Distribution Agreement

In presenting this thesis as a partial fulfillment of the requirements for a degree from Emory University, I hereby grant to Emory University and its agents the non-exclusive license to archive, make accessible, and display my thesis in whole or in part in all forms of media, now or hereafter known, including display on the world wide web. I understand that I may select some access restrictions as part of the online submission of this thesis. I retain all ownership rights to the copyright of the thesis. I also retain the right to use in future works (such as articles or books) all or part of this thesis.

Signature:

_Hayley E. Heaton_____ ____4-21-09___
[Student's name typed] Date

Charm or Harm: The Effect of an American Southern Accent on Attitude and Comprehension

by

Hayley E. Heaton

Adviser: Dr. Lynne Nygaard

Department of Psychology

____Dr. Lynne Nygaard____
Full Name of Adviser
Adviser

_____Dr. Susan Tamasi____
Full Name of Committee Member 2, typed
Committee Member

____Dr. Barbara Strock___
Full Name of Committee Member 3, typed
Committee Member

_____4-21-09_____
Date

Charm or Harm: The Effect of an American Southern Accent on Attitude and Comprehension

By

Hayley E. Heaton

Adviser: Dr. Lynne Nygaard

An abstract of
A thesis submitted to the Faculty of Emory College of Arts and Sciences
of Emory University in partial fulfillment
of the requirements of the degree of
Bachelor of Arts with Honors

Department of Psychology

2009

Abstract

Charm or Harm: The Effect of an American Southern Accent on Attitude and Comprehension
By Hayley E. Heaton

The main purpose of this project is to examine how context influences attitudes towards and comprehension of standard-accented and Southern-accented speakers. I am interested in the range of attitudes and judgments people form about how people speak and how these perceptions interact with what the person is saying. Participants listened to passages with either neutral or stereotypically Southern content spoken either in an American Southern English accent or a Standard American English accent. Following the passage, measures of passage comprehension and attitude towards the speaker were administered. Results indicated that attitudes clustered into categories of status and solidarity, in line with prior research. Passages with neutral content were rated higher in status compared to Southern-stereotyped passages. Southern-accented speakers were rated higher in solidarity and standard-accented speakers rated higher in status. Interactions between content and accent indicated standard speakers were more sociable, likeable, and cheerful when talking about Southern content. Comprehension was not affected, despite Southern-accented speakers being rated significantly less comprehensible in pilot tests.

Charm or Harm: The Effect of an American Southern Accent on Attitude and Comprehension

By

Hayley E. Heaton

Adviser: Dr. Lynne Nygaard

A thesis submitted to the Faculty of Emory College of Arts and Sciences
of Emory University in partial fulfillment
of the requirements of the degree of
Bachelor of Arts with Honors

Department of Psychology

2009

Acknowledgements

I would like to thank the SIRE program for their generous grant to help with this project, the speakers who recorded passages for me, and everybody at the Emory's Speech Perception Lab.

Contents

Appendices

Tables

Figures

"Charm or Harm: The Effect of an American Southern Accent on Attitude and Comprehension"

Accent and dialect are integral parts of language. Nobody truly speaks without one. Whether the process is conscious or not, accents and dialects are used to make initial judgments about people. Would anybody expect an expert brain surgeon to speak with a Southern accent? How about if the least intelligent person in the room spoke with an upper class British accent? A great amount of research has already shown the effect accent and dialect can have on people's perceptions of others. The main purpose of this project is to examine how context influences attitudes towards and comprehension of standard and non-standard accents. I am interested in the range of attitudes and judgments we form about how people speak and how these perceptions interact with what the person is saying.

Prior research has demonstrated that people judge individuals differently depending on their accent or dialect. In other words, people attribute certain characteristics to an individual, such as whether he/she is friendly, smart, or trustworthy, just by hearing that individual speak (Giles, 1992; Lambert, 1967; Preston 1999; Edwards 1982; Sebastian and Ryan, 1985). For instance, hearing somebody speak with a British accent might lead a listener to think the speaker is intelligent or has good manners. Accents are defined by phonological differences in how individuals or groups of individuals produce the linguistic segments comprising the same language. These differences include both prosodic features, such as intonation and pitch, and segmental features, such as differences in pronunciation of vowels and/or consonants. Dialects can differ in these features as well, with additional differences in morphology, sentence structure, and lexicon (Lippi-Green, 1997). Daniels (1985) defines a dialect as "a variety

of a particular language which has a certain set of lexical, phonological, and grammatical rules that distinguish it from other dialects" (p. 23). The current project focuses on the use of accents rather than dialects.

Judgments about people based on assumptions about how they speak can cause problems between individuals and groups. Linguistic profiling is used to discriminate against racial and geographic groups. While racial profiling uses visual cues, linguistic profiling uses auditory ones (Baugh, 2003). In order to demonstrate linguistic profiling, Purnell, Idsardi, and Baugh (1999) examined housing discrimination. In four experiments, the researchers showed that speakers of African American Vernacular English (AAVE) and Chicano English (ChE) were discriminated against through linguistic profiling. First, Baugh, a tridialectal speaker of AAVE, ChE, and SAE, called five potential landlords who had advertised an apartment for rent. Each landlord received three calls, one in each dialect. The landlords located in predominantly white areas called the SAE speaker back for an interview more often than the AAVE and ChE speakers. Additional experiments demonstrated that the dialects were identifiable and, in particular, Baugh's dialects were identified with the appropriate group, indicating that the first experiment's findings were not due to Baugh incorrectly producing the dialects. In combination, these experiments indicate that people can identify a dialect after hearing a single word and use auditory speech cues in deciding how to treat others, in this case leading to unintentional (or intentional) discrimination.

Further support for the existence of linguistic profiling, particularly in relation to housing, indicates that linguistic profiling is simply another way to discriminate against certain groups. Squires and Chadwick (2006) examined insurance quotes. Over a period

of seven years in a number of different cities, white and black testers would call insurance companies asking for quotes. The testers were not necessarily heavily accented, but had racially identifiable voices. The quotes were evaluated by price and quality as well as by agent responsiveness both in returning missed calls and giving information. Disparities between whites and blacks were found. The point at which the agent asked what neighborhood the property was located in was also noted. This question was asked significantly sooner when the caller was black. The sooner the question was asked, the less favorable the agent was to the caller. Simply by hearing a voice, these agents made judgments about the speakers, leading to preferential or adversarial treatment.

In another incident, a bilingual meteorologist who could speak both Hawaiian Creole and English (which was accented due to Hawaiian Creole) was denied a promotion, which would have resulted in him speaking on air. The reason cited was that he did not speak standard English. In the court case that followed, he was encouraged to "seek professional help in striving to lessen this handicap" (Matsuda, 1991, p. 1366). People can be denied housing and jobs simply due to the way they speak. People decide whether to listen to what a person says based on accent or dialect. Based on these studies and examples, the effect these perceptions can have on people every day, and the wide variety of accents and dialects in the United States and around the world, accent and dialect perception are areas which deserve a great deal of research.

A number of studies have been conducted examining how listeners make attributions about talkers depending on speaking style. Giles, Henwood, Coupland, Harriman, and Coupland (1992) examined attitudes towards speakers of a standard British accent, also known as Received Pronunciation (RP), and a non-standard British

accent from the Lancashire area in northwest England. Using a matched guise technique, they asked participants to listen to passages spoken by the same speaker in different manners. The matched guise technique, first used in the 1960s by Wallace Lambert and his team, is a method used to eliminate variance due to having two different speakers talk in different languages. A person judged to be a "perfect bilingual" (Lambert, 1967, p. 93) will speak in the dialects or accents being tested. In this way, preference for a certain speaker based on attributes other than dialect or accent is presumably eliminated. Although it is difficult to determine whether a person is actually a perfect bilingual, the matched guise technique is widely used in social psychology and sociolinguistics. In Giles study, a male speaker produced passages in speaking styles designed to elicit different ages, different accents, and different speech rates. Listeners then made attitude judgments about these passages, which they believed were produced by different speakers. A number of hypotheses were generated by Giles and his team, most of which found at least moderate support. RP speakers who were older were judged more competent than younger RP speakers. RP speakers in general were judged as more competent but less benevolent than non-standard speakers. Interestingly, when asked to recall information two days after the initial experiment, the information from supposedly younger speakers was recalled better than information from supposedly older speakers. These findings confirm prior research that standard speakers are seen as more competent but less benevolent, or friendly (Sebastian & Ryan, 1985; Edwards, 1982; Lambert, 1967). Perceived age of the speaker plays a part in competence judgments as well, indicating that people may assume younger speakers have less knowledge and/or authority at least on the topics addressed. That information from younger speakers was

recognized better two days later, however, may negate this assumption. In general, however, it seems that older and RP speakers are seen as more competent, while RP speakers are seen as less benevolent.

Such findings are not limited to Britain or to the English language. The effects of accent and dialect span multiple languages and dialect/accent groups across many countries, indicating it is not a phenomenon reserved for English speakers. That these effects exist in so many different places indicates that attributing characteristics to speakers based on speaking style may be universal. A recent study, for instance, found judgment effects in Turkey. Demirci and Kleiner (1999) asked participants from western Turkey to rate accented speakers (from northern, southern, eastern, and western regions of Turkey) using a variety of different words for traits such as intelligence, attractiveness, and linguistic competence. They found that listeners appeared to have definite biases or stereotypes, particularly negative ones for the eastern Turkish accent. Eastern Turks were judged as illiterate, harsh and backward compared to speakers from the north and west. Participants also filled out questionnaires to evaluate what is good and bad about certain accents, such as acceptability, correctness, and aesthetic quality. Speaking styles from Western Turkey were consistently judged the highest and speaking styles from Eastern Turkey were consistently judged the lowest in terms of correctness and pleasantness. This research demonstrates the importance of understanding language attitudes. They can affect our views of others based solely on how they speak. These attitudes are generally consistent within speakers of particular languages (and even across languages sometimes) and may lead to negative conclusions about an individual before that individual has a chance to be known. This research also shows that attitudes are not unique to the United

States. The way others see individuals with accents is influenced by the social and cultural environment in which they were raised. Language attitudes and stereotypes that stem from them can affect not just the English-speaking population, but have implications for people all over the world, regardless of language spoken.

Prestige of the accent or speaker is one feature of accents that can contribute to the judgments of the listener. Accents seen as more prestigious are viewed favorably in comparison to less prestigious accents. Lambert (1967) examined the more prestigious English Canadian accent in comparison to the French Canadian accent in Quebec. In his study, English Canadian and French Canadian students judged personality characteristics of recorded bilingual speakers, again using the matched guise technique. The listeners believed they were hearing different speakers rather than the same speaker in English Canadian and French Canadian. English Canadian males rated English Canadian speakers as "being better looking, taller, more intelligent, more dependable, kinder, more ambitious and as having more character" (p. 94) than French Canadian speakers. French Canadian students also rated English Canadians higher in almost all respects. In fact, they tended to judge the English Canadians more favorably than their fellow French Canadian speakers. These results demonstrate not only the existence of language attitudes towards different types of speakers, but also the implications of such attitudes. French Canadian speakers have negative attitudes towards their own speech, likely due to views of others. This belief could greatly influence individual speakers, leading them to change the way they speak and/or behave.

