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Influences of Accent and Ethnic Background on Perceptions of Eyewitness

Testimony

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*Abstract*

*The purpose of the present work was to investigate the effect two eyewitness factors, accent and ethnic background, have on the perceived favorability of eyewitness testimony and case disposition in criminal trials. Six variations of testimony were created and videotaped. The videotapes varied by accent and ethnic background of the eyewitness; the testimony text was identical. Four eyewitness favorability variables, a) credibility, b) judgment of accuracy, c) deceptiveness, and d) prestige, as well as their relationship to case disposition, were measured. One hundred seventy-four undergraduate participants viewed one of the six videotapes. Results indicate that there was a significant main effect of accent for the four eyewitness favorability variables. Accent by ethnic background interactions also yielded significant findings for the four variables as well as for the defendant's degree of guilt. Results were interpreted using the Elaboration Likelihood Model. The potential importance of these results for judicial settings is discussed.*

*Key words: eyewitness, accent, ethnic background, courtroom, crime*

## Influences of Accent and Ethnic Background on Perceptions of Eyewitness Testimony

The following research was conducted in an attempt to understand how two factors, accent and ethnic background, influence perceived favorability of eyewitness testimony in criminal trials. Many studies have been conducted with the sole purpose of assessing the effect of extralegal factors on perceptions of eyewitness's testimony. None, however, has examined the effects of speaking with a foreign accent on (a) credibility, (b) judgment of accuracy, (c) deceptiveness, and (d) prestige of eyewitness testimony and the relationship of these variables to case disposition (*i.e.*, outcome of a case) such as guilt and level of punishment of the defendant.

The purpose of this study is to examine the effect that ethnic background, in conjunction with accented and non-accented speech of foreigners, has on favorability ratings of an eyewitnesses' testimony.

### Accent

It is particularly important in U.S. society to ascertain how foreign nationals may be perceived because 12% of the population are immigrants (Census Bureau, 2003). Multiple accounts of discrimination have been cited by Matsuda (1991) and Triandis, Loh, and Levin (1966) in employment and educational settings due to foreign sounding speech. There have been a vast number of legal cases stemming from the discrimination foreign sounding

individuals have faced (Matsuda, 1991). Although many studies have investigated varying aspects of stereotyping, prejudice, and discrimination, few have assessed the way foreigners are socially perceived and judged (Galliker, Huerkamp, & Wagner, 1995). Research that has been conducted on accent-focused discrimination has shown that language (and accent) are not merely ways to communicate (Giles, 1971; Milroy & Milroy, 1992; Rickford & Traugott, 1992); they are ways for listeners to judge, form opinions, and determine believability (Lambert, 1967; Nesdale & Rooney, 1996).

Native speakers, regardless of the country or language, tend to downgrade nonnative speakers simply on the basis of their accent (Brennan & Brennan, 1981a, 1981b; Cargile & Giles, 1997; Gudykunst & Ting-Toomey, 1990). Munro and Derwing (1995) posit that some people have been taught to fear foreign accents, leading to the existence of accent-based discrimination. Anderson-Hsieh and Koehler (1988) and Bresnahan, Nebashi, Liu, and Shearman (2002) suggest that attitude toward foreigners and their speech is significantly correlated with comprehension. Giles, Bourhis, and Davies (1979) and Giles, Bourhis, Trudhill and Lewis (1974) believe associations made from the foreign accent may lead to the dislike of an individual regardless of the statement made by the speaker. Ryan and Giles (1982) conclude it is not the aesthetic quality of the accent that produces the discrimination; rather, it is an awareness of country of origin and the prestige accorded to that country's nationals. Research on accent indicates that individuals

who have accents thought to be undesirable are not perceived as favorably as those who have accents perceived as desirable (Giles, 1973; Lippi-Green, 1994). There was an increase in accent-reduction programs from the mid-1980s to the mid-1990s (Munro & Derwing, 1995). The existence of these programs tends to confirm the belief that accent may have a negative effect on listeners (Munro & Derwing, 1995).

It is unlikely that there is a conscious effort to respond negatively to individuals who speak with foreign accents. It is assumed that individuals are unaware of their prejudices towards those who speak with foreign accents. Yet, in all of the near twenty studies reviewed on lack of prestige of accent, research consistently showed that listeners did not think favorably of those who spoke with accents. It is likely that individuals who speak with a foreign accent are recognized as being different from the listener, and there is a series of unconscious associations, via peripheral processing<sup>1</sup> of the Elaboration Likelihood Model (ELM) (Petty and Cacioppo, 1986), that ultimately leads to perceptions of foreign-accented individuals as less favorable than non-accented individuals. The current study builds on these studies, looking at the foreign accent of individuals in a particular setting, a courtroom, to determine if accented individuals are indeed perceived less favorably than non-accented ones.

