

## Identification and Stereotypes of Foreign-accented English

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**Resumo:** Usando um design experimental semelhante ao de Bayard et al., o artigo pesquisa atitudes de universitários americanos em relação a falantes do inglês franceses, espanhóis, italianos e mexicanos (pronúncia, estereótipos sobre pronúncia).

**Palavras Chave:** pronúncia. estereótipos. percepção de personalidade.

**Abstract:** The effect of accent on perceived personality characteristics is well-documented in academic literature: perceiving someone to be from a particular region on the basis of their dialect affects attitudes toward the speaker (Rubin & Smith 1990, Baugh 2004, Lindemann 2003). Using an experimental design similar to that used by Bayard *et al.* (2001), this study investigates the attitudes of American college students toward French-, Spanish-, Italian-, and Mexican-accented speakers of English. Judges were presented with four audio clips of non-native speakers of English reading the same passage of text, and asked (1) to identify the speakers' country of origin and (2) to give them a rating from 1 to 6 on nine personality characteristics such as **Intelligence**, **Attractiveness**, and **Wealth**. The results of (1) showed that judges were more or less able to discern the speakers' language of origin, although there was more difficulty in terms of country of origin, with Spanish- and Mexican-accented English being frequently confused with one another. The results of (2) generated a list of characteristics associated with each culture which fell in line with popular folk knowledge about American stereotypes of different countries: the Mexican speaker, for example, was judged as **Poor** but **Efficient** and **Hard-working**, while the French one was **Lazy** but **Attractive** and **Refined**.

**Keywords:** accent. stereotypes. perceived personality.

### 1. Introduction

On the popular website TVTropes.org, a wiki devoted to cataloging frequently-occurring tropes in numerous genres of entertainment, one can find the page "Everything Sounds Sexier in French."<sup>2</sup> Compiled on this page is a list of over one hundred instances in film, television, literature, commercials, theater, and other popular forms of entertainment wherein a character's foreign accent or origin evokes stereotypical personality traits. These traits are very consistently associated with specific countries: according to the website, French is "sexy, fashionistic, romantic and cultured," British is "wealthy, privileged and aristocratic," Japanese is "polite and cute," and Spanish and Italian are "Hotter and Sexier."

As the website shows, these stereotypes are both widely and consistently disseminated throughout popular culture. Academic research has corroborated this assessment: Lippi-Green (1997) discusses the negative, stereotypical use of foreign accents in Disney films, while Dobrow & Gidney (1998) points out how accents such as German, Russian, and those from Eastern Europe are typically used for villains in children's cartoons. While nonnative accent stereotypes can be negative, this is not necessarily always the case. Lippi-Green (1994) and Lindemann (2005) found that Western European accents are perceived as more prestigious and non-stigmatized; this paper builds upon their claims by providing additional characteristics associated with individual Western European accents, specifically those countries which speak Romance languages.

Focusing on American attitudes toward several Romance language accents (French, Spanish, Italian, and Mexican), the present study asked first whether judges

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<sup>2</sup>. <http://tvtropes.org/pmwiki/pmwiki.php/Main/EverythingSoundsSexierInFrench>

could reliably identify the accents in question, and then what characteristics were associated with each. The results of the experiment showed that the test group could recognize French and Hispanic accents more often than not, although they struggled to differentiate between the specific accents of Spain and Mexico. An Italian accent, conversely, proved to be more problematic in terms of recognition. Each accent was additionally found to have its own unique set of personality characteristics, both positive and negative, which are associated with it and which vary according to the perceived L1 of the speaker.

## **2. Literature Background**

The effect of perceived origin on the perception of personality traits in general has already been well-documented. Gluszek & Dovidio (2010) provides an exhaustive list of literature related to this topic; below are several studies that are particularly relevant for our purposes.

Rubin & Smith (1990) investigated student perceptions of non-native speaking teaching assistants, and found that the more foreign a student perceived an accent to be from their own (regardless of the actual level of accentedness), the lower they rated the TA's teaching abilities. Similarly, Rubin (1992) had students listen to the same lecture, coupled with an image of either a Caucasian or an Asian individual whom they were led to believe was the lecturer. The group that saw the Asian image perceived the speaker as having an accent and performed worse on a comprehension task, while the group that saw the Caucasian image was unaffected. These results demonstrate that it was the listeners' prejudiced perception of the accent and not the phonetic characteristics of the accent itself which affected their comprehension.

Similarly, Chapter 8 of Baugh (2004) argues for the existence of "linguistic profiling," which is the idea that a speaker's origin can be determined from his accent, and this act of recognition results in (typically negative) prejudices. Gluszek & Dovidio (2010:217) corroborates this assertion by compiling a list of studies that found that nonnative accents frequently evoke negative stereotypes. These studies have found that nonnative accents negatively affect perceptions of characteristics such as intelligence, loyalty, competence, and language ability. Lindemann (2005) found that western European countries, in contrast, tended to receive positive ratings of friendliness and pleasantness (cf. Lippi-Green 1994).

Gluszek & Dovidio (2010:217) further articulates that "most researchers argue that there is nothing inherent to accents that makes some more aesthetically pleasing than others; rather, accents serve as cues to social identities, activating either negative or positive connotations." That is, it is not the phonetic characteristics of the accent itself that are considered positive or negative, but rather the political, socioeconomic and cultural stereotypes it evokes that make it prestigious or not. This means that if a judge misidentifies an accent, different connotations will be evoked than if they had done so correctly, as suggested by Lindemann (2003): this study investigated attitudes toward Korean-accented English, and the majority of participants could not reliably identify the accent (only 8% did so correctly). Lindemann hypothesized that the inability to recognize the accent resulted in the activation of negative, general anti-foreign stereotypes (lazy, uneducated, incompetent), rather than the positive stereotypes traditionally ascribed to Koreans (hard-working and intelligent).

In terms of how much stimulus material a judge needs to make this identification, Flege (1984) found that even untrained native speakers of English were able to identify French-accented English based on speech segments as short as 30 ms, although longer samples are typically used. In order to form these samples, most language attitude studies use the 'matched-guise' technique, described for example in

Giles & Bourhis (1976). In this technique, test subjects are asked to rate audio clips of multiple speech varieties under the impression that each clip is separately produced by a different individual. The voices, however, are all generated by a single speaker who can reliably reproduce the different speech varieties. The advantage of this technique is that confounding factors of pitch, intonation, speech rate, *etc.* remain constant between speech samples, rather than differing as a consequence of different speakers.

