao et al., 2024](#)), L1 English speakers across diverse educational and social contexts such as human resources bias reduction training or undergraduate classroom ([Miao et al., 2023](#)). In [Campbell et al. \(2014\)](#), for instance, the impact of explicitly teaching the phonological features of Korean-accented English to L1 speakers was studied; to illustrate, L1 speakers were informed that Korean-accented speakers confuse /l/ and /r/ while pronouncing English words with /l/ and /r/. The findings showed that receiving explicit instruction regarding the phonological features of Korean-accented English resulted in a sophisticated understanding of underlying issues that cause L1 speakers not to thoroughly comprehend Korean-accented English (see also [Lindemann et al., 2016](#)). Correspondingly, explicitly educating L1 speakers in terms of Korean and English phonological differences helped L1 speakers transcribe Korean-accented English sentences more accurately, compared with the control group where no explicit instruction was offered.

Another common strategy to teach L1 and L2 differences is through implicit instruction. Implicit instruction through exposure to accented speech would affect L1 listeners to better understand accented sentences. Both [Bradlow and Bent \(2008\)](#) and [Sidasas et al. \(2009\)](#) exposed L1 students to Mandarin Chinese and Spanish speakers and asked participants to transcribe accented sentences after a couple of treatment sessions, and as a result of implicit instructions, all participants showed improvement in transcribing accented speech after the exposure sessions. Thus, it is believed that implicit instruction also affects how L1-accented speech is perceived. Another practical takeaway from the results of this study is that trainers could critically think about the effect of priming in relation to its pedagogical usefulness before introducing it into their teaching. Similarly, they should also be aware of the findings where students' racial affiliations may influence how they view different accent varieties.

Exposure to individuals of a different racial, ethnic, or cultural group is also an important element to include in English Composition freshman classes. The implications of such a study extend to L1 speakers' perceptions of their international teaching assistants, professors, and classmates. To improve communication with people from different cultural backgrounds, besides implicit and explicit instruction, L1 speakers can count on communication strategies to facilitate their communication with L2 speakers. Studies have demonstrated that English L1 users are less competent in communicating with English as Lingua Franca speakers than their L2 counterparts. In the same vein, [Henderson \(2005\)](#) and [Sweeney and Hua \(2010\)](#) concluded that L1 users lacked sufficient understanding of intercultural communication, causing less successful communication with multicultural people. [Jenkins \(2006\)](#) stated that international institutions in North America and Britain cannot follow international norms without multicultural policymakers because they lack exposure to ELF students, and they tend to be less proficient in intercultural communication.

In short, the literature pertaining to accommodation in communication strongly suggests that both speakers and listeners must boost their tolerance to welcome linguistic variations (Rogerson-Revell, 2010).

To solve such problems, Subtirelu and Lindemann (2016) listed some communication strategies that can be used by both parties (L1 and L2 speakers) to make sure whether the message has been conveyed successfully or not. First, comprehension checking is recommended to be helpful. To do this, speakers and listeners can ask comprehension questions sooner in a conversation to acknowledge the importance of meaningful communication. Second, communication accommodation should be taken into consideration. For instance, colloquial and idiomatic language are culture-based. It is better to avoid idiomatic and colloquial language to increase ease of communication. To accommodate well, it is also a good idea to understand the discourse community a speaker belongs to.

In short, several implications of the present study can be summarized below. First, given that priming can positively and negatively affect listener perception and attitude, it would be interesting to implement them in a way to positively benefit listener attitude. This requires two additional lines of research: (a) how to implement priming to positively benefit perception, and (b) what is the longevity of any positive outcomes. Second, the present study provides empirical evidence to support listener linguistic stereotyping, corroborating with many previous studies. Specifically, even the ‘stereotyped’ L1 speakers who spoke a regional, less prestigious accent, exhibit negative bias against L2 accents. The present study, as with previous research, has thus motivated intervention studies designed to mitigate people’s perceptual bias and to implicitly and explicitly improve listener perception (e.g., Campbell et al., 2014; Miao et al., 2023). This is because individuals who identified with or were exposed to different racial backgrounds showed to be more equitable in their ratings of native and nonnative speakers. In fact, listener exposure to different racial backgrounds is a naturally-occurring intervention, and future interventions could replicate that in a more controlled fashion. Overall, relevant intervention studies are still limited but will provide more concrete and practical implications (Kang et al., 2015; Subtirelu & Lindemann, 2016). Furthermore, in future studies, different priming stimuli and techniques could be employed to build upon the current study as well as the existing literature. It would also be interesting to compare results of different priming techniques, especially because different priming approaches could potentially lead to different outcomes.

## 7. Conclusions

The current study aimed to determine the reactions of Southerners (both native-born or (im)migrated as a child) towards four English “accents” in terms of superiority and social attractiveness constructs: (1) Arabic, (2) Bangla, (3) Mandarin-accented, and (4) SAE-accented. We also looked at the influence of being primed about their own accentedness to the listeners’ evaluation ratings of these speakers. We further examined the differences in the ratings among the three groups of listeners based on their self-reported racial background: (1) African American, (2) Caucasian American, and (3) multi-racial. The speech evaluation was conducted based on sound alone and without visual or other sensory cues. Listener participants were also not briefed that they would listen to speakers with nonstandard accents nor informed of the speakers’ personal, language, and professional backgrounds.

The results suggest that university (in this case, Southern American) students view accented speech as inferior to the “standard accent” when it comes to superiority and social attractiveness traits. That holds true for both the unprimed and primed listeners and to listeners of African American and Anglo-American backgrounds. The unanimity of the judgment from these two ethnic groups debunks what is earlier hypothesized in this study that those speakers who experience linguistic discrimination or possess linguistic insecurity

in their L1 would be more lenient to people who speak this language with a foreign language influence. Dissenting from the opinion of the majority, however, the minority group of multi-racial individuals did not judge the SAE-accented speech as the most socially attractive. In fact, SAE-accented and Bangla-accented speakers nearly tie in their ratings. The social attractiveness scores of Arabic-accented and Chinese-accented speakers more so are not significantly different from the SAE-accented ratings. This favorable attitude suggests positive affinity to the speakers of “nonstandard” accent.

**Author Contributions:** Conceptualization: R.G.; methodology, R.G.; software, R.G., and Y.M.; validation, R.G., Y.M., S.F., and E.U.; formal analysis, R.G., and Y.M.; investigation, R.G., Y.M., S.F., and E.U.; resources, R.G., Y.M., S.F., and E.U.; data curation, R.G.; writing—original draft preparation, R.G.; writing—review and editing, R.G. and Y.M.; visualization, R.G. and Y.M.; supervision, R.G.; project administration, R.G.; All authors have read and agreed to the published version of the manuscript.

**Funding:** This research received no external funding.

**Institutional Review Board Statement:** The study was approved by the Institutional Review Board (or Ethics Committee) of University of Memphis (PRO-FY2019-219; date of approval unknown).

**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The data in this study is not publicly available. Please consult the first author for further information.

**Conflicts of Interest:** The authors declare no conflict of interest.

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