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<sup>1</sup> Content-irrelevant factors of a message are incorporated unintentionally along with the message and the real message content is influenced by the irrelevant information.

There is only one study, conducted in the mid-1990s, in which accent in legal settings was assessed, making it most relevant to the current study. Sobral Fernandez and Prieto Ederra (1994) conducted a study in the Basque region of Spain with 200 university students as participants (mock jurors), and assessed how the favorability of eyewitnesses was affected by their accent. The researchers trained their three eyewitnesses to control for differences in speech patterns such as pauses and intonation. The experimental variable was regional dialect.

Significant differences were found among eyewitnesses with different accents with respect to favorability. The researchers found the less the dialect had in common with that of the participants' dialect, the less likely they were to trust the testimony. The greatest willingness to accept the testimony occurred when the mock eyewitness came from the same region of the country, the Basque region, as the student judges. For example, the Navarra accent would be rated more favorably than the Castillian accent. The researchers concluded that the mock jurors tend to feel more favorably disposed towards those eyewitnesses who have accents that are similar to their own.

The current study assessed whether ethnic background and accent, or lack thereof, is tied into ratings of favorability of eyewitnesses. The study further determines whether there is a relationship between eyewitness accent and/or ethnic background and case disposition. Several hypotheses were tested in an



attempt to investigate whether accent and ethnic background play roles in perceptions of favorability of eyewitnesses in criminal trials.

## METHOD

### Participants

One hundred ninety-three participants completed this study. The data of 19 participants were excluded because they were not born in the U.S., yielding a total of 174 participants. Each participant viewed only one of six videotapes. The following number of participants viewed the following videos: 35 (German accent-free), 30 (German with accent), 30 (Mexican accent-free), 27 (Mexican with accent), 26 (Lebanese accent-free), and 26 (Lebanese with accent)<sup>2</sup>. The mean age of the participants was 19.2 years (range 17-63), and 63% of them were female. Nine percent of the participants' parents were born outside of the U.S. Six percent of the participants lived outside of the U.S., for an average of two years. Eleven percent of the participants traveled outside of the U.S. Of the 11%, each traveled approximately 1.4 times with 7.5% traveling to Western Europe, 3.4% to Canada, 2.9% to the Caribbean, and 1.1% to Eastern Europe. Sixty-one percent of the participants are Western European descendants, 14.2% African, 14.5% Eastern European, and 8% Asian, while the remaining 2.3% did not report

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<sup>2</sup> These three ethnic backgrounds were chosen based on data collected in a pilot study (described below) to represent high, neutral, and low favorably rated counties.

ethnic background. One hundred eighteen of the participants are Christian, 24 Jewish, 15 Hindu or Buddhist, and 11 did not report their religion.

#### Procedure

Undergraduate psychology students were recruited to be participants. Each of the potential participants was told that the entire study would take 10 to 15 minutes and would involve watching a short, three-minute videotape, and answering a self-report measure. Participants viewed the videotapes in groups ranging from one to 16 persons and each was given the response measure questionnaire immediately following the viewing. The order of the showings of the 6 videotapes varied systematically to spread out order effects over the experimental conditions until a sufficient number of participants, as determined by an a priori power analysis test ( $p < .05$ ), watched each of the videos and completed the response materials. This was done by randomly selecting one video for viewing. Once it was viewed, it was eliminated from the rotation until the remaining five videos were shown. This pattern was repeated. Participants who were not born in the U.S. participated in the research session, but their data were excluded from the study. Participants were given information on the type of crime (see Appendix 1) for which the defendant was being tried in the videotape, as well as being provided with “jury instructions” (see Appendix 1).

### Pilot Study

A preliminary study was conducted to determine which nationalities were chosen to represent high, neutral, and low favorability countries. Sixty-seven college undergraduate psychology students were recruited to participate in the pilot study. They were asked four questions to assess the degree to which they liked or disliked various foreign groups. The questions were taken from a study by Lambert and Klineberg (1967) on children's views of foreign peoples. People from seventeen geographic locations were rated. The locations were selected to be representative of the different regions (*i.e.*, Western and Eastern Europe, Africa, Middle East, Asia, South America). Based on these data, three countries of varying levels of favorability were selected to represent foreign groups: German ( $M = 6.49$ )--high, Mexican ( $M = 9.17$ )--middle, and Lebanese ( $M = 11.74$ )--low on a 1-17 point scale with 1 being the highest possible rank. T-tests conducted to determine that these means were significantly different from each other yielded results of the German-Mexican comparison ( $t = 1.96, p < .05$ ), the German-Lebanese comparison ( $t = 2.11, p < .05$ ), and the Mexican-Lebanese comparison ( $t = 2.08, p < .05$ ). Note that data from the pilot and main studies were collected prior to the 9/11/01 attacks.