Further studies have not only found evidence of attitudes towards language variation, but have also examined the implications these attitudes can have. Judgments of

the speakers as well as how well others understand or comprehend the speakers can be influenced by accent. Choy and Dodd (1976) examined standard English-speaking children in comparison to non-standard Hawaiian English-speaking children. Children listened to short passages spoken in standard or non-standard accents. The children then answered comprehension questions based upon these passages. Their comprehension accuracy and time to respond were measured to evaluate both overall and on-line comprehension, with slower response times and lower accuracy assumed to indicate slower or more difficult comprehension. The results showed that standard speakers comprehended standard speech faster and more accurately than non-standard speech. Hawaiian speakers were faster and more accurate at comprehending speech produced by Hawaiian speakers than by standard English speakers. Teacher judgments of the children were examined as well. Teachers had lower expectations for the nonstandard English-speaking Hawaiian children compared to the standard English speaking children. These results provide evidence that non-standard speakers are comprehended less readily than standard speakers, but that comprehension can depend on the match between speaker and listener dialect or accent. The study also suggests that making assumptions about individuals based on accent can have detrimental effects. Teachers were shown to have lower expectations for their accented students, which indicates not only that judgments are made based on accent, but that individuals act upon these judgments.

Rubin (1998) found substantial evidence of the effect judgments can have on action in a classroom setting. Rather than looking at teachers' attitudes of students, however, he examined the attitudes of students towards their teachers. Rubin references the "Oh No!" syndrome, the panic students get when they discover they have a professor

or TA who is not a native English speaker. He conducted an experiment in which students listened to the same tape-recorded lecture in a Mainstream North American English accent while looking at the face of either an Asian or a Caucasian, whom they were told was the instructor giving the lecture. When the Asian face was presented, not only did students report hearing an Asian accent, but they also were significantly worse at recalling information from the lecture. Separately, however, Rubin found that students who reported having experience with non-native English speakers or who said they were open to learning from the non-native English speakers comprehended the speech better and had more positive attitudes towards the foreign TAs. It would seem that if a person decides he or she is not going to be able to understand an accent, he or she will indeed have difficulty understanding the speaker, but also may judge the speaker differently compared to those who are neutral or hold positive regards for accented speech.

Other studies have also addressed teacher perceptions and language attitudes. Gill (1994) examined perceptions of teachers, stereotypes, and language attitudes for British, North American, and Malaysian English accents. Participants were North American English speakers. They listened to an accented lecture, then answered questions assessing stereotypes, their own perceptions of the speakers, a recall task about the lecture, and questions about facts from the lecture. They were not told that an accent would be present. Listeners perceived the speakers with their own accent, referenced by the author as “non-accented”, more favorably than the speakers with less familiar accents (British and Malaysian, referenced by the author as “accented”), though there were no significant differences between ratings for the British and Malaysian speakers. The stereotype indexes filled out by the listeners indicated that explicit stereotypes were not reported and

the self-report measure was not related to speaker perceptions. Significantly more information was recalled from the non-accented lecture in comparison to the accented lectures when questions were asked about factual information from the lecture. These results again demonstrate the impact accent can have on perception of the speaker and comprehension of information presented by the speaker. An effect such as this in a classroom, or another career, should be noted due to the implications for both the teachers and the students.

Language attitudes can have a profound effect in hiring of individuals as well. De la Zerda and Hopper (1979) examined this effect in Mexican-accented speech in Texas. Hiring interviewers were presented standard-accented, or Mexican-accented voices. They then answered questions evaluating language attitudes and likelihood of hiring the individual in either a supervisory position, a skilled technician position, and a semi-skilled worker position. Mexican-accented speakers were judged more likely to be hired for lower status positions while standard-accented speakers were given higher level positions. Thus, language attitudes may impact what kind of job a person is hired for and, therefore, how much money he or she can earn.

In general, even outside a social communicative context, non-standard and/or accented speech appears to be less intelligible and is more difficult to comprehend (Bent & Bradlow, 2003; Choy & Dodd, 1976; Van Wijngaarden, Steeneken & Houtgast, 2002). According to Munro and Derwing (1995), intelligibility is the understanding of what has been said. For Munro and Derwing, this was measured by accuracy in sentence transcription. In comparison, comprehensibility is the level of difficulty associated with this understanding. Accented speech appears to affect both of these aspects of spoken

language understanding. Munro and Derwing (1995) had subjects listen to sentences produced by Mandarin (accented) and English (unaccented) speakers, then judge whether the sentences were true or false and write out the sentence exactly. The written task evaluated intelligibility, while time to make the true/false response was recorded to indicate comprehensibility. Both intelligibility and comprehensibility were significantly affected by accent. Accented sentences were transcribed less accurately and took longer to rate as true or false than unaccented sentences.

Effects on intelligibility extend beyond foreign-accented speech to accents due to within-language variation. Floccia, Goslin, Girard, and Konopczynski (2006) presented listeners with sentences spoken in three French dialects. Their task was to determine whether sentence-final words were actual words or pseudowords. The participants were monolingual French students who had grown up in the Franche-Comte region. Different regional French accents were designated as home, familiar, or unfamiliar to the participants. They found that when sentences were spoken in an unfamiliar accent, it took longer to make the lexical decision. When presented with an unfamiliar accent, comprehension can be slowed. It takes more mental effort to make lexical decisions when the information is presented in an unfamiliar accent. Overall, these results demonstrate that nonstandard accents are processed more slowly than standard accents.

African-American English (AAE) is a dialect which has been found to differ from standard English with respect to comprehension. Levy and Cook (1973) examined attitudes to AAE by asking African-American second graders to listen to stories and answer comprehension questions spoken in either a standard or nonstandard (AAE) dialect. The children also rated the story on how much they liked it, how much they liked

the person telling it and how much they thought their friends would like it. Overall, the results indicated that the stories in standard English were comprehended better than stories produced in AAE regardless of the children's competence in either dialect. The standard dialect is comprehended more readily than the nonstandard dialect, as elicited by comprehension questions from a spoken passage.

In sum, we know a great deal already about attitudes towards speech. People judge others based upon speech style, including both dialect and accent. When making these judgments, people prefer a higher prestige, or higher status, speaking style in comparison to lower prestige or status. We also know that people use their speech judgments not only to assess intelligence and friendliness, among other factors, but also to make decisions regarding housing and jobs. Comprehension of information can be affected by speech styles and the resulting judgments as well.

Of interest in the present experiment is the American Southern accent, one of the many regional varieties of speech in the United States. Attitudes towards regional dialects and accents differ from attitudes toward foreign accents and dialects and dialects such as AAE because attitudes towards regional speech are not confounded with race or ethnicity. A person with an American Southern accent could be African American, Asian, Caucasian, or Hispanic. A good deal of research has been done concerning dialect regions of the United States. As a diverse nation, one way to separate and identify oneself is by where one lives. With no physical attributes being indicative of different regions, manner of speaking may fill the gap and become the identifying factor.

Clopper and Pisoni (2004) examined what attributes distinguish Southern speech from other regional accents. In their study, 66 male speakers from the TIMIT corpus were

selected, equally representing six different regions in the United States, New England, North, North Midland, South Midland, South, and West. An acoustic analysis was performed on these sentences, revealing a number of differences, including Southern usage of fricative voicing. A second experiment was conducted to determine sounds untrained listeners use to identify accents. The participants listened to sentences spoken by the accented speakers and then identified to which of the six regions each speaker belonged. Multiple regressions were used to determine which phonetic cues differentiated speakers as belonging to certain regions. These sounds that distinguished American Southern English (ASE) were /u/ fronting, for example saying *dyuke* instead of duke, monothongization of the 'oi' diphthong, such as saying sole instead of soil, /oʊ/ diphthong, like saying *gou* instead of *go*, /oʊ/ backness, which indicates that a person is using the back of his or her mouth to articulate rather than the front, and /æ/ diphthongization, such as saying /rɑɛg/ instead of /ræg/. Aside from demonstrating differences in American Southern English compared to other regions, this experiment confirmed that untrained listeners can identify accents, which is useful information for those using auditory stimuli to elicit stereotypes of different regions.

Since Southern speech is identifiable by listeners, speech samples can be used to examine the processes underlying stereotyping individuals on the basis of regional speaking style. Like with any group, there are stereotypes associated with different regions. The Southern dialect in particular has been stigmatized over the years. Oftentimes, on television, in movies, and in real life, people mimic a Southern dialect or accent to indicate when somebody is unintelligent. One example can be found in an episode of the show *Supernatural*, in which a family who hunts and kills other people for

fun in Minnesota inexplicably has a Southern accent, among other stereotypical hillbilly traits, and not a good one at that. Shows like *The Beverly Hillbillies* also exemplify these stereotypes. Cooke-Jackson and Hansen (2008) describe media portrayals of Southerners, including *The Beverly Hillbillies, The Andy Griffith Show, Hee Haw,* and the movie *Deliverance,* to name a few.

Preston (1999) had students draw borders around areas where people speak differently on an unlabelled map of the United States. Although a number of definitive and distinct speech regions were identified, the South was identified more often than any other region, indicating that its speech is very recognizable as being different. After this task, the students rated different attributes for each speech region. These attributes were divided into two statistically-determined factors, which is typical or representative of research examining linguistic attitudes. Attributes generally appear to group into factors representing (1) status and (2) solidarity. The first factor included the attributes smart, educated, normal, Good English, no drawl, no twang, and fast. Casual and down-to earth were negatively correlated with the first factor. The second includes the attributes polite, friendly, down-to-earth, and, to a lesser degree, normal and casual. Preston found that Southern speech styles were considered more friendly, but less correct than standard speech styles. Preston's evidence demonstrates specifically that those who use Southern speech are viewed differently in terms of these attributes. Southerners are seen as rating higher in measures of solidarity and lower in measures of status.

These and other similar findings (e.g., Giles et al., 1992) suggest that regional accents significantly influence our perception of others. The judgments studied by Giles, Preston, and others are indicative of stereotyping. According to Hilton and von Hippel

(1996), stereotypes are defined as "beliefs about the characteristics, attributes, and behaviors of members of certain groups" (Hilton & von Hippel, 1996, p. 240). Stereotypes are a way for people to quickly take in what is around them (Reed, 1986). In the case of those with regional accents, there are fixed images that are associated with certain regions. Oftentimes, these appear to be negative images. The stereotypes usually come from accurate observations of a small group. They are then projected onto all members of the group, even though the stereotype is based on a small sample of the regions' inhabitants (Cooke-Jackson & Hansen, 2008).

There has been a great deal of research on stereotypes from a social psychological point of view, leading to a number of different views. Of particular interest is the stereotype content model, first addressed by Fiske, Cuddy, Glick, and Xu (2002). The model is based upon the notion that stereotypes can be split into two dimensions, competence and warmth, and that these stereotypes are formed based upon status and competition, or power. Competence and warmth can be associated with social groups to differing degrees unique to that group and lead to prejudices. This model is of potential relevance to language attitudes because of its focus on competence and warmth. Competence and warmth may be equated to status and solidarity, the two factors under which language attitudes have a tendency to cluster. In terms of competence, those who are perceived as high status with more power will be considered more competent. In terms of kindness, out groups are generally seen as kinder if they pose no competitive threat to the in-group. These two perceptions serve a purpose in society, though the purpose is somewhat varied depending on the person and view adopted. For instance, if an out-group poses a threat to the in-group in competition, it would be advantageous for

the in-group to form a negative stereotype about the out-group, thus potentially lowering support for them. If the out group does not pose a threat, stereotyping them as kind not only demonstrates that lack of threat but also characterizes the out group as being almost deferential to the in group (Fiske, Cuddy, Glick, and Xu, 2002).