Nevertheless, not all studies strictly adhere to the matched-guise technique when presenting various speech varieties to judges. Clarke & Garrett (2004), for example, did not use just one speaker to generate all stimulus materials, opting instead for a native speaker of American English and a native speaker of Spanish. Lindemann (2003) similarly rejects the technique, on the grounds that several studies have demonstrated it to be inappropriate when stimulus materials are all in the same language. This is principally because test subjects are liable to recognize that a single person has prepared all the speech materials, and their knowledge of experimental design may impact their responses. Furthermore, Lindemann comments on the difficulty of finding speakers who can imitate multiple guises in a felicitous manner, an unfortunate reality that motivates the selection of authentic speakers.

Bayard *et al.* (2001) did not use the matched-guise technique, either, although they did comment that the monotonic reading of one speaker may have affected results, thereby acknowledging that using different speakers has disadvantages. Their study was quite similar in methodology to that which will be presented in Section 3, so will be examined in more detail than the others mentioned thus far.

In their study, eight speakers from four separate English-speaking countries—one male and one female per country—each read the same text which had been prepared by a previous study assessing phonological variables in New Zealand English. The four speech varieties represented were New Zealand, Australian, American, and British English. Participants listened to a recording of the four voices in a random order, and rated their impressions about the speakers' personality on a six-point semantic differential scale ranging from 'not at all' to 'very' in regard to the following variables: reliable, ambitious, humorous, authoritative, competent, cheerful, friendly, dominant, intelligent, assertive, controlling, warm, hardworking, pleasant, attractive, powerful voice, strong voice, and educated. Thereafter, they listened to the tape again and were asked to respond to fixed form questions about, among other items, the speaker's nationality, where they were asked to select from a list of 12 possibilities. This multiple-choice method of selecting nationality was designed to limit erroneous answers, and was also used in Garrett, Williams, and Coupland (1999).

The analysis of nationality selection was carried out without the use of any statistical measures, simply drawing conclusions from the percentages of raters who correctly identified a speaker's country of origin. The personality traits were first examined by carrying out a Varimax rotated factor analysis of the study's variables, which clustered the individual traits into the categories POWER, SOLIDARITY, COMPETENCE, and STATUS. The individual traits were then ranked against one another according to their means, after subjecting them to a MANOVA analysis.

The results of the study found that speakers did not rate their own accent most highly on traits representing solidarity as expected. That is, they did not prefer their own accent over nonnative ones, but had more positive stereotypes towards American English, which the article argues is slowly replacing British Received Pronunciation as the preferred prestige dialect in the English-speaking world.

### 3. Methodology

#### 3.1 Research Questions

This study sought to expand Lindemann's (2005) and Lippi-Green's (1994) claim that western European accents have generally positive connotations, specifically looking at how those accents compare to one another. The attitudes investigated were those of college-age students in an American university. In order to reduce the sheer number of potential variables in such an investigation, this study restricted itself to foreign-accented speakers of English from several Romance-language countries: France, Italy, and Spain—Mexico was included as well as a point of comparison with Spain, as it was hypothesized that the American testing population would have more familiarity with Mexican- than Spanish-speakers. The study followed a similar experimental design to that of Bayard *et al.* (2001), and asked the following research questions:

**QUESTION 1:** Can American college students correctly identify foreign-accented English from different countries?

**QUESTION 2:** What personality traits do each of these accents evoke?

#### 3.2 Participants

This study was carried out with students at a California university<sup>3</sup> enrolled in an 'Introduction to Iberian Linguistics' class. This class consisted of 62 students (46 female, 16 male) with an average age of 20. Twenty-five students (40%) considered themselves bilingual in both English and Spanish, and only 19 (30%) listed neither parent as being of foreign origin (28 students—45%—had parents from Mexico, for example). It is perhaps worth noting that a larger number of students had experience with foreign cultures than one might expect in a typical American classroom, but only four students had not grown up in the United States, and these students were excluded from the data set. It therefore seems reasonable to assume for the purposes of this study that the test subjects possessed folk knowledge common among Americans, although it must be acknowledged that these students, many of them heritage speakers, were likely to have a much higher exposure to Spanish and Spanish-accented English than non-Hispanic students.

The study was performed during class time, over the course of approximately 30 minutes. Students were given a participation grade for completing the study, although they were offered the opportunity to complete an alternative assignment if they chose not to take part. It was emphasized that their responses would be completely anonymous and that their grade was based on participation only.

#### 3.3 Stimulus Materials

Four sound clips were selected for the students. Each sound clip consisted of a male non-native speaker of English reading a short passage of instructions (provided in Appendix A), which were essentially content-free as per the suggestion of Aronovitch (1976:210). Three of the four clips (French, Spanish, and Italian) were obtained from the George Mason Speech Accent Archive, a freely available online database of English speech. The Mexican clip was recorded independently, since satisfactory clips could not be found on the website. The speakers selected had the following characteristics:

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<sup>3</sup> These were unpaid volunteers and selected in compliance with Human Subjects guidelines.

Nationality	Age	Age of English Onset	Length of residence in English-speaking country
French	28	13	0
Spanish	18	6	0
Italian	28	14	3 (USA)
Mexican	26	11	1 (England)

Table 1

The speakers were primarily selected based on the strength of their accent. Those clips were selected which most clearly demonstrated the salient characteristics typically associated with the accents in question. Another criterion was age: in an effort to prevent any possible confounding factors resulting from age differential between speaker and subject, the clips were limited to speakers between the ages of 17 and 30.

### 3.4 Measurement Instruments

The assessment was administered in two parts, samples of which are available in Appendix B. Part 1 consisted of five questions: identification of the speaker's country of origin, an open-ended question about what personality traits that accent evoked, how long the rater thought the speaker had been studying English, whether the rater would have trouble understanding the person as a TA, and whether the rater would go on a date with the speaker. For the first question, raters were given the same 15 possibilities to choose from for every speaker and informed that each country would only be appearing once.

Part 2 asked the participants to rate each accent in terms of 9 personality characteristics on a semantic differential scale from 1 through 6, 1 being the negative end of the personality trait (“Unattractive”) and 6 being the positive end (“Attractive”). An even number was used (*i.e.* 1-6 instead of 1-7) to avoid participants simply taking a neutral stance by choosing the middle point. The relative order of each of the nine characteristics was varied randomly, but the positive end always remained on the same side of the page to avoid confusion.