### Materials

A total of six videotapes of approximately three minutes in duration were created in which three female college graduate mock eyewitnesses--each

representing one of the three nationalities--gave identical eyewitness testimony about a burglary and nonfatal shooting of a female neighbor. Three nationalities were chosen that varied in their degree of perceived favorability as determined by a pilot study as indicated above. Each of the three mock eyewitnesses taped two versions of the testimony: speaking (a) in English with her "native" accent of German, Mexican Spanish, or Lebanese Arabic and (b) in English, speaking "accent-free." Accent and accent-free were determined by four researchers in addition to the author who reviewed every version of the videos and are familiar with the local accent in the region. Accent was not determined by the participant. In both the accented and non-accented versions, the testimony included a reference to ethnic background. Each mock eyewitness was chosen because she had a "foreign look" typically associated with the country/region she was representing, was foreign born in the region she was representing (hence the "foreign look"), grew up in a dual-language household (*i.e.*, English as well as another primary language), and because she was able to mimic the foreign accent of the country.

The confederates were given an audiotape of an individual with the actual accent reading the testimony. As the confederates were from foreign countries, and spoke the languages for which they were copying the accents, they were well equipped to mimic the accent. Furthermore, to ensure that the accents were equally accent and accent-free, experienced researchers were asked to review the

videotapes. They reviewed the videos with attention to intonation, gestures, facial expression, and similar degree of accent in the accented conditions and lack of accent, or identical regional accent, in the accent-free conditions. In one instance, some of the reviewers did not feel that a confederate performed adequately in a condition. All of that confederate's testimony was re-taped. In all cases, except the initial one for which the testimony was re-taped, there was 100% agreement between raters. That is, all reviewers believed the accent-free and accented conditions were credible. In the instance where there was not 100% agreement, the testimony was re-taped. The re-taping was reviewed resulting in 100% agreement in satisfaction of the accent-free and accent conditions.

The matched-guise technique was employed in the current study (Lambert, Hodgson, Gardner, & Fillenbaum, 1960) in which a confederate fakes an accent in one condition and then speaks with his or her real accent in the other. All three eyewitness confederates in the present study spoke with their American-accented English (accent-free condition)<sup>3</sup> and then faked a foreign accent (accented condition).

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<sup>3</sup> While there are certainly differences in speech pattern, which could be related to accent, the confederates spoke fluent mid-Atlantic American English. Their accents were never questioned as being foreign in their day to day lives and the reviewers believed that the three accent-free conditions were sufficiently "accent-free", thus were considered the accent-free condition.

Mock eyewitnesses were given 12 months to practice the accent. Audiotapes were made of natives of the three countries giving the testimony, and the eyewitnesses imitated the voices on the tapes. In two of three instances, the audiotape was of the confederate's mothers, who both retain their native accent when speaking English. Each eyewitness had a one-hour session with the researcher to practice executing the testimony. This was done to ensure that the intonation and inflection of each eyewitness's voice, and to the extent possible body language and hand gestures, were as similar as possible to the other two eyewitnesses. The confederates were paid for their efforts and contacted the researcher once they felt they had sufficient practice. This varied from a few to several hours each month. In the instance of the re-taping, the confederate had to spend 10 hours, approximately, in preparation. An effort was made to ensure that the actresses all were as similar as possible, save the varying accent (*e.g.*, similar clothing, intonation, hand gestures). This was done in an attempt to eliminate confounding variables. The experienced reviewers watched the videotapes and determined there was an equal degree of hand gestures, intonation, excitement in speech, etc., across confederates. In addition, one of the questions in the questionnaire was used as a manipulation check for ethnic background.

A courtroom at the Law School of the University of Maryland was used for videotaping in order to increase the authenticity of the setting for the

videotapes. The eyewitnesses were dressed alike so that their dress would not play a role in any differences in favorability.

In each of the videotapes, one of the eyewitnesses gave the eyewitness testimony. The text was based on a fabricated case in which the defendant was accused of attempting to rob a house and inflicting a nonfatal wound on the occupant. The testimony was written by the researcher in conjunction with an attorney. Participants were told the videotape was a portion of eyewitness testimony from a criminal case in which the defendant was being tried for armed burglary.