According to Hilton and von Hippel (1996), stereotypes can form for a number of different reasons. These reasons depend on context. For instance, when first meeting a person, it might be easier to stereotype them based on a few features. Thus, the stereotype allows an individual to simplify information being taken in during the interaction. As time goes by, the person would get to know that other person better and would likely (and hopefully) depend less and less on the initial stereotype. Stereotypes could also form due to conflicts between groups or to associate others with social groups. They are usually based in reality to an extent (although it may be one individual's reality), but ignore individual differences. After the formation of these stereotypes, maintenance depends primarily on motivation. If one is motivated to like another person, he or she would more easily dismiss prior stereotypes than if one is not motivated to like (or is motivated to dislike) the other person.

Research on stereotypes has revealed a number of Southern stereotypes, including the good old boy, the hillbilly, and the southern belle (Cooke-Jackson & Hansen, 2008; Reed, 1986). Preston (1999) demonstrated that American Southern speech is rated as less intelligent. As speech is one of the more static ways to determine social position and nonstandard varieties of language are typically viewed as indicating lower status (Luhman, 1990), those who speak with an American Southern accent tend to be stereotyped as less intelligent.

A great deal of the research on accent perception has centered on judgments drawn about people based on their speech. However, it is less clear how the context, or the content of what is being said, might interact with this perception. My research was designed to examine how the content of what is being said influences how people 1) perceive and 2) comprehend speakers of Southern-accented English.

For the purposes of this thesis, context is defined as the topic or topics referenced in a speech sample, in other words, the passage content. There are differing forms of context. Context in the form of information related to the subject (location, occupation, etc) has an effect on judgments of speaker attributes (Wittenbrink, Judd, & Park, 2001; Barden, Maddux, Petty, & Brewer, 2004). One example of the role of context is in the domain of racial judgments. Prior research has demonstrated that placing an African-American face in a ghetto setting activated racial bias while, in a church setting, these biases disappeared. This effect could have been due to the contexts used, as a ghetto may raise negative feelings while a church could elicit positive feelings (Wittenbrink, Judd, & Park, 2001). Barden, Maddux, Petty, and Brewer (2004) examined this effect as well. They showed participants pictures of white and black faces with differing backgrounds (a classroom and a basketball court). The participants then responded to a series of adjectives, indicating whether each was good or bad. Reaction time to the adjectives was the dependent variable. Reaction times were faster when the black faces (faster in comparison to white and Asian faces) appeared in association with the basketball court and slower when they appeared in association with the classroom, indicating bias based upon context. A second experiment put the faces in the roles of factory worker, prisoner, and church goer. The participants responded to a 9-point scale to adjectives in response to

white and black faces in the different contexts. Different contexts again demonstrated different biases with the black face being more favored in the factory setting, less favored in the prison setting, and equally favored compared to white faces in the church setting. These experiments demonstrate that context and role of the individual in a social setting significantly impact evaluation of that person.

The current experiment is centered on Southern-accented speech in comparison to standard-accented speech. Using these accents, I examined the role of context by changing the content of passages read in the two accent varieties to be either stereotypical or not of Southern regions. My goal was to see how passage content would impact judgments of the speakers as well as comprehension of the passages. Participants listened to two passages, either two that were judged to be stereotypically Southern (hunting and cooking) or two that were judged not stereotypically Southern (medicine and investment). These passages were read by both standard and Southern-accented speakers. Following each passage, the participant answered comprehension questions and completed an attitudes questionnaire. Thus, two main factors were manipulated, content of the passage and accent of the speaker.

I predicted that ratings of individual attributes would vary with both type of accent and passage topic. Individuals speaking a Southern accent were expected to be rated as less competent and more friendly than individuals speaking a standard accent. In addition, however, I predicted that dialect ratings would vary depending on passage topic. Participants were expected to rate Southern-accented speakers as relatively more competent with the hunting/cooking passages, and relatively less competent in medicine/investment passages. Participants were expected to rate standard-accented

speakers as relatively more competent with the medicine/investment passages and less competent with the hunting/cooking passages.

Similarly, I predicted that accent type would influence the comprehension of passage content. Overall, listeners were expected to comprehend the standard-accented speakers better than the Southern-accented speakers. More specifically, I expected that participants would comprehend the passages about medicine and investment better when read in the standard accent than when presented in the Southern accent. Likewise, the passages about hunting and cooking read in the Southern accent were expected to be comprehended relatively better, as this area is more closely associated with the South. In short, passages with congruent accent and theme (standard-accented medicine/investment and Southern-accented hunting/cooking) were expected to have speakers rated as more competent and would be comprehended better than passages with incongruent accent and theme (standard-accented hunting/cooking and Southern-accented medicine/investment).

Methods

Participants

Participants were 76 undergraduate students at Emory University. Participants either received $10 for their participation or were recruited from introductory psychology classes and received research credit for their participation. Of these 76, 12 could not be used due to technical error, prior speech or hearing disorders, first language not being English, or having participated in pilot studies. Of the 64 remaining subjects, 51 were female (79.7 percent of the sample) and 13 were male (20.3 percent of the sample). A variety of regions were represented, including the North (n = 6), Northeast (n = 19), South (n = 19), Midwest (n = 3), Southwest (n = 3), and West (n = 5). The Northeast and

South were most represented, each with 19 participants, or 29.7 percent of the sample. Florida, Texas, and the East Coast (Virginia and Maryland) were counted separately and comprised 4, 2, and 3 people from the sample. The Northwest was not represented.

Stimulus materials

Passages

Four passages were constructed to elicit regional stereotypes. Two passages were intended to be consistent with stereotypical Southern activities and two passages were intended to be inconsistent or neutral with respect to Southern stereotypes. A hunting passage describing the procedure of loading a gun and a cooking passage instructing preparation for a soufflé were intended to be associated with the South. A medical passage detailing the procedure of an appendectomy and an investment passage explaining the process of short selling were intended to be neutral with respect to regional stereotypes. Passages were matched on number of words, number of sentences, and on reading difficulty. Each contained between 220 and 230 words, 14.5 to 15 lines and all the passages were matched for reading ease and grade level using the Flesch Reading Ease scale and the Flesch-Kincaid Grade level scale (Flesch, 1948). Passages scored between 58 and 67 on the Flesch Reading Ease scale, in which lower scores indicate more difficult texts. All passages scored an 8.5 on the Flesch-Kincaid Grade Level scale, in which lower scores indicate less difficulty. Both Flesch scales use formulas based upon the average number of words in each sentence and the average number of syllables in each word. Each passage contained similar numbers of phonemes associated with American Southern English (ASE) accents in accordance with Clopper and Pisoni (2004). In their paper, Clopper and Pisoni identified five phonemes untrained listeners used to

differentiate speakers as belonging to the South. These were /u/ fronting (*dyuke* instead of *duke*), 'oi' monothongization (*sole* instead of *soil*), /oʊ/ diphthong (/goʊ/ instead of /go/), /oʊ/ backness, which indicates that a person are using the back of his or her mouth to articulate rather than the front, and /æ/ diphthongization (/rɑæg/ instead of /ræg/). Because the passages contained the same words and sentence structure for each speaker, the only difference was the manner in which the speakers read them phonologically. Word choice and grammatical constructions were constant across speakers. Therefore, accent differences, rather than dialect differences, were the manipulation of interest. See Appendix A.

Twelve undergraduate students recruited from psychology classes for course credit participated in pilot tests for passage stereotypicality. Raters were asked to report on a scale of 1 (not at all characteristic) to 5 (very characteristic) how characteristic passage topics were for seven American regions. Table 1 lists average ratings as a function of region for each passage type. The regions were the North/Great Lakes, Northeast, Midwest, South, Southwest, West Coast, and Northwest. All the categories other than the South were collapsed and compared to the ratings for the South. The ratings confirmed that regional stereotypicality ratings for the medical (t (11) = 4.43, p = .01), investment (t (11) = 4.43, p = .01), and hunting (t (11) = 4.43, p = .01) passages were all significantly different for the South than for the other regions. Ratings of the cooking passage just missed significance (t (11) = 1.88, p = .09). The hunting and cooking passages were rated as being more associated with the South and the medical and investment passages were rated as being more associated with regions other than the

South. The average ratings indicate that the passages were characteristic of the intended regions.

Recording

Standard-accented and Southern-accented male and female speakers were recorded reading each of the four passages. The standard-accented speakers were a married couple from Cleveland, Ohio. The male was 56 years old with a Ph.D. in clinical psychology. He grew up in Cleveland and lived in Pennsylvania for three years during college before returning to Ohio. His parents grew up in Pennsylvania and Ohio. The female standard-accented speaker was 53 years old with a JD. She grew up in Ohio and left only to pursue her college degree in Washington, DC for three years before returning to Ohio. Both her parents grew up in Cleveland. The Southern-accented speakers were a married couple from Anderson, South Carolina. The male was 52 years old with a BS. He spent the majority of his life in Tennessee, where he grew up, and South Carolina. His parents were also raised in the South, specifically North Carolina and Tennessee. The female Southern-accented speaker was 48 years old with a BA in Business Administration and accounting. She grew up in Tennessee and otherwise only lived in South Carolina. Both her parents grew up in northeast Tennessee.

Pilot tests were performed to ensure that the speakers were sufficiently accented, that their accents were associated with the intended regions, and that their utterances were judged comprehensible. Fifteen participants were recruited from undergraduate psychology classes and participated for course credit. The first three sentences of each passage were played to participants over headphones and they were asked to rate on a scale of 1 (not likely) to 5 (very likely) how likely each speaker was from each of the

seven regions specified in the passages pilot testing. Table 2 shows average ratings for each speaker as a function of region. Ratings for all regions except the South were collapsed for analysis and regional likelihood ratings were compared. Standard-accented speakers were rated as being significantly less likely to be from the South (t (14) = 5.73, $p < .01$) than from other regions. In contrast, Southern-accented speakers were rated as being significantly more likely to be from the South (t (14) = 12.76, $p < .01$) than from other regions.

To give more detail, the standard male speaker was rated as neutral, with the highest rating being 3.6 out of 5 for the Northeast. He was judged least likely to be from the South, receiving a rating of 1.53 for that region. The standard female speaker was also neutral with her highest ratings being 3.59 and 3.12 for the North and Northeast respectively. She was rated least likely to be from the South, receiving a rating of 1.48 for that region.

The Southern male speaker was rated most likely to be from the South, receiving a 4.33 rating. The next closest rating was 3.3 for the Southwest, followed by 2.37 for the Midwest. The Southern female speaker was also rated most likely to be from the South. She received a 4.4 rating for the South, 3.47 for the Southwest and between 1 and 2 for all other regions.

Speaker comprehensibility was evaluated as well. The passage excerpts from each speaker were rated on two types of comprehensibility based upon the sound of the recording and the speaker. The first was ease of understanding in relation to sound quality on a scale of 1 (not at all comprehensible) to 5 (very comprehensible). The standard and Southern-accented passages were not rated as significantly different,

although the standard-accented passages were rated slightly more comprehensible, receiving an average rating of 4.5 out of 5, while Southern-accented passages received an average rating of 4.25 out of 5. The second type of comprehensibility referenced ease of understanding for the passages in general on the same 1 to 5 scale. The passages were rated significantly different in this case. Standard-accented passages had a mean rating of 4.68 while Southern passages had a mean rating of 4.12 (t (14) = 4.14, $p < .01$). This difference may have been due to the Southern accents being considered less comprehensible by participants rather than actual difference in how well individuals could comprehend each passage. This difference in comprehension measures will be revisited in the discussion section. As expected, the Southern-accented passages were also rated as significantly more accented than the standard-accented passages (t (14) = 10.08, $p < .01$).