It should be noted that the two parts were distributed in the reverse order from Bayard *et al.* (2001). The intention was to prime raters by determining country of origin before personality characteristics in order to strengthen the likelihood that they were activating cultural stereotypes and not solely responding to phonetic factors particular to the speaker (*e.g.* pitch, intensity, speed, *etc.*). Additionally, having participants solve Part 1 first allowed raters a chance to give open-ended responses about personality characteristics in order to see if there was any particular personality dimension not included in Part 2.

### 3.5 Procedure

After students had filled out consent forms and demographic questionnaires, Part 1 was distributed. The four audio clips were then played with several minutes between each to allow raters time to respond. France was the first clip played, followed by Spain, Italy, and finally Mexico. Randomizing the order of the clips was unfortunately not possible given the testing environment, so all students heard the

clips in the same order. This order was determined by placing what the researchers deemed to be the most easily identifiable accent first (French) in order to encourage participation. It was then decided that the Spain and Mexico clips should be kept separated by the one from Italy, so as to divide the Spanish speakers. Spain was placed first among the Hispanic accents because it was hypothesized that, upon identifying Spanish language characteristics, many students would default to choosing Mexico rather than making a more careful selection. The placement of Spain first was intended to sort out those participants who truly recognized the accent from those who just assumed it was Mexican.

After participants answered these questions for all 4 accents, their responses were collected and Part 2 was distributed. Each accent was played again in the same order, and subjects filled out the evaluative scales of Part 2.

#### 4. Analysis

The purpose of the collected data was 1) to show the ability of American-English speakers (UCSB students in this case) to discriminate among 4 different Romance language speakers' accented English, and 2) to see which personality characteristics participants associated with which accent. The results and analysis of these questions is laid out below.

#### 4.1 Can students correctly identify foreign-accented English from France, Spain, Italy, and Mexico?

The results of Part 1 are summarized in Figures 1 through 4:

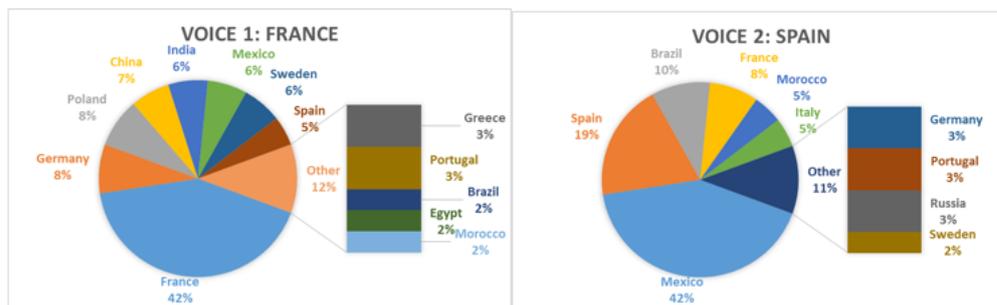


Figure 1

Figure 2

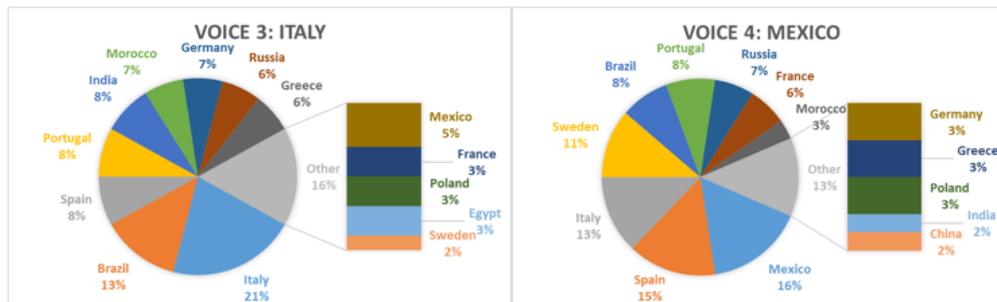


Figure 3

Figure 4

The above graphs show the identification of country of origin for each voice clip according to what percentage of subjects (N = 62) selected a given country. Figure 1 shows that French-accented English was the most easily identified by raters, with 42% of subjects correctly identifying the accent. While this might not have been a majority, it is substantially higher than the 1/15 (7%) chance they stood of guessing

the accent randomly from the list of countries. Note that the selected erroneous countries reflect this chance probability in almost every case of all four figures.

Figures 2 and 4 show more confusion in country selection. Forty-two percent of subjects who listened to the Spanish-accented voice (Figure 2) identified it as Mexican, while only 19% selected the correct country. Similarly, 15% of raters misidentified the Mexican voice (Figure 4) as Spanish, with 16% correctly identifying it. Despite the confusion between these two accents, it seems clear that subjects could identify a Hispanic accent, although they struggled to differentiate when it came to country of origin; conflating the selections Spain and Mexico into one category—Hispanic—gives an accuracy of 61% and 31% for Voice 2 and 4, respectively.

The disparity between these two percentages seems perplexing, given the Mexican-influenced demographics of the subjects articulated in Section 3.2. One would have expected substantially higher familiarity with the Mexican accent, although Scales *et al.* (2006: 732) similarly found that L1 Spanish speakers, including one from Mexico, experienced difficulties in identifying Mexican-accented English as anything more specific than “Spanish speaker” or “Latin.” Additionally, the relatively low percentage of correct guesses in Figure 4 (even after conflating the two variables) could have resulted from experimental design: because raters were instructed to only mark each option once, by the time subjects arrived at the fourth voice (Mexican), many had already used up their ‘Mexican’ selection on Voice 2 (Spanish), perhaps leading them to guess randomly between other, unused options.

As for Figure 3, Italian proved to be the most difficult accent to recognize, with only 21% doing so correctly. This could indicate that the Italian accent is not so pervasive in American popular culture as French or Spanish. Even so, while the number is comparatively small, it is still bigger than chance alone would allow, indicating at least a low level of familiarity with the accent.

The overall results of the country-identification task indicate that many participants were capable of distinguishing a speaker's mother tongue, even if they were not as accurate in identifying that speaker's country of origin. Italian-accented English appeared to be the least familiar for the raters, while French and Hispanic accents were easier to identify.

#### **4.2 What is the relationship between the selected accent and the personality characteristics a subject assigns to that accent?**

The second research question was what personality traits judges associated with each of the accents in question. As elaborated above, participants’ attitudes toward the accents were measured through two methods: an open-ended response section and a closed, 6-point evaluative scale.