#### Variables

The primary dependent variables are: (a) how credible the eyewitness is believed to be, (b) how accurate the participant believes the eyewitness to be in relaying the evening's events, (c) how deceptive the eyewitness is thought to be (deception being intentional), and (d) how prestigious the participant believes the eyewitness to be (prestige is used as a check on the success of the manipulation on variation of ethnic background). The case disposition variables are as follows: (e) the degree to which the defendant is judged to be guilty, and (f) assuming the defendant is found guilty, what an appropriate punishment is within the range of punishments for this crime in the State of Maryland. Variables labeled "a" through "d" were measured on a one to ten scale (from "not at all" to "very much"). The guilt question (variable "e") was measured dichotomously (guilty/ not guilty).

The appropriate punishment question (variable “f”) was measured by giving actual sentence lengths (ranging from one year to a life sentence). (see Appendix 2)

It was hypothesized that individuals whose speech is accented are viewed less favorably than those with accent-free speech. Individuals with accented speech are judged as less credible, less accurate, more deceptive, and less prestigious, with the result that the defendants receive lower ratings of guilt and lighter punishments. The direction of the predictions were determined from the results of the pilot study. It was also hypothesized that ethnic background would play a role in ratings of favorability within the accented condition. It is expected that the German would be rated the most favorably, the Mexican the next most favorably, and the Lebanese the least well. This is consistent with the results of the pilot student. The defendant, in turn, would receive the highest guilt ratings and most severe punishment after hearing the testimony delivered by the German witness and the lowest guilt ratings and least severe punishment when the testimony was provided by the Lebanese eyewitness.

The hypotheses were tested by a series of six 3 (ethnic background: German, Mexican, Lebanese) x 2 (accent: accent, accent-free) multiple regressions, one for each of the dependent measures, with attractiveness as a covariate to ensure that all three-stimulus persons (*i.e.*, eyewitness) are considered equally attractive. Confirmation of the hypotheses requires main effects of accent with the non-accented witnesses rated more favorably than the accented witnesses



and interaction effects of accent by ethnic background with the German rated most favorably, then the Mexican, and finally the Lebanese. Independent variables were entered in the following order: accent, ethnic background, and the product variable accent by ethnic background.

## RESULTS

Attractiveness was used as a covariate in the primary analyses because a one-way analysis of variance revealed a significant effect of ethnic background/appearance of the eyewitness on attractiveness ( $F(2, 174) = 8.06, p < .05, \eta^2 = .16$ ). The German was rated as the most attractive. There were no significant attractiveness differences between the Mexican and Lebanese eyewitnesses.

The multiple regression analyses yielded significant main effects for accent on four of the dependent variables: credibility ( $F(1, 174) = 7.37, p < .01, r_c^2 = .14$ ); accuracy ( $F(1, 174) = 7.03, p < .01, r_c^2 = .23$ ); deception ( $F(1, 174) = 3.92, p < .05, r_c^2 = .30$ ); and prestige ( $F(1, 174) = 6.89, p < .01, r_c^2 = .22$ ). All of the differences between the accent and accent-free conditions were in the expected direction with the accented speech rated less favorably. (see Table 1)

Insert Table 1 about here.

Follow-up protected *t*-tests were conducted to compare the three accented conditions with each other (*i.e.*, German vs. Mexican, German vs. Lebanese, Mexican vs. Lebanese). The protected *t*-tests showed significant differences as predicted by the pilot study between (a) the Lebanese and the Mexican witnesses

and (b) the Lebanese and German witnesses. The accented Lebanese eyewitness was rated less favorably than both the accented German and Mexican eyewitnesses, as predicted. However, contrary to predictions, there were no significant differences between the accented German and Mexican eyewitnesses (see Tables 2 and 3). In the accent-free conditions, as predicted, no significant differences were found among the eyewitnesses across the German, Mexican, and Lebanese nationalities on credibility ( $t = -1.62, p < .11$ ), accuracy ( $t = -.22, p < .83$ ), deception ( $t = 1.67, p < .10$ ), prestige ( $t = 1.66, p < .10$ ), guilt ( $t = .77, p < .44$ ), and punishment ( $t = .04, p < .97$ ).

Insert tables 2 and 3 about here.

A correlation matrix shows that the four eyewitness variables--credibility, accuracy, deception, and prestige--are significantly intercorrelated. (see Table 4) Defendant guilt is significantly correlated with the four eyewitness variables. However, defendant punishment did not correlate with all of the eyewitness variables. It did correlate significantly with guilt, but the correlation was very small ( $r = .12$ ).

Insert table 4 about here.