Comprehension measure

A set of 10 comprehension questions was developed for each passage and pilot tested by 12 undergraduate psychology students for research credit. Participants read the passage and answered the corresponding comprehension questions for each passage. Questions reflected comprehension of general information from the passage, such as "According to the passage, when assessing appendicitis, name one of the symptoms the surgeon looks for" and "What is the complicated element of soufflé preparation?" each of which were specifically referred to in the preceding passages (See Appendix B). Independent means t-tests were run comparing each of the passages to assess baseline comprehension for each passage. Pairwise comparisons revealed that none of the

passages were significantly different from one another, indicating that each was similarly comprehensible.

Attitudes Assessment

An attitudes assessment was developed to evaluate judgments about the speaking style of each talker (See Appendix C). This assessment was administered following the comprehension questions. The scale consisted of 22 adjectives formatted and adapted from Giles et al. (1992) and Preston (1999). The scale was intended to assess a range of attitudes about the speaker and speaking style. The attitudes of most interest for the current experiment were characteristics of status and competence such as *intelligent, smart, competent, Good English* and *well-educated*, and characteristics of sociality such as *friendly, sociable, trustworthy, sympathetic,* and *nice.* These characteristics have been found in the previous literature to differ significantly depending upon dialect or accent (Giles, 1992; Lambert, 1967; Preston 1999; Edwards 1982; Sebastian and Ryan, 1985).

Procedure

Participants were presented passages after which they answered comprehension questions and completed the attitude measure scale. Participants were randomly assigned to one of four conditions, each group listening to two different passages. Sixteen participants comprised each condition. Each group listened to a male and female speaker from the same region reading different passages with the same regionally stereotyped content. For example, one participant would listen to the male standard-accented speaker read the medical passage and the female standard-accented speaker read the investment passage. Another participant would listen to the same speakers read the hunting passage and cooking passage respectively. Another would listen to the male standard-accented

speaker read the investment passage and the female standard-accented speaker read the medical passage, etc. Within each group, order in which the passages were heard was counterbalanced.

Passages were presented auditorily over headphones at a comfortable listening level. The presentation of passages was controlled on-line by E-Prime experimental software and responses to the attitude scale were collected via computer keyboard. Participants were instructed to listen carefully to each passage and that they would then be asked a series of questions about both passage content and about the speaker's voice. A fixation cross appeared before each passage and then after each passage was played, instructions for the next phase of the experiment were presented.

Comprehension Assessments

After the passages were presented, the comprehension measure was administered. Participants were asked to answer ten questions using pen and paper. The pen and paper were placed next to the participant, turned facedown so that the participant could not see the questions. After the passage, a screen would appear telling the participant to turn over a color-coded paper (medical indicated by a blue dot on the back of the paper, investment by red, hunting by green, and cooking by yellow). Participants wrote their answers then pressed a button on the computer to continue to the attitudes assessment.

Attitudes Assessment

The attitudes assessment was administered following the comprehension assessment. Participants rated each speaker (on a scale from 1 to 7) on each of the 22 adjectives. For instance, the participant would be presented with the following:

Incompetent 1 2 3 4 5 6 7 Competent

Ratings were collected on-line with each adjective pair being presented one at a time. The next set of adjectives appeared automatically once the participant input their rating for the adjective set on the screen.

Results

Table 3 shows mean ratings scores and standard deviations for each of the 22 attitude measures as a function of type of passage content and speaker accent. The male and female speakers were not rated significantly differently and, as such, ratings means were collapsed across the two Southern and the two standard talkers. Likewise, ratings were collapsed across individual passages to yield means for Southern-stereotyped and neutral content passages.

In order to evaluate the extent to which passage content and accent type influenced comprehension, a 2 x 2 analysis of variance (ANOVA) was conducted using the mean percent correct comprehension as a dependent measure. There were no significant main effects of passage or accent nor was there an interaction. Therefore, comprehension will not be discussed further in this section.

Factor Analysis

In order to determine if the rated adjectives clustered together in any way, a factor analysis (principle components analysis with varimax rotation) was performed on the attitude ratings to the 22 adjectives used to assess listeners' judgments of speaker attributes. Five factors emerged accounting for 71.72% of the variance. The first two factors of the analysis accounted for 54% of the variance and were consistent with previous research (Giles, 1992; Preston, 1999). This was the least number of factors accounting for most of the variance according to a Scree test. The first factor or

component corresponded to a construct that has been characterized as status or intelligence in previous work (34.82% variance, eigenvalue = 7.7). Attributes that loaded highly on this factor were *Good English* (0.74), *smart* (0.82), *honest* (0.61), *trustworthy* (0.71), *intelligent* (0.86), *important person* (0.65), *organized* (0.72), *competent* (0.81), *rich* (0.47), *well educated* (0.88), and *reliable* (0.81). The second factor or component corresponded to whether the person was pleasant or friendly, described as solidarity in previous research (19.19% variance, eigenvalue = 4.2) Attributes that loaded highly on this factor were *amusing* (0.46), *sociable* (0.74), *cordial* (0.60), *cheerful* (0.78), *nice* (0.71), *like* (0.77), *friendly* (0.85), and *polite* (0.62). See Table 4 for all factor values under these two components. The differential loading of subsets of the rating scale suggests that raters were evaluating speakers along at least two dimensions corresponding to their status or competence and to their solidarity or sociability.

Effects of passage content and accent on judgments of speaker attributes

In order to evaluate the extent to which passage content and accent type influenced listeners' ratings of speaker attributes, a series or 2 x 2 analyses of variance (ANOVAs) were conducted using each of the 22 adjective ratings as a dependent measure. Passage content (Southern typical versus Standard) and accent type (Southern versus Standard) were between subjects factors. Individual analyses, while increasing the possibility of Type I errors, allowed for an examination of the sets of attributes that were influenced by passage content, accent, and their interaction. Finally, two overall 2x2 ANOVAs were conducted using a *status* measure that collapsed across ratings with high loading (> .40) on Factor 1 and a *solidarity* measure that collapsed across ratings with high loadings (> .40) on Factor 2. First, I report the significant main effects involving

passage content for each attribute rating dependent measure. Then, I report significant main effects for speaker accent and then I report significant interactions between content and voice. Finally, I report the results of the overall ANOVAs on the composite measures of status and solidarity.

Passage Effects

Recall that each of the attributes was analyzed individually in a 2x2 ANOVA comparing accent and passage content. The analyses showed that when the speaker was reading the standard content passages, he or she was rated significantly more intelligent ($F(1,60)= 7.83$, $p < 0.01$) more educated ($F(1,60) = 17.49$, $p < 0.01$), more important ($F(1,60) = 7.06$, $p = 0.01$), richer ($F(1,60) = 19.06$, $p < 0.01$), and as having better English ($F(1,60) = 8.19$, $p < 0.01$) than when the speaker was reading Southern content passages. Note that each of these attributes was associated with the status factor derived from the factor analysis.

Speaker Effects

Several main effects of speaker accent were found as well. The analyses revealed that when the speaker was talking with a standard accent, he or she was rated significantly more intelligent ($F(1,60) = 4.14$, $p = 0.05$), more arrogant ($F(1,60) = 5.47$, $p = 0.02$), smarter ($F(1,60) = 4.49$, $p = 0.04$), better educated ($F(1,60) = 5.02$, $p = 0.03$), and as having better English ($F(1,60) = 12.90$, $p < 0.01$) than Southern-accented speakers, regardless of passage type. These attributes all appeared to be associated with the status factor that emerged from the factor analysis. When the speaker was talking with a Southern accent, he or she was rated as more amusing ($F(1,60) = 8.16$, $p < .01$), friendlier ($F(1,60) = 11.44$, $p < .01$) and nicer ($F(1,60) = 2.89$, $p < .01$) than standard-

accented speakers, regardless of passage type. Southern-accented speakers were also rated as significantly more sociable (F (1,60) = 24.98, $p < .01$) and more cheerful (F (1,60) = 11.48, $p < .01$), although these main effects were mediated by significant interactions between accent and passage type, which are reported below. Of note, Southern accented speakers were considered more polite (F (1,60) = 3.65, $p = 0.06$) than standard speakers, although this just missed significance.

Interactions

The analyses revealed three significant interactions between speaker accent and passage content. Figure 1 shows ratings of sociability as a function of passage content and speaker accent. The analysis revealed a significant interaction between passage content and speaker accent for ratings of sociability ($F(1,60) = 6.24$, $p = .02$). Follow-up means comparisons for passage content differed significantly for standard ($t(30) = 2.58$, $p < 0.02$), but not for Southern speakers ($p > .05$). Standard-accented speakers were considered significantly more sociable when they were producing the Southern passages than when they were producing the standard passages while Southern-accented speakers were judged equally sociable regardless of passage content. Figure 2 shows ratings of likeability as a function of passage content and speaker accent. The analysis revealed a significant interaction between passage content and speaker accent for ratings of likeability ($F(1,60) = 5.77$, $p = .02$). Follow-up means comparisons for passage content differed significantly for standard ($t(30) = 2.19$, $p = 0.04$), but not for Southern speakers ($p > .05$). Standard-accented speakers were considered significantly more likeable when they were producing the Southern passages than when they were producing the standard passages while Southern-accented speakers were judged equally likeable regardless of

passage content. Figure 3 shows ratings of cheerfulness as a function of passage content and speaker accent. The analysis revealed a significant interaction between passage content and speaker accent for ratings of likeability ($F(1,60) = 4.33$, $p = .04$). Follow-up means comparisons for passage content differed significantly for standard ($t(30) = 2.03$, $p = 0.05$), but not for Southern speakers ($p > .05$). Standard-accented speakers were considered significantly more cheerful when they were producing the Southern passages than when they were producing the standard passages.

Status and Solidarity

Two 2x2 ANOVAs were performed on the composite measures of status and solidarity. There was no significant interaction in status. Significant main effects were found for both passage ($F(1,60) = 7.71$, $p < .01$) and speaker accent ($F(1,60) = 4.53$, $p = .04$). Figure 4 shows ratings of status as a function of passage content and speaker accent. Neutral/standard content passages were rated as higher status than Southern-themed passages. Likewise, standard-accented speakers were rated as higher status than Southern-accented speakers. In the analysis of the solidarity measure, a significant interaction was found ($F(1,60) = 5.74$, $p = .02$) as well as a main effect for speakers ($F(1,60) = 14.22$, $p < .01$). Figure 5 shows ratings of solidarity as a function of passage content and speaker accent. Southern speakers were rated higher in solidarity. Ratings of standard speakers depended on passage content. Standard speakers were rated as significantly higher in solidarity when the passage had Southern-stereotyped content than when the passage had neutral content. Follow-up means comparisons for passage content differed significantly for standard ($t(30) = 2.02$, $p = 0.05$), but not for Southern speakers ($p > .05$). Standard-accented speakers were considered significantly more cheerful when

they were producing the Southern passages than when they were producing the standard passages.