Analysis of the open response section did not yield any particularly useful results. As is the danger with open-ended questions, participants tended to give brief answers which did not differ in a consistent manner either between accents or between judges. Therefore, this section will restrict its analysis to the data collected from Part 2 of the study wherein students rated personality traits of the speakers on a 6-point semantic differential scale. This section will first inspect the data via exploratory statistical measures, with Section 4.2.1 investigating the correlation of personality traits with perceived nationality and Section 4.2.2 exploring the clustering of nationalities and personality traits. Then, Section 4.2.3 will turn to analytical measures, resuming Section 4.2.1’s discussion of how perceived nationality varies as a function of personality traits.

### 4.2.1 Correlation of personality traits with perceived nationality

The first step in the investigation of this data was to perform an exploratory analysis. In order to get a rough visualization of how the accents compared to one another, Figures 5-8 were created. These figures show the mean rating of each characteristic on the 6-point scale.

In contrast to Bayard *et al.* (2001), which makes no mention of dividing participant responses according to perceived country of origin, the present study did so on the grounds that participants were supposedly making personality judgments on the basis of ethnic stereotypes. As Lindemann (2003) shows, misidentifying an accent activates different personality characteristics than doing so correctly. Therefore, it was assumed that a judge who identified an accent incorrectly (*e.g.* mistaking the French accent for a Spanish one), could potentially give a different rating, despite listening to a voice with the same phonetic qualities.

In order to take these differences into account, Figures 5-8 separate the data into three columns for each characteristic, representing different combinations of **Actual Country** vs. **Perceived Country**—*i.e.* the speaker's actual country of origin vs. the rater's perception.

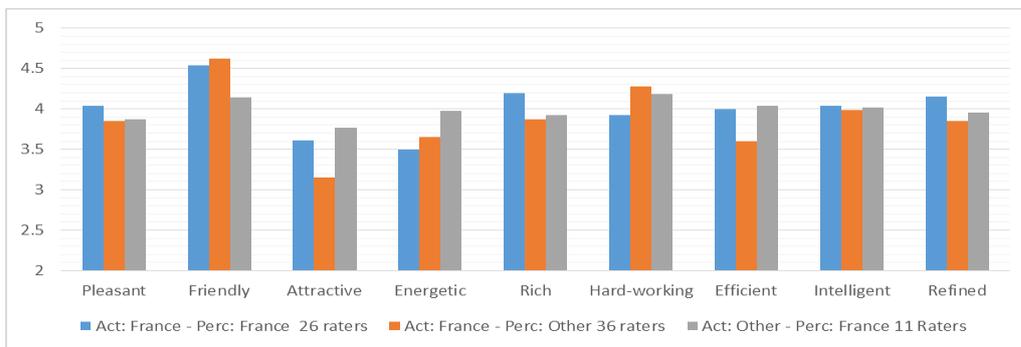


Figure 5

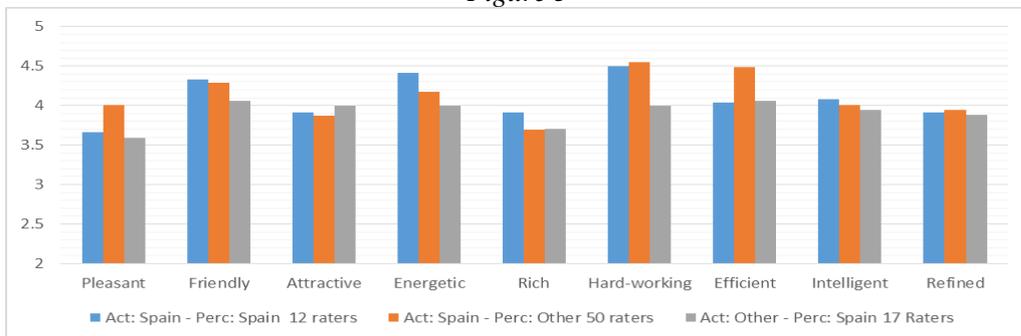


Figure 6

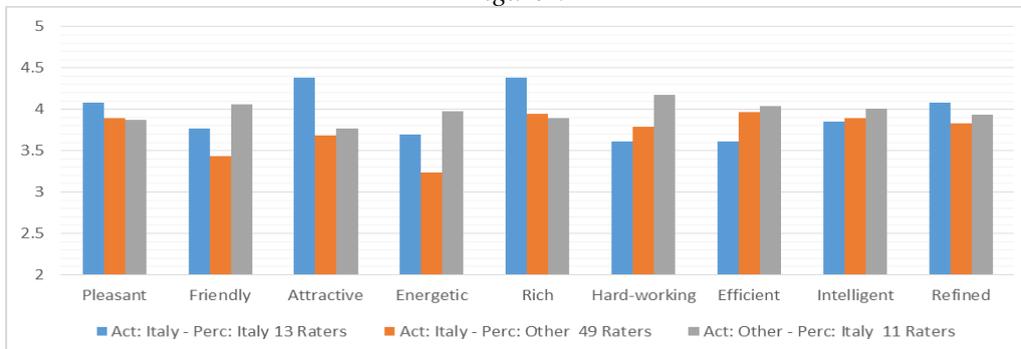


Figure 7

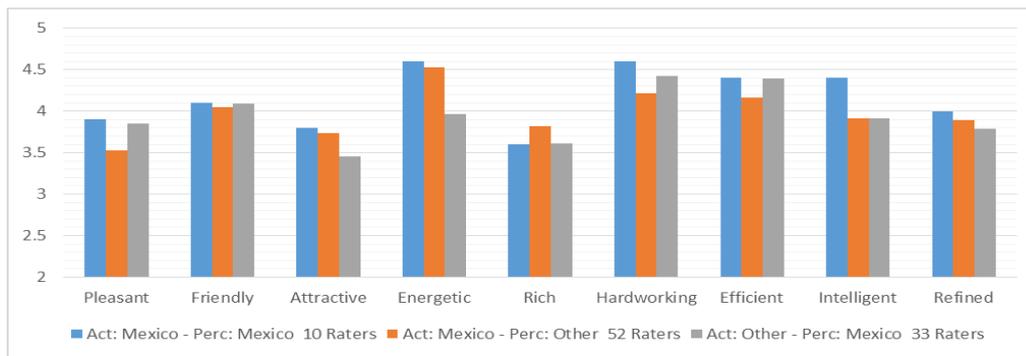


Figure 8

There were three possible combinations of these variables for each characteristic. If **Actual Country** and **Perceived Country** were both the same, the rater correctly identified the accent and this is represented by the blue column—in Figure 5, for example, the blue column represents those raters who successfully identified the French voice. Cases where the rater misidentified the country (**Perceived Country**  $\neq$  **Actual Country**) are represented by the red column—again using Figure 5 as an example, the red column represents those raters who misidentified the voice as any nationality other than French. Finally, the gray column represents the ratings given to any another accent misidentified as the one in question—those users who identified either Voice 2, 3, or 4 as French. The relevance of this third column is expanded upon below.