There were several significant findings for the variable of ethnic background as well as its product variable with accent. There was a significant main effect of ethnic background on credibility ( $F(2, 174) = 6.37, p < .01, r_c^2 = .06$ ). The German eyewitness was rated as the most credible ( $M = 7.99$ ), the

Mexican eyewitness was rated with a medium degree of credibility ( $M = 6.85$ ), and the Lebanese eyewitness was rated as the least credible ( $M = 5.94$ ). The overall F test was followed by paired comparisons to investigate where differences in ratings lay. Protected  $t$ -tests revealed no significant differences between the German and Mexican ( $t = 1.43, p < .15$ ), but did show statistically significant differences between both the German and Lebanese ( $t = 2.12, p < .05$ ) and the Mexican and Lebanese ( $t = 2.94, p < .01$ ).

There were five significant effects for the accent by ethnic background interaction: credibility ( $F(2, 174) = 6.87, p < .01, r_c^2 = .06$ ); accuracy ( $F(2, 174) = 3.92, p < .05, r_c^2 = .07$ ); deception ( $F(2, 174) = 6.67, p < .01, r_c^2 = .04$ ); prestige ( $F(2, 174) = 3.88, p < .05, r_c^2 = .03$ ); and guilt ( $F(2, 174) = 5.83, p < .05, r_c^2 = .04$ ). The significant F tests of the interactions were followed by  $t$ -tests to further explore the findings. The results of those tests may be found in Table 5.

Insert table 5 about here.

## DISCUSSION

A message processing model (ELM) (Petty & Cacioppo, 1986) was used as the guiding framework for this study. ELM is a theory of persuasion, which posits that changes in attitudes can arise through effortful and noneffortful processes. Ideally, central processing is the way that new thoughts are incorporated into an individual's cognitions. Central processing is the term used

in the model when a thought is carefully evaluated for information relevant to the merits of a given argument (Petty, 1995). Sometimes however, because of a lack of motivation to process content, individuals may rely on, or engage in, peripheral processing. According to Petty and Cacioppo (1986), in peripheral processing, ideas are processed by an individual's mind as in central processing, but content-irrelevant factors of a message (*e.g.*, accent) are incorporated unintentionally along with the message and the real message content is influenced by the irrelevant information. The peripheral route becomes more likely to take over from the central route if the message recipient is unable to elaborate on the message (Smith & Shaffer, 1995). The route by which attitude change occurs, if it does in fact occur, is determined by an individual motivation to process content.

When used to study perceived favorability of foreign and non-foreign eyewitnesses, ELM provides an explanation for why mock jurors may attend to irrelevant or extralegal factors. Active elaboration of eyewitness-testimony may be minimal when listening to accented speech because the listener may become heavily focused on the accent of the speaker. The listener may not have time to process content of the speech because he or she will be so focused on understanding the accented words. It is possible that, as Anderson-Hsieh and Koehler (1988) suggest, listener's attitude towards foreigners and their speech is significantly correlated with comprehension. Alternately, the listener's motivation, in addition to or instead of the characteristics of the accent, may be a

factor. However, since there were differences in favorability ratings in this study between the accents, it is more likely to be attitude rather than motivation. The results of this current research may alternately indicate that accent is used as a heuristic to evaluate witness favorability irrespective of listener attitude or motivation. Irrelevant factors may enter an individual's mind through peripheral processing, influencing him or her to rate target individuals in certain ways.

Two important findings emerged from the present study: (a) the four eyewitness dependent variables varied significantly as a function of accent: credibility, accuracy, deceptiveness, and prestige; (b) the accent by ethnic background interaction was significant for the same dependent variables as well as the more consequential rating of defendant guilt.

The same testimony delivered by the same witness was perceived as less favorable if the witness testified with an accent. This effect is replicated across three witnesses using different accents. Eyewitnesses who spoke with an accent were rated less favorably on the four eyewitness variables than those eyewitnesses whose speech was accent-free. The present findings are consistent with prior research on discrimination of individuals in other settings (*i.e.*, employment (Matsuda, 1991) and education (Triandis, et.al., 1966)). They are also consistent with prior findings in accent research indicating that standard speakers of English are rated as more prestigious than non-standard speakers (for example see Nesdale & Rooney, 1996; Tucker & Lambert, 1969; Williams, Hewett, Miller, Naremore,

&Whitehead, 1976). Numerous studies have found that listeners tend to downgrade nonnative speakers of a given language based simply on the nonnative speakers' accent (Lippi-Green, 1994; Tucker & Lambert, 1969; Williams, et. al, 1976). The findings from the current study corroborate these past findings.