Discussion

This study was designed to evaluate whether both the content of a passage or utterance and a speaker's accent influences listeners' attitudes towards speakers and spoken language comprehension. Passage content was varied to be neutral or stereotypically Southern and each passage was spoken by two standard- or Southern-accented speakers. Attitude and comprehension measures were administered. Results indicated that attitude ratings clustered into categories of status and solidarity, in line with prior research. Passage content impacted attitudes regarding status. Stereotypically Southern passages were judged as lower in status-related judgments than neutral/standard-themed passages. Speaking style influenced attitudes regarding both status and solidarity. Southern-accented speakers were rated higher in solidarity and standard-accented speakers rated higher in status. Interactions between content and accent indicated standard speakers were more sociable, likeable, and cheerful when talking about Southern content. Comprehension was not affected, despite Southern-accented speakers being rated significantly less comprehensible in pilot tests.

I hypothesized that standard-accented speech would be rated higher in factors such as intelligence and competence, while Southern-accented speech would be rated higher in factors such as friendliness and niceness. The results provided evidence for these hypotheses. In agreement with prior research, two factors emerged from the attitude ratings that appeared to correspond to "status" and "solidarity" categories (Edwards, 1982; Giles, 1992; Preston, 1999). Standard-accented speakers were rated higher on

status while Southern-accented speakers were rated higher on solidarity. The hypothesis that standard-accented speakers would be rated more intelligent was correct in this regard, as was the hypothesis that Southern-accented speakers would be rated friendlier.

The finding that two factors emerged, corresponding to status and solidarity, from the adjective ratings is consistent with prior research. Giles et al. (1992) found that the factors of competence (status) and benevolence (solidarity) appeared in relation to accent, and Preston (1999) found that judgments of American dialects were consistent with the categories of status and solidarity. In Giles (1992), Preston (1999), and others (Demirci & Kliener, 1999; Lambert, 1967) these categories not only emerged, but were associated with standard vs non-standard accent types as well. There is considerable evidence at this point that non-standard dialects or accents are judged as higher in solidarity while standard dialects or accents are judged as higher status. Giles himself stated that support for such a hypothesis "could almost be conceived of as a kind of manipulation check these days" (Giles et al., 1992, p. 520). It was interesting that both dialects and accents fall into categories of high status-low solidarity or vice versa. Although there has been research performed on accents previously, much of the research had dealt with dialects, in which the changes in lexicon or sentence structure could have led to these different judgments (Lambert, 1967; Levy & Cook, 2006; Luhman, 1990; Demirci & Kliener, 1999; Purnell, Idsardi & Baugh, 1999; Squires, and Chadwick, 2006). This finding suggests that speech sounds themselves can have an impact on judgments regardless of lexicon and syntax.

Significant differences in attitudes appeared as a function of both passage content and speaker accent. Passages were judged differently based upon what the topic was,

regardless of the accent type. Standard passages were given higher ratings in intelligence, importance, wealth, education, and English usage. All these factors fell into the status cluster of the factor analysis. It would appear that no matter what accent is being spoken, if the material is considered of higher intellectual value, the speaker will be considered of higher status. In the case of status, this finding indicates that in some cases, message content may override speaker accent in the stereotyping process. For any person to work as a doctor or an investment banker, it is generally assumed that he or she is intelligent, well educated, important and rich. The appearance of good English in association with these attributes indicates a possible preconceived belief that people of high status do not use "poor English", which encompasses non-standard-accented speech. It was never made clear that the speaker actually worked in the profession about which he or she was speaking. Perhaps results would have been affected had the listeners been told the speakers were professionals in the field indicated by passage content. It may be that ratings of good English are based upon other factors, such as lexical choice, syntax, and morphology, though this may not explain why Southern-accented speakers talking about Southern-stereotyped content were rated lower. As word choice, syntax, and other indictors of dialect remained constant in the present experiment, an interaction between passage content and speaker accent might have been more difficult to find. If dialect were used, the interaction may become more apparent.

Speaker accent had strong effects on ratings as well and the hypothesis regarding speaker accent was supported. In accordance with prior research (Giles, 1992; Preston 1999), standard-accented speakers were rated as speaking better English and were rated as more intelligent, smart, and educated, factors which all clustered under the status

category of the factor analysis. Southern-accented speakers were rated as more amusing, sociable, humble, cheerful, and friendly, factors which all clustered under the solidarity category of the factor analysis. In sum, the standard accent was regarded as higher status, while the non-standard (Southern in this case) was considered higher in solidarity. Southern-accented speakers were not necessarily regarded as unintelligent. Their ratings were near or above neutral, indicating that while they were not viewed as intelligent as the standard speakers, they were not necessarily rated as unintelligent either. It is interesting, though, that raters judged Southern-accented speakers as less intelligent than standard-accented speakers even though the rater listened to only one accent type. Recall that in the current experiment, listeners were only exposed to a single accent and passage type. The difference in ratings indicates that in general, Southern-accented speech is viewed as lower status than standard-accented speech, even when there is no direct comparison taking place. Stereotypes of Southerners being less intelligent were evoked without explicitly hearing a standard against which it can be compared. Although this could be due to an ingrained idea of a comparative standard, it would be interesting to see if the results would be more pronounced if the listener heard both a standard and Southern accent. With the ability to compare the two accents, greater disparities may become evident, though it may also make it easier for the listener to guess the purpose of the experiment.

An interaction between passage content and speaker accent was hypothesized as well, so that when Southern-accented speakers were reading Southern-stereotyped passages, they would be rated more competent and standard-accented speakers would be rated as more competent with non-stereotyped passages. In general, passage content and

accent type did appear to influence one another as reflected in the interaction with the composite solidarity dependent measures reaching significance. This interaction does, in general, support the hypothesis that ratings would differ as a function of congruence between passage content and speaker accent. Although passage content and speaker accent did not interact as expected, particularly in regards to comprehension and status, passage content and accent type did interact for three of the individual attitude measures as well as for the composite measure of solidarity. When standard-accented speakers were talking about Southern topics, they were rated as significantly higher in sociability, cheerfulness, and likeability than when talking about standard topics. In contrast, attitudes towards Southern-accented speakers tended to remain more stable across passage topic. One explanation is that perhaps Southern stereotypes of sociability, for example, were elicited for the standard-accented speakers when they were talking about the Southern topics in comparison to the standard content passages. Since the Southern-accented speakers were already stereotyped by their accent, their solidarity ratings remained stable. They were rated as uniformly sociable, for example, regardless of passage content and nothing more was needed to identify them as belonging to the group of Southerners. In other words, the accent may be used to make initial stereotypes. When accent is considered standard or nonexistent, no stereotype can be created, at which point the listener must depend on content to make initial judgments about speaker attributes.

A final hypothesis addressed comprehension of passage material, which I believed would vary based upon congruence between accent and passage topic. The current findings, however, suggest that neither factor significantly influenced comprehension of the passages. Overall, comprehension was similar for all passages,

though the Southern passages had a slightly higher percentage correct. One possible explanation for this lack of significance could be that the questions used to assess comprehension were not sensitive enough to uncover subtle differences in comprehensibility. Although there were no significant effects in the experiment, a comparison to the pilot testing yielded an interesting note. Pilot participants rated the Southern-accented speakers as less comprehensible than standard-accented speakers. Yet in the results, there were no discernable effects to indicate that the Southern-accented speakers were less comprehensible. Recall that pilot participants were given only three sentences of the passage and asked to rate how comprehensible each talker was. This procedure did not give much opportunity to adapt to the accent, which therefore might lead to it being considered less comprehensible. However, since some dialects can be identified after just a "hello" (Purnell et al., 1999) and there is evidence that listeners can adapt quickly to accented speech (Clarke & Garrett, 2004), it is likely that the comprehensibility ratings reflect listeners' bias rather than a true difficulty comprehending the Southern-accented speech. This effect is consistent with findings of Rubin (1998) and Rubin and Smith (1990) that people perceive an accent (even one which is non-existent at times) as less comprehensible, when, in fact, it is not any less comprehensible than other speech. Therefore, biases about comprehensibility of accents appear to be supported through this preliminary finding. Further study of this effect with a variety of regional accents could provide further information as to whether people perceived Southern-accented speech as less comprehensible.

There are several implications that can be drawn from the findings of this experiment. People appear to judge or stereotype others by their accents, a finding that is

consistent with prior research and that this project has confirmed. In addition, the impact of these stereotypes could be increased in certain situations, depending upon the context or the content of spoken language. One situation in which particular judgments based on speaking style could be harmful is in the classroom. For example, children with a Southern accent could be negatively impacted by the judgments of their teachers, just as Choy and Dodd (1976) found with Hawaiian children. If teachers perceive Southern-accented children as lower in status attributes, such as intelligence, they may have lower expectations for those children. These lower expectations could in turn lead to a complex negative interaction for both the teachers and the children. The teachers may not work as hard with the students. The students could pick up on the teacher favoring other students, leading them to think less of themselves. This scenario, of course, could be an extreme example. Nonetheless, there is the potential that children could be unfairly disadvantaged by teachers' perceptions of them as less intelligent (Rosenthal & Jacobson, 1968; Pomerantz & Dong, 2006). Classrooms are just one example of venues in which stereotypes could make an impact. Stereotyping can have a social impact on people of all ages in many different ways, from housing discrimination to being denied jobs or promotions (Matsuda, 1991; Purnell et al., 1999; Squires & Chadwick, 2006).

The results also seem to fall in line with the stereotype content model of stereotyping (Fiske et al., 2002). The stereotype content model states that out groups are judged by varying degrees of competence and warmth, usually in a way that one is high and the other low. The Southerners in Fiske et al.'s study fell into a middle group in which competence and warmth were both judged as moderate. In the present study, Southerners were viewed in a more polarized manner, as being higher in solidarity

(warmth) and more neutral or lower in status (competence). Fiske et al. found that status predicted competence while lack of competition was the predictor for warmth. This is interesting, as it indicates that both factors could change if social patterns changed. If Southerners, for instance, began to pose a competitive threat to the in group, stereotypes may begin to reflect less warmth. Perhaps the hillbilly stereotype, which typically depicts an unintelligent and violent type (Haskell, 2006), would become more prevalent than the kind, but not as intelligent Southerner. Another finding of Fiske et al. was that competence tended to show more differences between the in group and out group than warmth. When rating adjectives, out groups would be rated relatively neutral in warmth compared to in groups, but be rated as significantly different from in groups in competence. This did not appear to be the case in the present study. When results significantly differed, many of the lower ratings were considered relatively neutral, with a few exceptions. It is unclear why this may have occurred. It may have to do with Fiske et al.'s findings that Southerners rated towards the middle of both competence and warmth in their study.

Although the current results suggest significant effects of passage content and accent type on listeners' attitudes towards the speaker, there were limitations. One limitation was that because a between subjects design with a limited number of subjects was used, overall power was diminished to a degree. A within subjects design and/or more subjects would strengthen the experiment, though it would be easier for the listener to guess the purpose of the experiment. In terms of comprehension, a free recall task, or a combination of free recall and comprehension questions, may have been more effective. There would be fewer cues as to the potential answer and it would evaluate whether the

participant regarded the information as being sufficiently salient and/or important to encode it and place it in memory. Using a different comprehension measure would either confirm the results of the present research or demonstrate that comprehension is, in fact, affected by accent and/or passage content in situations. Another limitation may have been having a pen and paper comprehension measure rather than an on-line measure, which may have led to less sensitivity to the subtle difference between standard and Southern accents in processing difficulty. Including an on-line measure of processing difficulty could have made differences in comprehension as a function of accent and content easier to detect. Including passages on more obscure procedures, rather than appendicitis, for example, may be helpful as well, as this would diminish the chance of prior knowledge. Prior knowledge may confound comprehension, as they would not be learning from the accented speaker. The measure would not be assessing comprehension of the speaker but rather information known beforehand. Finally, giving the listeners a practice passage beforehand might have helped accustom participants to the task. Nerves may have led to errors in comprehension measures.