These figures include a large amount of information, so let us unpack an individual graph in more detail before moving onto the significance of the four as a whole. One of the more easily-interpretable characteristics is **Attractive** in Figure 5. The blue column (**Actual Country**: France; **Perceived Country**: France) shows that the mean **Attractive** rating of the 26 raters who correctly identified the accent was 3.6. Conversely, the red column (**Actual Country**: France; **Perceived Country**: Other) shows that this number fell to 3.1 if they identified the accent as something other than French. This is revealing, as it suggests that in characteristics where we see differences between the blue and red columns, judges did in fact make ratings based at least in part on cultural stereotypes. If the judgment was made on phonetic factors alone, the mean rating given to the voice should not be influenced by the perceived country of origin. Yet, a difference in the two columns indicates that a priming factor took place: recognizing the speaker as French made users rate him as more **Attractive**, allowing us to infer that **Attractive** is a trait associated with the French accent on a cultural level.

Further weight is given to this assumption by the mean ratings of the gray column (**Actual Country**: Other; **Perceived Country**: France). Here we see the mean **Attractive** rating (3.77) of all the users who misidentified Voice 2, 3, or 4 as French. That is, similar ratings were given on the **Attractive** characteristic by those users who identified an accent as French, whether they did so correctly (3.62—blue column) or incorrectly (3.77—gray column), whereas misidentifying the French voice as being a different nationality resulted in a lower value (3.1—red column). This third column, however, must be interpreted more cautiously than the first two; given that the ratings encompass ratings given to up to three other speakers, it is probable that a number of other interfering factors contribute to noise in the data. Nevertheless, in those instances where the blue and red columns differ, a similarity between the blue and gray columns provides even more evidence for the existence of a cultural stereotype.

Assuming that a difference between the blue and red columns indicates a cultural stereotype, what conclusions can we draw when there is no appreciable difference? In order to answer this question, consider the blue and red columns for **Intelligent** in Figure 5. Note that the mean **Intelligent** rating of the blue column was just above 4—higher than the **Attractive** rating of 3.6; this might encourage one to claim that there is an even stronger positive bias toward **Intelligence** in the perception of French accents. Yet, the inter-characteristic comparison of ratings is less useful than the comparison of ratings between those users who correctly identified the accent (blue column) and those who did not (red column). Comparing the blue column to the red one, we can see that there is virtually no difference between the raters who correctly identified the accent and those who did so incorrectly. That is, whether or not a participant identified the speaker as French had no bearing on their evaluation of the speaker’s **Intelligence**. This suggests that listeners were perhaps basing their rating on phonetic qualities for that particular voice, rather than activating any cultural preconceptions about French speakers in general, although it is also possible that the other accents selected evoked the same types of prejudices. Either way, similar values in the blue and red columns mean that no judgment can be made about that characteristic.

To sum up, in the interpretation of Figures 5-8, a considerable difference<sup>4</sup> between the blue column and the red column suggests a potential cultural stereotype, especially in the cases where the gray column shows a similar tendency as the blue. On the other hand, a similarity between the blue and red column can be interpreted as participants judging that characteristic based on the phonetic qualities of the voice, rather than any cultural stereotypes about the speaker.

With that in mind, the data suggests the following associations between each accent, with a (+) sign indicating a positive association, and a (-) indicating a negative one:

	Pleasant	Friendly	Attract.	Energetic	Rich	Hard-working	Efficient	Intel.	Refined
FRA			+		+	-	+		+
SPA	-						-		
ITA		+	+	+	+		-		
MEX	+					+		+	

Table 2

It might be surprising to see that some countries received negative characteristics in certain areas, despite the overall means being so high. Spain, for example, was assessed as **Inefficient** with a mean **Efficiency** rating of 4 by those who correctly identified it; not only was this mean on the positive end of the 6-point scale, but France was assessed as **Efficient** despite having the very same mean rating for **Efficiency** in the blue column. Remember, however, that the factor under assessment was the relative difference in mean ratings according to correct or incorrect identification of country, and not according to inter-country comparisons. These inter-country comparisons are dealt with in the following section.

<sup>4</sup> For the list of characteristics below, a difference of at least 0.3 between the blue and red columns merited the characteristic’s inclusion. This number was assigned on the basis of it being 5% of the 6-point scale range.

#### 4.2.2 Clustering of nationalities and personality traits

An exploratory examination of inter-country comparisons yields some enlightening information as well. Figure 9 compares the mean ratings of those users who correctly identified each speaker's country of origin (that is, we are now comparing each country's blue columns against one another).

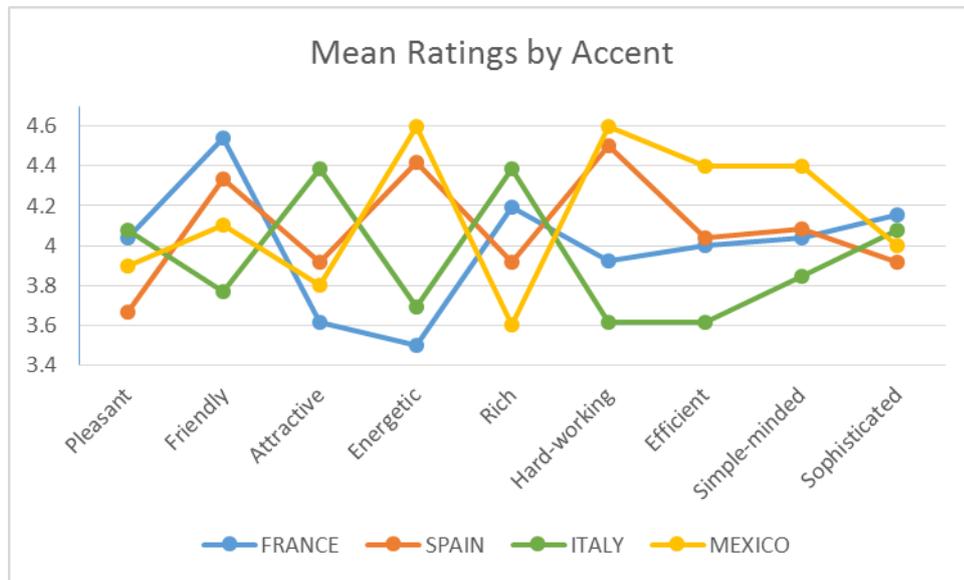


Figure 9

Comparing the four countries in this manner shows an interesting trend. The lines for Spain and Mexico behave in a very similar fashion, and run roughly parallel to one another across the entirety of Figure 9. Likewise, France and Italy mirror one another, with ratings rising or falling in an inverse proportion to those of the Hispanic accents in all characteristics except for **Friendly** and **Attractive**. Indeed, a hierarchical agglomerative cluster analysis of the data according to country yielded the following dendrogram, which suggests a very clear division between the four accents:

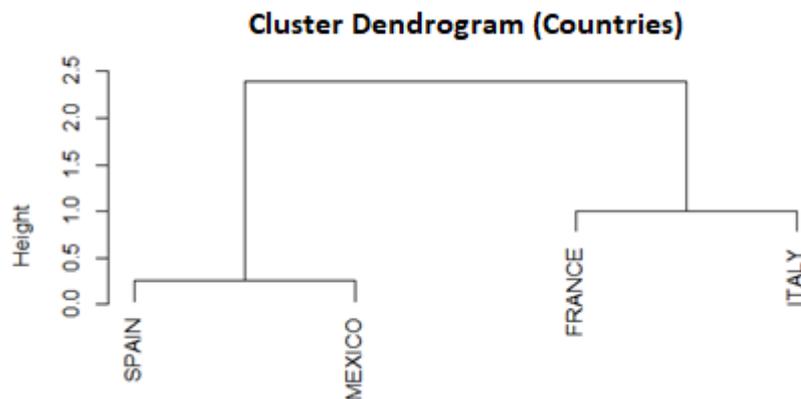


Figure 10

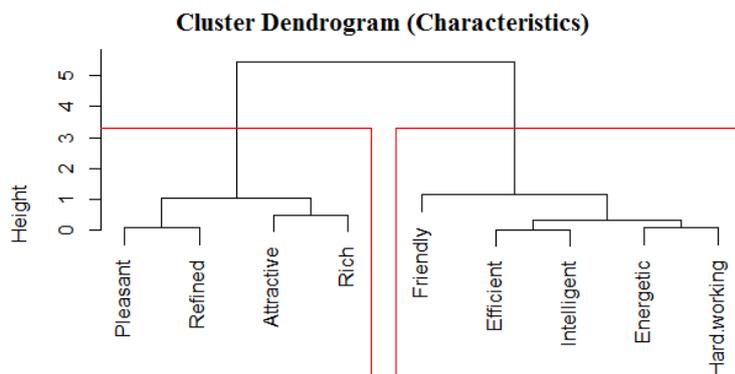
The above dendrogram was generated by first constructing a similarity matrix (similarity measure: Pearson product-moment correlation  $r$ ) for the four countries and the means of the nine evaluative characteristics. The selected matrix is a numerical comparison of how similar the data points are to one another according to their

curvature (*i.e.* the behavior of the lines in Figure 9). This matrix is then used to generate a cluster structure (amalgamation rule: “ward”), whose grouping clusters are created by combining individual factors based on the error sum of squares.<sup>5</sup> The longer the arms in the resulting dendrogram, the more dissimilar the constituent elements.

With this in mind, Figure 10 can statistically confirm our inference about the countries’ behavior from Figure 9: Spain and Mexico exhibit high levels of similarity to one another, as do France and Italy, but both groups of countries behave quite distinctly from one another.

This behavior has a fairly straightforward explanation: as we saw in the identification task in Section 3.1, participants tended to conflate the Hispanic accents, with a large number of raters mistaking the Spanish voice for a Mexican one, presumably due to increased exposure to Mexican culture. More than likely, the division in Figure 10 represents a conceptual division between European accents and Hispanic ones, with “Hispanic” having a *de facto* definition of “Mexican” for the participants. This division is also consistent with Lindemann’s (2005) grouping of Western European accents under a single conceptual category; participants may not have had extremely specific stereotypes idiosyncratic to each country, but rather an overarching conception of what constitutes “European” and “Hispanic” culture. Interestingly, Spain seems to fall under the conceptions regarding the latter category rather than the former.

As discussed in Section 2, Bayard *et al.* (2001) carried out a factor analysis of their own, not in order to group the countries in question, but rather to arrive at a clustering of personality traits. To this end, another cluster dendrogram was created for the present study using the same process as that described above (similarity measure: “correlation”, amalgamation rule: “ward”):



*Figure 11*

The clustering in Figure 11 indicates two distinct groups of characteristics, as indicated by the red boxes.<sup>6</sup> This is a common phenomenon throughout language attitude research, where numerous variables are condensed into two or three core dimensions which are consistent across studies (Garrett 2001, Campbell-Kibler 2006:71-72, Llamas *et al.* 2007:117, Chambers *et al.* 2008:41-42, Newman 2011). The individual assignment of specific characteristics varies from study to study, but Group 1 above (**Pleasant, Refined, Attractive, Rich**) correlates with the classic grouping of

<sup>5</sup> For a full explanation of the process, see Gries (2013:336-349).

<sup>6</sup> The grouping of the data into two distinct clusters was calculated by computing average silhouette widths as outlined in Gries (2013:348-349).

*solidarity* or *social attractiveness*; Group 2 (**Friendly, Efficient, Intelligent, Energetic, Hard-working**), on the other hand, fits into the prestige categories of respect called *status* or *competence*.

The effect of the above clusters on each country can be assessed by examining the relative *t*-values in order to see numerically to what degree each country loads on each group. The higher the *t* value, the higher ratings one expects in that group, and vice versa.

	Group 1	Group 2
<b>France</b>	0.000	0.000
<b>Spain</b>	-0.850	0.680
<b>Italy</b>	0.954	-0.763
<b>Mexico</b>	-0.916	0.733

Table 3

Spain and Mexico, for example, load positively on Group 2 (**Friendly, Efficient, Intelligent, Energetic, Hard-working**) and negatively on Group 1 (**Pleasant, Refined, Attractive, Rich**), while the opposite is true of Italy. That is, participants were more likely to rate Spain and Mexico higher on Group 2 traits and lower on Group 1 traits, while the reverse happened for Italy. Interestingly, France did not load positively or negatively on either of the groupings; this is presumably a result of the French accent being associated with characteristics from both groups.