Accent and ethnic background may both be considered peripheral cues. Accents are likely to make it difficult for the listener to elaborate on the content of the message (*i.e.*, to process centrally) therefore peripheral processing is likely to occur when there is an accent present. Ethnic background, when not presented with a foreign sounding accent, should not disrupt central processing because it should not interfere with the listener's ability to elaborate on the content of the message.

With respect to the accent condition alone, it was expected based on the pilot study that Germans are rated the most favorably with the Mexicans rated the next most favorably. The German and Mexican eyewitnesses were rated more favorably than was the Lebanese eyewitness, consistent with expectations. There were, however, no significant differences between the accented German and Mexican eyewitnesses.

In terms of the interaction effects (accent by ethnic background), there is empirical evidence that Western European accents are perceived more positively by Americans than are non-Western European accents (Lippi-Green, 1994). Therefore, it was reasonable to expect that the dependent variables would vary

significantly between German-accented and Mexican-accented eyewitnesses. The lack of significance in the difference between favorability ratings of the German-accented and Mexican-accented eyewitnesses is somewhat difficult to understand and warrants further, prediction-based research. One possible explanation is that university students in the mid-Atlantic U.S. may have a greater familiarity with Mexican accents than with German or Lebanese accents and thus view them as “less” foreign. Another possibility is that the degree of accent influenced the ratings indicating that the Lebanese had a stronger accent than the German or Mexican. While this may be the case based on the work of Anderson-Hsieh and Koehler (1988), as the inter-rater reliability of the reviewers was 100%, this explanation is not founded.

It is interesting to note that defendant guilt varied significantly as a function of the accent by ethnic background interaction, even though punishment did not. Although it might seem that defendant guilt and punishment are related, they were not in this study ( $r = .12$ ). It is possible that the participants tried to reconcile the level of punishment they deemed appropriate with the level of the crime, rather than with the perceived level of guilt. Punishment, after all, is supposed to fit the crime, not necessarily the perceived level of guilt. That is, guilt and punishment are not necessarily related in courtroom settings (W. Lawrence Fitch, personal communication May 31, 2000). Dixon, Mahoney, and Cocks (2002) suggest that attributions of guilt are influenced by accent. In

retrospect then, it is not particularly surprising that guilt is significant for this interaction while punishment is not.

The current results further support a body of research indicating that the interaction of accent and ethnic background does have an effect on ratings of credibility, accuracy, deception, prestige, and defendant guilt. A number of researchers found that accent determines ratings of favorability such that individuals who speak with more "prestigious" accents receive higher favorability ratings than do individuals who speak with less "prestigious" accents (*e.g.*, Deshpande, Hoyer, & Donthu, 1986; Francis & Phyllis, 1998; Giles & Bourhis, 1979; Luhman, 1990; Saddlemire, 1996; Sobral Fernandez & Prieto Ederra, 1995).

The fact that the interaction effects in this study qualify the main effects are not particularly surprising. It makes logical sense based on ELM that listeners would feel most favorably towards non-accented speech regardless of county of origin of the speaker. Furthermore, using the framework, it follows that based on how familiar a listener is with a given accent (*e.g.*, Mexican-accented Spanish), the listener is more likely to rate the speaker in a favorable light. Speech of individuals originating from "prestigious" countries (*e.g.*, Germany) would also receive higher favorability ratings (Lippi-Green, 1994). This corroborates research which found that participants who had little contact with minorities base their perceptions of them on either misinformation or total lack of information



(Saddlemire, 1996). Participants in the current study should be basing their ratings on the text of the testimony, but instead based them on their perception of the speaker. Jurors in a courtroom who are unfamiliar with a particular accent or ethnic background may make judgments based not on the facts of the testimony, but instead on perceptions of the individual who is testifying. Luhman (1990) found that speakers of standard American English were rated significantly higher than individuals speaking in Appalachian English, irrespective of the fact that information was provided indicating both groups of speakers had equal educational status. Yet again, this supports the idea that accent influences ratings of speakers regardless of other equivalent factors (e.g., education, knowledge of crime).

There was a main effect of ethnic background on credibility irrespective of the accent or accent-free speech of the eyewitness. The eyewitness who stated that she was German was perceived as more credible than the Mexican eyewitness, who in turn was perceived as more credible than was the Lebanese eyewitness. This finding supports other research indicating that there is a preset rank ordering of favorability by Americans towards individuals from foreign countries (Lippi-Green, 1994).