Future research could go in several directions. Another potential way to judge attitudes could be to include a follow-up question, such as “Would you hire this person to be a...” or “Would you like this person to be your…”, including professions of differing levels, though this may be difficult to do without the listener guessing the purpose of the experiment. These questions would give us a better understanding of how the listener feels about the speaker. Imagine if a potential babysitter with wonderful credentials had a history of schizophrenia, which has never had an impact on any of his or her previous jobs. The parents may report no bad feelings towards anybody with schizophrenia, but

may still not want the person babysitting their child. Similarly, people may report that they believe Southern-accented speakers to be perfectly capable of performing brain surgery. If a brain surgeon about to operate on a brain tumor had a heavy Southern accent or dialect, people may be less comfortable than with a standard-accented speaker. These questions would give a better idea of how people truly feel outside of explicit reports. It would also be interesting to see if expectation of an accent would have an effect, for instance, telling the listener that the speaker was born and raised in South Carolina. This would tell us if people use location alone to make stereotypes. If students think their lecturer is Asian, they report heavier accents and have poorer comprehension (Rubin, 1998). Giving the listener the expectation that the speaker will have a Southern accent may have a similar effect.

A measure of on-line comprehension or intelligibility could be included as well. For example, in order to assess comprehension and intelligibility of a speaker, a divided attention task in which the listener is presented with the spoken passage and is told to make judgments about the passage. At the same time, the subject is doing a secondary task that involves looking at the computer screen and pressing a button when a green dot appeared. The secondary task presumably provides a measure of how difficult comprehension is and may have indicated whether the listener was having difficulty with particular aspects of the accent or passage.

Participants could also be divided depending upon region in which they grew up and/or their own perceived accent to determine the effects these factors might have. Exposure to an accent or exposure to others who have accents has been shown to have a positive effect on comprehension of foreign accents (Rubin, 1998). This may be the case

with regional accents as well. If a person has had positive interactions with Southerners in the past, he or she might not be as prone to stereotype those with Southern accents.

In conclusion, this experiment was a test of attitudes and comprehension relating to a commonly stereotyped American accent. Based on the results, judgments of speakers are influenced by both passage content and speaker accent. Passage content has a greater effect on status stereotypes and is able to override stereotypes that may be drawn exclusively from speaker accent. Interactions were present in composite solidarity as well as three individual solidarity measures, demonstrating that standard speakers have higher solidarity when talking about Southern topics. My questions were whether accent has an effect on attitudes and comprehension and whether content and accent would interact to change people's perceptions. It would seem that, at least for American Southern English, the answer to most of these questions is yes. Attitudes towards accents match those found towards dialects and accents in the United States and elsewhere. Further research may be required to answer the question of whether comprehension is truly affected by accent as well.

References

Barden, J., Maddux, W., Petty, R., and Brewer, M. (2004). Contextual moderation of racial bias: The impact of social roles on controlled and automatically activated attitudes. *Journal of Personality and Social Psychology, 87,* 5-22.

Baugh, J. (2003). Linguistic profiling. In S. Makoni, G. Smitherman, A. Ball, and A. Spears (Eds.), *Black linguistics: Language, society, and politics in Africa and the Americas*, (pp.155-168). New York: Routledge.

Bent, T. and Bradlow, A. (2003). The interlanguage speech intelligibility benefit. *Journal of the Acoustical Society of America, 114*, 1600-1610.

Choy, S.J. and Dodd, D.H. (1976). Standard and nonstandard Hawaiian English-speaking children: Comprehension of both dialects and teacher's evaluations. *Journal of Educational Psychology. 68*, 184-193.

Clarke, C. and Garrett, M. (2004). Rapid adaptation to foreign-accented English. *Journal of the Acoustical Society of America, 116,* 3647-3658.

Clopper, C., and Pisoni, D. (2004). Some acoustic cues for the perceptual categorization of American English regional dialects. *Journal of Phonetics, 32*, 111-140.

Cooke-Jackson, A., and Hansen, E. (2008). Appalachian culture and reality TV: The ethical dilemma of stereotyping others. *Journal of Mass Media Ethics, 23*, 183-200.

Daniels, H. (1985). Nine ideas about language. In V. Clark, A. Escholz & A. Rosa (Eds.), *Language: Introductory Reading*, (pp. 18-36). New York: St. Martin's Press.

De la Zerda, N and Hopper, R. (1979). Employment interviewers' reactions to Mexican American speech. *Communication Monographs, 46,* 126-134.

Demirci, M. and Kliener, B. (1999). The perceptions of Turkish dialects. In D. Preston (Ed.), *Handbook of Perceptual Dialectology,* (pp. 263-281). Philadelphia: John Benjamins.

Edwards, J. (1982). Language attitudes and their implication among English speakers. In E. Ryan and H. Giles (Eds.), *Attitudes towards language variation: Social and applied contexts* (pp. 20-33). London: Edward Arnold.

Fiske, S., Cuddy, A., Glick, P., and Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*, 878-902.

Flesch, R. (1948). A new readability yardstick. *Journal of Applied Psychology, 32,* 221-

233.

Floccia, C., Goslin, J., Girard, F., and Konopczynski, G. (2006). Does a regional accent perturb speech processing? *Journal of Experimental Psychology: Human Perception and Performance, 32*, 1276-1293.

Giles, H., Henwood, K., Coupland, N., Harriman, J., and Coupland, J. (1992). Language attitudes and cognitive mediation. *Human Communication Research, 18*, 500-527.

Gill, M. (1994). Accent and stereotypes: Their effect on perceptions of teachers and lecture comprehension. *Journal of Applied Communication Research, 22,* 348-361.

Hillbilly. (2006). In Haskell, J., Abramson, R., and Haskell, J. (Eds.), *Encyclopedia of Appalachia* (pp. 216-218). Knoxville, TN: University of Tennessee Press.

Hilton, J. and von Hippel, W. (1996). Stereotypes. *Annual Review of Psychology, 47*, 237-271.

Lambert, W. (1967). The social psychology of bilingualism. *Journal of Social Issues, 23*, 91-109.

Levy, B. and Cook, H. (1973). Dialect proficiency and auditory comprehension in standard and Black non-standard English. *Journal of Speech and Hearing Research,16,* pgs. 642-649.

Lippi-Green, R. (1997). *English with an accent*. New York: Routledge.

Luhman, R. (1990). Appalachian English stereotypes: Language attitudes in Kentucky. *Language in Society, 19*, 331-348.

Matsuda, M. (1991). Voice of America: Accent, antidiscrimination law, and a jurisprudence for the last reconstruction. *Yale Law Journal, 100,* 1329-1407.

Munro, M. and Derwing, T. (1995). Processing time, accent, and comprehensibility in the perception of native and foreign-accented speech. *Language and Speech, 38*, 289-306.

Pomerantz, E. and Dong, W. (2006). Effects of mothers' perceptions of children's competence: The moderating role of mothers' theories of competence. *Developmental Psychology, 42,* 950-961.

Preston, D. (1999). A language attitude approach to the perception of regional variety. In Preston, D. (Ed.), *Handbook of perceptual dialectology* (pp. 359-373). Amsterdam: John Benjamins.

Purnell, T., Idsardi, W., and Baugh, J. (1999). Perceptual and phonetic experiments on American English dialect identification. *Journal of Language and Social Psychology, 18,* 10-30.

Reed, J. (1986). *Southern folk, plain and fancy*. Athens, Georgia: University of Georgia Press.

Rosenthal, R. and Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectations and student intellectual development*. New York: Holt, Rinehart and Winston.

Rubin, D. (1998). Help! My teacher (or physician or boss) can't talk English. In J. Martin, T. Nakayama, and L. Flores (Eds.), *Readings in cultural contexts* (pp. 149-159). Mountain View, CA: Mayfield Press.

Rubin, D. and Smith, K. (1990). Effects of accent, ethnicity, and lecture topic on undergraduates' perceptions of non-native English speaking teaching assistants. *International Journal of Intercultural Relations, 14,* 337-353.

Sebastian, R. and Ryan, E. (1985). Speech cues and social evaluation: Markers of ethnicity, social class, and age. In H. Giles and R. St. Clair (Eds.), *Recent advances in language communication and social psychology* (pp. 112-143). London: Lawrence Erlbaum.

Squires, G. and Chadwick, J. (2006). Linguistic profiling: A continuing tradition of discrimination in the home insurance industry? *Urban Affairs Review, 41,* 400-415.

Van Wijngaarden, S., Steeneken, H., and Houtgast, T. (2002). Quantifying the intelligibility of speech in noise for non-native talkers. *Journal of the Acoustical Society of America, 112*, 3004-3013.

Wittenbrink, B., Judd, C., and Park, B. (2001). Spontaneous prejudice in context: Variability in automatically activated attitudes. *Journal of Personality and Social Psychology, 81,* 815-827.

Appendix A

Passages

Medicine

A surgeon performs an appendectomy when the appendix is inflamed. This is diagnosed by assessing fever as well as tenderness and pain in the right lower abdomen. First, the surgeon makes a two to three inch long incision through the skin and abdominal wall in the area of the appendix. The surgeon enters the abdomen and looks for the appendix. After he or she is certain there are no problems in the area surrounding the appendix and deems the area suitable, the surgeon removes it. To do this, the appendix is released from its abdominal and colon attachment. The hole in the colon is then closed. After this, the surgeon closes the incision. A more modern technique to perform the procedure involves a laparoscope, a thin telescope attached to a video camera. With this, you can inspect the inside of the abdomen through a small puncture wound. The appendix can be taken out with instruments that enter the abdomen through the puncture wounds. There is less pain following the operation and faster recovery. This can be spoiled, however, if the appendix has burst. In this case, the patient usually must stay in the hospital for additional time. The patient is given medicine to fight any resulting infection. If this is not the case, the patient is allowed to return home.

Investment:

Short selling allows people to sell securities that they don't own at a high price. After the value decreases, they buy the stock back for a profit. The first step in this process is borrowing securities from a current shareholder. Banks or a prime broker are considered suitable sources for this. First, a future date by which you will return the securities is

agreed upon by you and the shareholder. There are usually interest fees on the share values while you are in possession of them. When you think the price of the securities will drop soon, you sell them at the current market price. After the price drop, you will buy the securities back for the lower price, thus making a profit. When the time comes, the securities are repaid to the lender. Any interest charged is also included in this payment. If the difference in values of the securities is large enough, the lender can be repaid while you still make a profit yourself. This is risky however because if the price does not drop enough or at all, it will spoil the process and the higher cost must be covered by you. Borrowing securities without obtaining permission from the trader beforehand is a practice called naked short selling. After the traders have made the sales and hopefully made a profit, they look immediately to cover their position.