The results of this cluster analysis provide further evidence for the conceptual grouping of the two Spanish-speaking cultures according to language rather than geography. While France and Italy did not exhibit homogenous factor loading, Spain nevertheless obviously was rated distinctly from its geographic neighbors. Instead, it behaved far more similarly to Mexico, indicating that raters did not distinguish substantially between stereotypes concerning Spain and Mexico.

#### 4.2.3 Effect of trait selection on perceived nationality

The previous two sections investigated the data via exploratory statistics; this section will proceed to analytical methods in the form of a multinomial regression in order to further describe how a rater's selection of an accent varied according to the values assigned to each personality characteristic. The independent variables of the regression consisted of the nine personality characteristics, along with the **Actual Country** of the speaker.<sup>7</sup> The dependent variable was each judge's perception of the speaker's country of origin (**Perceived Country**).<sup>8</sup> In addition to analyzing the main

<sup>7</sup> Unlike Bayard *et al.* (2001), the statistical analysis in this section was performed with the original characteristics, not with the clusters found in the exploratory phase. This decision was made because under normal circumstances it is not methodologically permissible to run exploratory and analytical statistics on the same data set. Therefore, the present study was unable to generate the same significance factors from MANOVA analysis as those used by Bayard *et al.*, and statistical analysis was continued instead with a multinomial regression.

<sup>8</sup> This variable originally had 15 possible levels, as explained in section 3.4—the four accents being studied, along with 11 distractors. In order to reduce the degrees of freedom of the dependent variable for the multinomial regression, these 11 distractors were combined into one variable level, "Other," leaving only five possible levels for **Perceived Country**.

effects of each of the ten independent variables, the multinomial regression also searched for interactions between **Actual Country** and the characteristics, making for 19 total parameters.

The model resulting from the regression was subjected to a model-selection process using type II Anovas, and the final minimal model found three significant ( $p < 0.05$ ) main effects: **Actual Country**, **Poor/Rich**, and **Inefficient/Efficient**. No interactions met the minimum threshold for significance.

In terms of these significant effects, it was logical that **Actual Country** should have been a determining factor in rater selection of **Perceived Country**. If a rater had prior knowledge of the salient phonological characteristics of an accent and recognized any of these in the voice clip, then they understandably could be expected to select the country corresponding with that accent.

As for **Poor/Rich**, Figure 12 contains a visualization of that variable's effect on the final model:

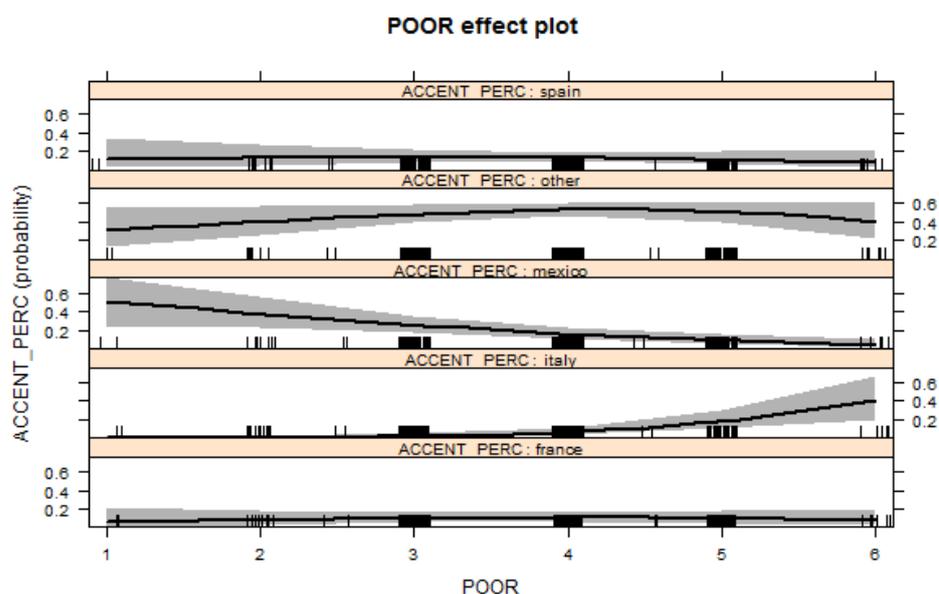


Figure 12

Figure 12 contains five separate graphs, one for each level of **Perceived Country** (listed as ACCENT\_PERC). The x-axis contains the rating from **Poor** (1) to **Rich** (6). Given that rating, the y-axis shows the predicted probability that a rater would select the country listed in that graph: the higher the dark line, the greater the likelihood of selection, and vice versa. The gray areas represent confidence intervals: the narrower the shading, the more confident the prediction.

Several of the graphs in Figure 12 show no correlation, or have wide, overlapping confidence intervals which are insufficient for further analysis. The third and fourth graphs, however, clearly demonstrate the effect of **Poor/Rich** in the case of Italy and Mexico. Italy shows a positive correlation—the **Richer** the voice was perceived to be, the more likely that judge had identified it as Italian. The reverse was true of Mexico, on the other hand, which shows a negative correlation. **Rich** can therefore be considered a trait associated with Italy, while **Poor** is associated with Mexico.

The final significant effect was that of **Inefficient/Efficient**, visualized here in Figure 13:

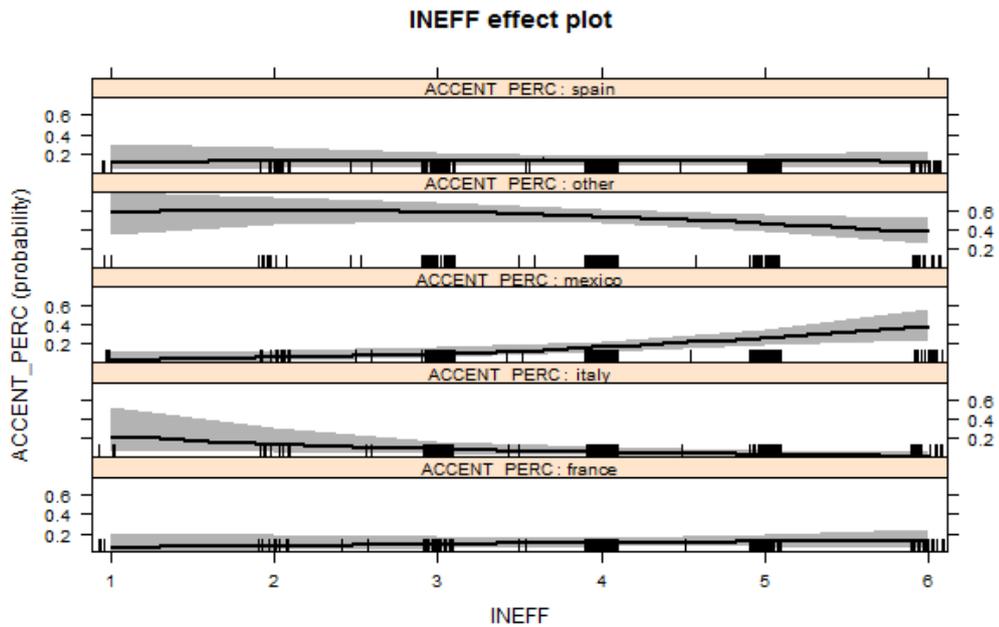


Figure 13

The clearest association in Figure 13 is that of Mexico, which shows a positive correlation with **Efficient**. Italy appears to show a negative trend as well, but the confidence intervals are too wide to draw a conclusion with certainty.