### Limitations

There are at least two possible limitations to the study that constrain its generalizability. First, the eyewitness testimony may have been too short and not

detailed enough (only showing the witness box) for the mock jurors to develop anything beyond an initial and overall impression of the eyewitness. The videotaped testimony did not show the judge, or the defendant. Perhaps the brief testimony provided one piece of information only-information about the eyewitness. The mock jurors had no opportunity to view the defendant (*e.g.*, via photograph of him) or hear any contradictory testimony (*i.e.*, from other witnesses, the defense attorney, or the defendant himself). Additionally there was no discussion of the defendant's or victim's ethnic background and/or accent, both of which might have altered the results. It might have been too large a conceptual leap to assume that after such a brief encounter with an eyewitness, a participant is willing to make a determination about a defendant who is neither viewed nor heard. Consequently, some participants may have been hesitant to make judgments that would presumably have a very serious effect on an individual's life.

A second limitation is related to time differences and perceptions of groups: that is, society is dynamic and things such as opinions of others based on ethnic background and accent are likely to change with time. The participants may have had the opportunity to interact with Mexican individuals, as there are many Mexicans in the U.S. If this is the case, they may not perceive Mexicans as "foreign" in the same way as the other groups, Germans or Lebanese, are perceived as foreign.

### Future Research

The results of this study leave several questions to be answered in future research. It would be useful to determine the ecological validity of the current findings. Can the results generalize to other populations? Since the current juror population was relatively homogeneous with respect to age and education, it would be useful to repeat the study with mock juror participants selected from a group more typical of real jury populations. Second, can the findings generalize to other nationalities and individuals from varying parts of the world who speak with accented speech? A future study could use the same design as the current study to measure the perceived favorability of different nationalities and foreign accents. A third study to consider would be to add an additional group. For instance, if the eyewitnesses each had a videotape stating that they were born in the US, then nationality in addition to ethnic background could be analysed as well.

### Conclusion

ELM provides a reasonable theoretical explanation for the findings of accent and accent by ethnic background. It provides a good vehicle for explaining the findings involving accent as a main effect and as an interaction effect with ethnic background because it postulates that peripheral or irrelevant factors, *i.e.*, accent main effects or ethnic background by accent interaction effects, influence the judgments of individuals. Given that the accent and accent-free testimony

were identical in content, and the eyewitness herself was identical in both conditions, the non-relevant factor of accent seems to have influenced the mock jurors. Similarly, even when the attractiveness of the eyewitness was accounted for, the ethnic background of the eyewitness played a role in ratings of favorability of the eyewitnesses. Petty and Cacioppo's (1986) theoretical position is that in peripheral processing ideas enter and are processed in an individual's mind as in central processing, but content-irrelevant factors of the message are also incorporated during processing and may influence the real message content. This position seems an apt interpretation of the current data.

The results of this research may have important implications for the U.S. judicial system. It speaks to the need for attorneys and judges to be aware of the power supposedly irrelevant variables may have on eyewitness testimony. It would appear from these findings that the accent and ethnic background of foreign-born witnesses influences jurors. Even though case disposition was not affected by accent and ethnic background, it does not mean that accent and ethnic background are innocuous. Further research is needed to determine whether these results have ecological validity.

Accented eyewitness testimony provided in legal settings is perceived less favorably than non-accented testimony. There are nuances and variables that may alter this general conclusion, but taken together, this research provides support for potential unfairness in the U.S. justice system. Individuals involved with using

eyewitnesses in the United States justice system should be aware of the potential pitfalls of having accented eyewitnesses testify in criminal trials.

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## Footnotes

<sup>1</sup> Based on a favorability pilot study conducted prior to this research and to be described in the Method section.

<sup>2</sup> The basis for this expected rank-ordering is the result of a pilot study to be described in the Method section.

### Appendix 1- Instructions given to Participants

In a moment, you will view a two-minute videotape of eyewitness testimony. The testimony is taken from a criminal trial. The defendant is being tried for armed burglary. This is not the entire court case, nor is it the entire testimony from this eyewitness. Rather, it is simply a segment of the testimony from one eyewitness. Please watch the videotape carefully. Following the conclusion of the video, I will pass out a two page questionnaire. Please give your reactions to the tape by answering the questions on the questionnaire. They will be based mainly on the eyewitness testimony you just watched. Are there any questions?

Appendix 2 – Partial Measurement Instrument for Study

1) Did you think the witness was trying to deceive you?

Not at all  
 10      9      8      7      6      5      4      3      2      1  
 Very much

2) How credible (a trustworthy source) did you find the witness?

Not at all credible  
 1      2      3      4      5      6      7      8      9      10  
 Very credible

3) How accurate do you think the witness is in relaying the events?

Not at all accurate  
 1    2    3      4      5      6      7      8      9      10  
 Very accurate

4) How prestigious do you find the witness to be?