Hunting:

Loading a gun can be done easily with the proper knowledge. First, hold the weapon upright and, in this position, pour the powder in, hitting the butt-end of the weapon against the ground. This will carry down the particles of powder that might become stuck on the insides of the barrel as well as to settle the mass of powder. Next, you pass a powder-wad down until it reaches the powder. Using the powder-wad, the powder should be pressed down as tightly as possible. After that, you pour down a suitable amount of shot, shaking it once or twice to settle them evenly and solidly. Wadding of sufficient substance and elasticity should be placed over them to maintain the shot steadily in their position. Following this, a fresh cap should be put on and the cock should be lowered very gently. You are now ready to shoot the gun. After the gun has been discharged, it is good practice for you to reload it immediately, at which point the barrel is still warm.

Once it has cooled, moisture will settle on the inner surfaces and catch some of the finer particles of the powder-charge. There, the charge will spoil and decompose or be prevented from falling to the bottom, either of which will diminish the projectile force acting upon the shot.

Cooking:

If you plan to prepare a soufflé, two main components must be considered. The base is the first component, which, if savory, is a thick flavored white sauce, made from flour, butter and milk. To this base, egg yolks are added for consistency and then stiffly whisked egg whites are folded into the mixture. The egg whites provide for the dish their light and airy texture and cause the rising of the soufflé during cooking. For sweet soufflés, a custard style base is made with sweet ingredients to which the stiffly whisked egg whites are then added. After this, the soufflés are poured into individual ceramic serving bowls, called ramekins, or a larger round soufflé dish and baked in the oven for about twenty minutes. The complicated element of soufflé preparation is correctly estimating a suitable cooking time. If you don't want to spoil the dish, the oven door must not be opened whilst it is baking, as this will cause the soufflé to deflate. The soufflé should rise several inches above the dish while cooking and the crust will be browned and crisp on the outside. If it is removed before it has cooked properly, it will deflate soon after being removed from the oven. Overcooking the soufflé will have the same effect. The air bubbles will burst, causing the soufflé to collapse.

Appendix B

Comprehension questions

Medicine:

1. According to the passage, when assessing appendicitis, name one of the symptoms the surgeon looks for.

2. When does a surgeon perform an appendectomy?

3. According to the passage, where is the appendix located?

4. What can spoil a patient's recovery from an appendectomy?

5. How long is the incision made by the surgeon to remove the appendix?

6. What was the thin telescope attached to a video camera called?

7. What is a patient given if his or her appendix bursts?

8. What does the surgeon check after making the incision and looking for the appendix, but before removing the appendix?

9. When using the more modern technique, what type of wound is made by the surgeon to enter the abdomen?

10. What is attached to the end of the laparoscope?

Investment:

1. According to the first part of the passage, when do you buy the stock back for a profit?

2. What is the first step in the process of short selling?

3. From whom are the securities borrowed and returned?

4. According to the passage, name one of the two places are considered suitable sources for borrowing securities.

5. What is agreed upon by you and person being borrowed from at the beginning of the arrangement discussed in the passage?

6. What type of fee is usually added onto the price of the share while you are in possession of them?

7. When do you sell the securities you have borrowed?

8. Who must cover the price of the securities if the price does not drop enough?

9. What is the process called when people do NOT obtain permission before borrowing securities?

10. What do people who participate in naked short selling do immediately after making their sales (and hopefully a profit).

Hunting:

1. What position do you hold the gun in to start out?

2. What is poured in first once the gun is in the correct position?

3. What part of the gun do you hit on the ground to carry the particles down?

4. What is used to press the powder down as tightly as possible?

5. What do you do to the shot to make sure it is settled evenly and solidly?

6. What is used to maintain the shot in their position?

7. What should you do immediately after discharging the gun?

8. What will catch some of the finer particles of the powder-charge once the surface has cooled?

9. Name one thing that will happen to the charge if it is caught by the moisture after discharge.

10. What will be diminished if the charge decomposes or is prevented from falling to the bottom?

Cooking:

1. What is the first component to be considered when making a soufflé?

2. What gives the dish its light and airy texture and causes the soufflé to rise during cooking?

3. According to the end of the passage, what causes the soufflé to collapse?

4. For sweet soufflés, what type of base is made with sweet ingredients?

5. What are ramekins?

6. What is the complicated element of soufflé preparation?

7. How much will the soufflé rise above the dish when cooking?

8. How long do you bake a soufflé?

9. What must not be opened if you do not want to spoil the soufflé?

10. What will the soufflé do if the oven door is opened too early or too late?

Appendix C

Attitude Rating Scale

Amusing	1 - 2 - 3 - 4 - 5 - 6 - 7	Boring
Sociable	1 - 2 - 3 - 4 - 5 - 6 - 7	Not sociable
Honest	1 - 2 - 3 - 4 - 5 - 6 - 7	Dishonest
Cordial	1 - 2 - 3 - 4 - 5 - 6 - 7	Rude
Sympathetic	1 - 2 - 3 - 4 - 5 - 6 - 7	Unsympathetic
Trustworthy	1 - 2 - 3 - 4 - 5 - 6 - 7	Untrustworthy
Intelligent	1 - 2 - 3 - 4 - 5 - 6 - 7	Unintelligent
Important person	1 - 2 - 3 - 4 - 5 - 6 - 7	Unimportant person
Arrogant	1 - 2 - 3 - 4 - 5 - 6 - 7	Humble
Well-organized	1 - 2 - 3 - 4 - 5 - 6 - 7	Disorganized
Smart	1 - 2 - 3 - 4 - 5 - 6 - 7	Dumb
Self-confidant	1 - 2 - 3 - 4 - 5 - 6 - 7	Lacks confidence
Cheerful	1 - 2 - 3 - 4 - 5 - 6 - 7	Gloomy
Competent	1 - 2 - 3 - 4 - 5 - 6 - 7	Incompetent
Rich	1 - 2 - 3 - 4 - 5 - 6 - 7	Poor
Nice	1 - 2 - 3 - 4 - 5 - 6 - 7	Mean
Like	1 - 2 - 3 - 4 - 5 - 6 - 7	Dislike
Friendly	1 - 2 - 3 - 4 - 5 - 6 - 7	Unfriendly
Well-educated	1 - 2 - 3 - 4 - 5 - 6 - 7	Poorly educated
Good English	1 - 2 - 3 - 4 - 5 - 6 - 7	Poor English
Reliable	1 - 2 - 3 - 4 - 5 - 6 - 7	Unreliable
Polite	1 - 2 - 3 - 4 - 5 - 6 - 7	Crude

Table 1

Mean pilot ratings for passage stereotypicality on a scale of 1 (not at all characteristic) to 5 (very characteristic)

Region	Medicine	Investment	Hunting	Cooking
West	3.75	3.42	2.83	3.25
Northeast	3.58	4.67	2.75	3.5
North	3.5	3.17	3.08	3.33
Northwest	3.42	2.75	3.25	2.75
Midwest	3.08	2.92	3.58	2.83
South	3	2.50	4.25	3.58
Southwest	3	2.50	3.92	2.75

Table 2
Mean pilot ratings for accent stereotypicality on a scale of 1 (not at all characteristic) to 5 (very characteristic)

	Standard-accented Average	Southern-accented Average
North/Great Lakes	3.18	1.51
Northeast	3.38	1.24
Midwest	2.73	2.31
South	1.50	4.39
Southwest	1.72	3.40
West Coast	2.64	1.62
Northwest	2.84	1.53

Table 3

Mean ratings scores and standard deviations for 22 attitude measures.

	Speaker Accent			
	Stan dard		Sout hern	
	Neutral Passage	Southern Passage	Neutral Passage	Southern Passage
Boring/Amusing	2.38 (1.10)	3.22 (1.18)	2.97 (0.87)	3.63 (1.27)
Not Sociable/Sociable	2.97 (0.88)	4.47 (0.76)	3.72 (0.75)	4.22 (0.80)
Dishonest/Honest	5.47 (0.72)	5.66 (0.73)	5.72 (0.89)	5.13 (1.04)
Rude/Cordial	4.81 (0.85)	5.31 (0.66)	5.13 (0.94)	5.13 (0.96)
Unsympathetic/ Sympathetic	3.28 (0.86)	3.28 (0.86)	3.28 (0.86)	4.03 (1.12)
Untrustworthy/ Trustworthy	5.38 (0.65)	5.19 (1.09)	5.38 (1.07)	4.91 (1.13)
Unintelligent/ Intelligent	5.97 (0.85)	5.47 (0.74)	5.28 (0.97)	4.78 (1.29)
Unimportant Person/Important Person	4.81 (0.81)	4.69 (1.48)	4.38 (0.87)	3.81 (0.54)
Humble/Arrogant	4.28 (0.48)	3.53 (1.07)	4.00 (0.77)	3.78 (0.88)
Disorganized/ Well-organized	5.75 (0.77)	5.63 (0.83)	5.47 (1.06)	5.50 (0.97)
Dumb/Smart	5.81 (0.75)	5.00 (1.10)	5.13 (0.81)	4.91 (1.17)
Lacks confidence/Self-confident	4.72 (0.84)	5.22 (0.91)	4.97 (1.10)	5.03 (0.72)
Gloomy/Cheerful	2.91 (0.76)	4.34 (1.27)	3.50 (0.89)	3.84 (1.19)
Incompetent/ Competent	5.53 (0.92)	5.47 (1.02)	5.28 (0.88)	5.06 (0.93)
Poor/Rich	4.88 (0.70)	4.59 (0.78)	4.06 (0.51)	4.06 (0.40)
Mean/Nice	4.28 (0.71)	5.00 (0.84)	4.31 (1.05)	4.34 (0.91)
Dislike/Like	3.84 (0.68)	4.75 (0.80)	4.47 (0.92)	4.22 (1.33)
Unfriendly/ Friendly	3.75 (0.55)	4.84 (0.89)	4.03 (0.83)	4.38 (1.06)

Poorly Educated/Well-educated	5.84 (0.77)	5.44 (0.87)	5.03 (0.72)	4.50 (0.97)
Poor English/Good English	6.09 (0.88)	5.63 (1.04)	5.81 (0.77)	4.44 (1.33)
Unreliable/ Reliable	5.44 (0.75)	5.44 (1.01)	5.47 (0.88)	4.88 (0.96)
Crude/Polite	4.72 (0.91)	5.47 (0.64)	4.84 (1.06)	4.97 (0.99)
Comprehension	54.38 (18.96)	53.75 (16.68)	63.13 (17.40)	58.13 (17.40)

Table 4

Factor analysis results of two most significant factors

Attribute	Component 1 Status	Component 2 Solidarity
Good/Poor English	.74*	-.35
Dumb/Smart	.82*	-.05
Boring/Amusing	-.22	.46*
Not Sociable/Sociable	-.11	.74*
Dishonest/Honest	.61*	.18
Rude/Cordial	.46	.60*
Unsympathetic/Sympathetic	-.11	.33
Untrustworthy/Trustworthy	.72*	.24
Not Intelligent/Intelligent	.86*	.05
Not important/Important	.65*	-.04
Humble/ Arrogant	.09	-.57
Disorganized/Organized	.72*	.02
Lacks confidence/Self-confident	.43	.43
Gloomy/Cheerful	-.01	.78*
Incompetent/Competent	.81*	.14
Poor/Rich	.47*	-.08
Mean/Nice	.30	.71*
Dislike/Like	.39	.77*
Unfriendly/Friendly	.15	.85*
Poorly educated/Well educated	.88*	-.05

Unreliable/Reliable	.81*	.20
Crude/Polite	.48	.62*

*Attitudes above .4 included in factor

List of Figures:

Figure 1

Interaction between speaker accent and passage content for not sociable/sociable

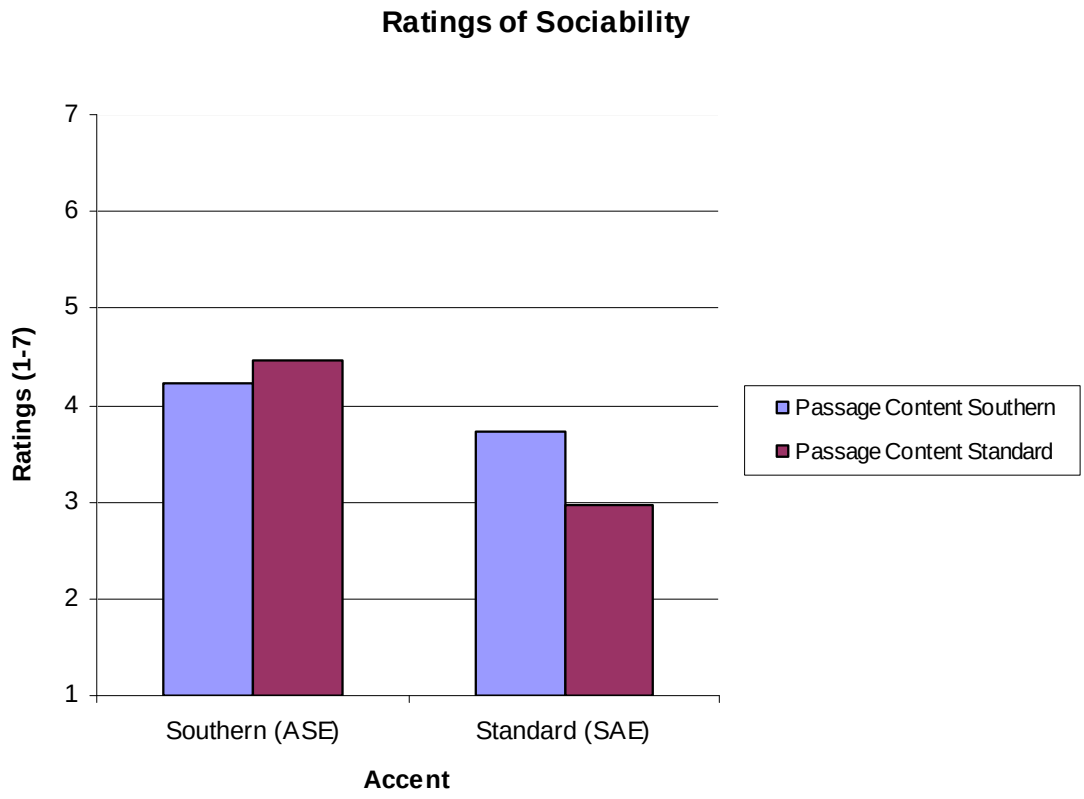

Figure 2

Interaction between speaker accent and passage content for dislike/like

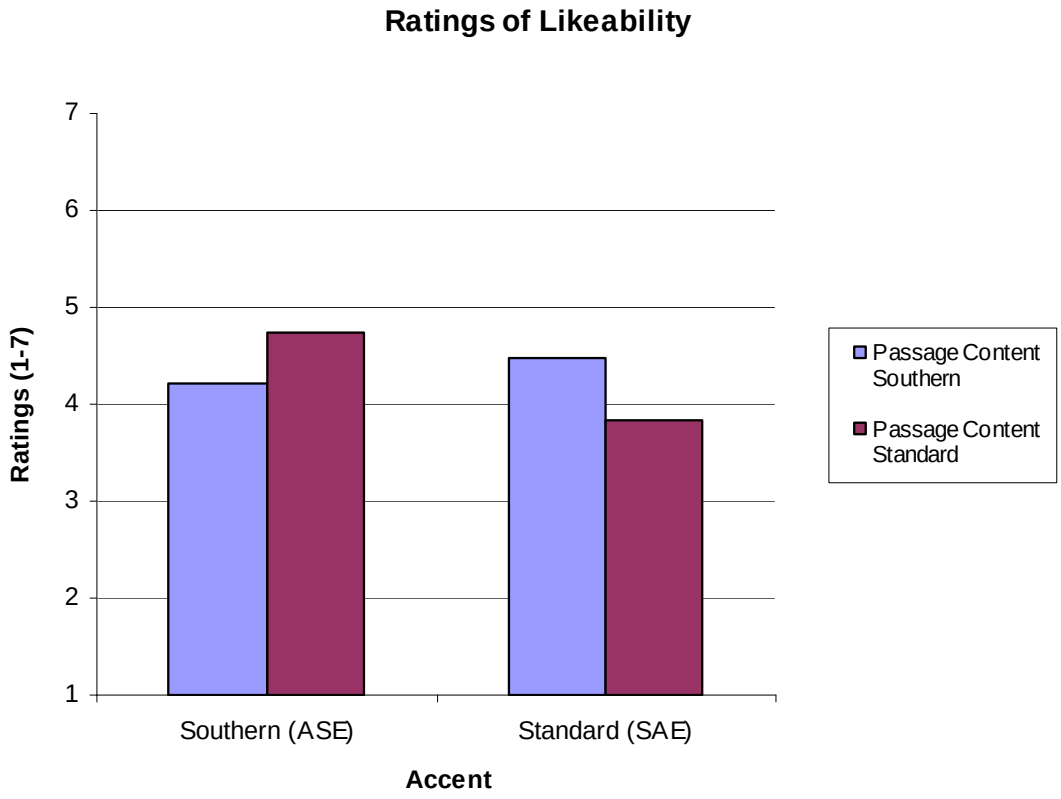

Figure 3

Interaction between speaker accent and passage content for gloomy/cheerful

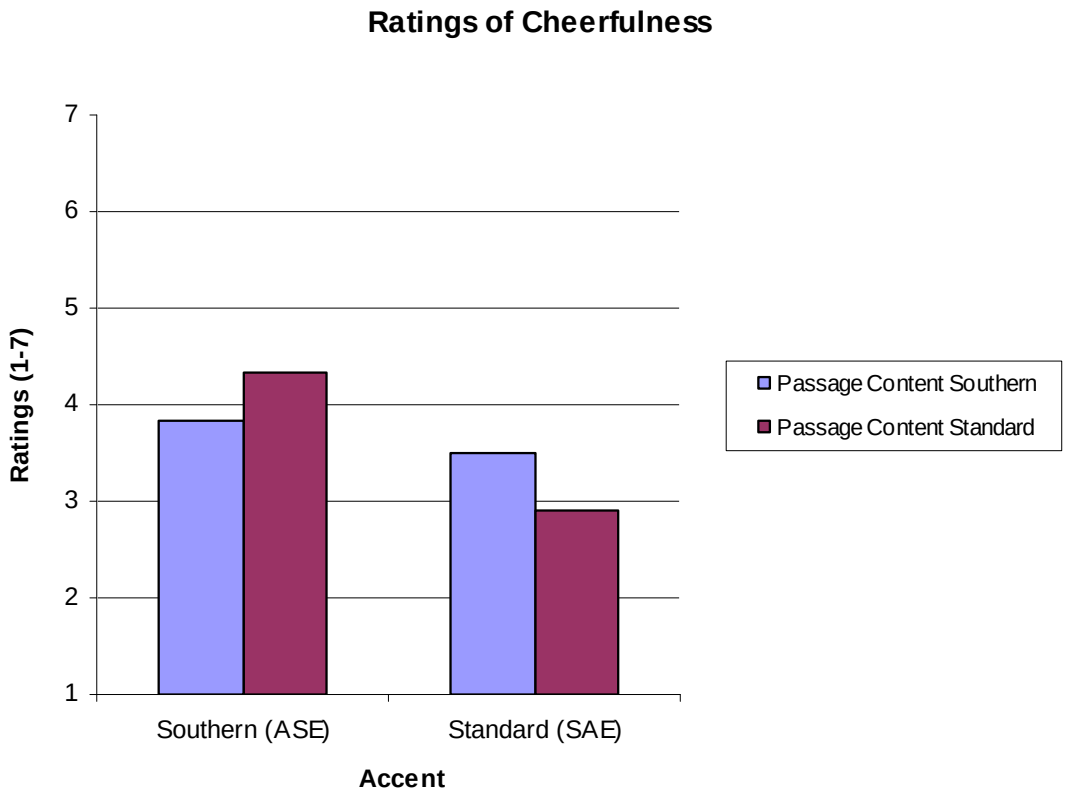

Figure 4

Interaction between speaker accent and passage content for status

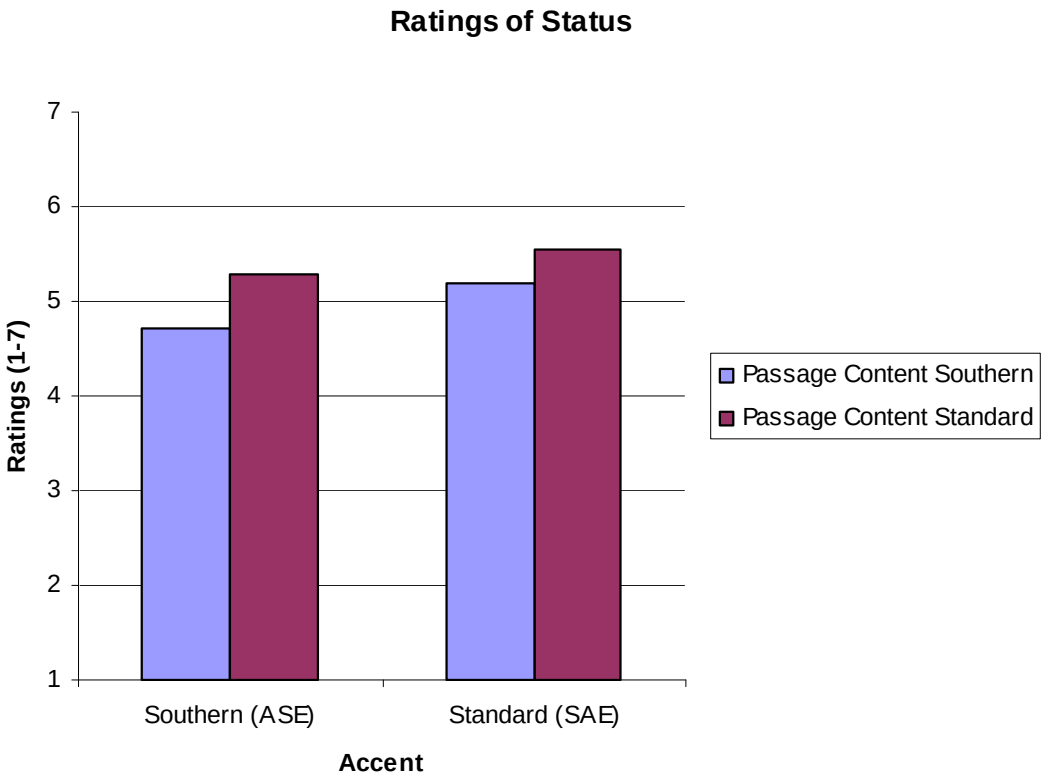

Figure 5

Interaction between speaker accent and passage content for solidarity