Not at all prestigious  
 1      2      3      4      5      6      7      8      9      10  
 Very prestigious

5) How physically attractive did you find the eyewitness?

Not at all  
 1      2      3      4      5      6      7      8      9      10  
 Very much

6) Based on the testimony of the eyewitness, do you think the defendant is guilty?

Not at all guilty  
 1      2      3      4      5      6      7      8      9      10  
 Definitely guilty

7) Assuming that the defendant is found guilty, what punishment do you think is appropriate for the defendant? (circle one)

- 1-2 year jail sentence
- 3-8 year jail sentence
- 15-20 year jail sentence
- 20-25 year jail sentence
- 9-14 year jail sentence
- Life Sentence

Table 1

Means and Standard Deviations of the Dependent Variables as a Function of Accent

Variable	Accent (n = 83)		Accent-free (n = 91)	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Credibility**	5.80	1.41	7.42	1.42
Accuracy**	5.97	1.34	7.31	1.30
Deception*	5.55	1.28	6.94	1.64
Prestige**	6.57	1.32	7.75	1.32
Guilt	6.61	1.62	6.82	1.43
Punishment	2.73	1.21	3.09	1.66

\*\* p &lt; .01

\* p &lt; .05

Table 2

Means and Standard Deviations as a Function of Ethnic Background by Accent

<b>Credibility</b>	<b>German</b>			<b>Mexican</b>			<b>Lebanese</b>		
	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>
Accent	30	6.80	1.50	27	6.87	1.53	26	5.03	1.21
Accent-free	35	6.97	1.63	30	6.88	1.38	26	6.50	1.25
<b>Accuracy</b>									
	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>
Accent	30	6.31	1.26	27	6.31	1.50	26	5.50	1.28
Accent-free	35	6.77	1.15	30	6.75	1.20	26	6.71	1.56
<b>Deception</b>									
	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>
Accent	30	6.48	1.54	27	6.58	1.22	26	5.14	1.23
Accent-free	35	7.12	1.39	30	7.05	1.54	26	6.78	1.86
<b>Prestige</b>									
	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>
Accent	30	6.78	1.62	27	6.53	1.52	26	5.39	1.38
Accent-free	35	7.07	1.27	30	6.84	1.48	26	6.65	1.21
<b>Guilt</b>									
	<u>N</u>	<u>Mean</u>	<u>SD</u>	<u>n</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>Mean</u>	<u>SD</u>
Accent	30	6.64	1.51	27	6.63	1.32	26	5.50	1.30
Accent-free	35	6.80	1.16	30	6.78	1.19	26	6.68	1.09

Table 3

Paired Comparisons for the Three Nationalities within the Accented Conditions

Dependent	German/Mexican		German/Lebanese		Mexican/Lebanese	
Dependent Variable	$t_p$	$P$	$t_p$	$p$	$t_p$	$P$
Credibility	1.43	.15	2.12	.05	2.94	.01
Accuracy	1.18	.14	2.90	.01	2.12	.05
Deception	.55	.58	2.51	.05	2.30	.05
Prestige	1.53	.13	2.84	.01	2.58	.05
Guilt	.69	.49	1.06	.19	2.09	.05
Punishment	.99	.32	1.14	.13	1.64	.10

Note: Protected t-tests were used for the comparisons.



Table 4

Correlation Matrix for the Dependent Variables

	Accuracy	Credibility	Deception	Prestige	Guilt	Punishment
Accuracy	1.00	.65***	.28***	.37***	.43***	.13*
Credibility	.65***	1.00	.41***	.42***	.50***	.09
Deception	.28***	.41***	1.00	.20***	.21***	.08
Prestige	.37***	.42***	.20***	1.00	.24***	-.006
Guilt	.43***	.50***	.21***	.24***	1.00	.12*
Punishment	.13*	.09	.08	-.006	.12*	1.00

Note: \*\*\*  $p < .001$

\*\*  $p < .01$

\*  $p < .05$

Table 5

Paired Comparisons for the Three Nationalities within the Accented Conditions

Dependent Variable	German/Mexican		German/Lebanese		Mexican/Lebanese	
	$t_p$	$p$	$t_p$	$p$	$t_p$	$p$
Credibility	1.40	.15	2.17	.05	2.88	.01
Accuracy	1.18	.14	2.90	.01	2.12	.05
Deception	.55	.58	2.51	.05	2.30	.05
Prestige	1.53	.13	2.84	.01	2.58	.05
Guilt	.69	.49	1.06	.19	2.09	.05
Punishment	.99	.32	1.14	.13	1.64	.10

Note: Protected t-tests were used for the comparisons.