The reasoning for the wide confidence intervals is relatively straightforward. While the classification accuracy for the model as a whole was 0.4637097 (*i.e.* the model successfully predicts ~46% of the data in the sample), breaking down the classification accuracy by country demonstrates that the model's predictive power is weaker than it might at first appear. The majority of the classification accuracy comes from predictions in the category "Other," which are predicted successfully 88% of the time. The other countries in question have classification accuracies ranging from 16.2% to 11.6%, while Spain is never actually predicted by the model at all.<sup>9</sup>

Still, the low classification accuracy does not necessarily invalidate the conclusions reached above regarding **Actual Country**, **Poor/Rich**, and **Inefficient/Efficient**, given that each of them can be verified through other conclusions reached throughout the present study. The effect of **Actual Country** on **Perceived Country** is reasonable, considering Section 4.1 showed that many raters were able to successfully identify the speaker's country of origin.

Similarly, the association between Mexico as **Poor** and **Efficient**, as well as Italy as **Rich** can be supported by an earlier section. Section 4.2.1 reached conclusions about the stereotypes of each accent by analyzing the mean ratings of each trait, comparing the ratings of those who correctly identified the accent to those who did not (visualized by the blue and red columns of Figure 8). If those values varied by more than 0.3, the trait was included as a cultural stereotype. All three associations made by interpreting the multinomial regression's results can be corroborated by the difference

<sup>9</sup> While it would theoretically be possible to remove the "Other" data points from the sample given that they are not a matter of interest in this study, this would reduce the total number of observations per parameter under investigation to well below the minimum recommended by Jaeger (2011:170). Such a model would be overfitted to the present data set to the extent that it would be of little use in extrapolating to larger population sizes.

of means in Figure 8: those who successfully identified the Italian accent rated it as 0.43 **Richer** than those who did not; those who correctly identified the Mexican accent rated it as 0.22 **Poorer** and 0.24 more **Efficient** than those who did not. Because the difference in **Poor** and **Efficient** did not meet the 0.3 minimum, they were not recorded in the conclusions of Section 4.2.1, but the results of the multinomial regression give sufficient support for their inclusion. The updated table of stereotypes according to country is given in Table 4—the results of Section 4.2.1 are repeated in blue, while the results of the multinomial regression are given in orange:

	Pleasant	Friendly	Attract.	Energetic	Rich	Hard-working	Efficient	Intel.	Refined
<b>FRA</b>			+		+	-	+		+
<b>SPA</b>	-						-		
<b>ITA</b>		+	+	+	+/+		-		
<b>MEX</b>	+				-	+	+	+	

Table 4

There are several things worth noting in Table 4. First of all, it is apparent that many boxes in the table are not filled in. This likely reflects the previously cited literature which argues that most language attitudes are condensed down to two or three core dimensions—the average person has a vague perception of the characteristics of a foreign accent, but not a complex, finely nuanced accounting of each and every possible personality trait.

Similarly, raters do not appear to have a completely distinct profile for each individual country. As seen in the cluster analysis of Section 4.2.2, France and Italy are grouped together as European countries: both are **Attractive** and **Rich** (positive ratings, as expected from Lindemann 2005), where the two Spanish-speaking countries are not. Interestingly, although Section 4.2.2 demonstrated a high degree of similarity between Spain and Mexico, this is not so apparent in Table 4. In fact, Spain only had a stereotype attached to two out of nine characteristics. This can be considered further evidence for the lack of knowledge about Spanish culture in the United States: it is either confused for Mexico, or not significant enough to warrant any strong reactions, whether positive or negative.

Additionally, Table 4 makes apparent the positive, labor-related stereotypes held toward Mexicans. Although they are considered **Poor**, they are seen as **Hard-working**, **Efficient**, and **Intelligent**. These characteristics possibly reflect stereotypes of Mexican migrant laborers in the California area where the study was conducted. Notably, the stereotypes were for the most part positive, despite the current political climate in the United States which is at times hostile toward Mexican immigrants. This could be a result of the testing group’s demographics (the judges consisted in a large part of heritage speakers of Spanish, many of whom listed at least one parent as Mexican).

Finally, it is worth considering the correlations with the TVTropes website mentioned at the beginning of this paper. Though far from a traditional academic source, the database has compiled a large amount of popular media in a way that serves as a reflection of cultural stereotypes. The website has the following to say

about French stereotypes in popular media: “French sounds sexy, fashionistic, romantic and cultured, or (in the Anglosphere e.g. Britain and America) the accent of hubristic snobbish douchebags.” While each of these adjectives was not present in this study, “sexy” correlates with **Attractive**, while “fashionistic,” “cultured,” and “snobbish” all suggest **Refined**, and both of these characteristics were found to have positive ratings in this study.

As for the other accents, the website groups Spanish and Italian together: “Spanish and Italian: Both sound Hotter and Sexier (See the Latin Lover trope for why) and exotic”; Mexicans are notably excluded from this Latin Lover stereotype: “The Latin Lover was originally from Spain or Italy, but has expanded to include Puerto Rico, Cuba, Brazil, and other Central and South American countries. Mexicans are usually not considered exotic enough for Americans, but they can also fall under the trope if handsome and smooth-talking enough.” The characteristic used in the present study comparable to those above is obviously **Attractive**, which is present for Italy but not for Spanish as expected—this is presumably further evidence for the conflation of Spain with Mexico.

The correlation between this study’s results and those posited by TVTropes.org support the theory that popular culture shapes and reflects actual stereotypes, as authors such as Lippi-Green (1997) and Dobrow & Gidney (1998) have identified. Future authors could perhaps use TVTropes.org to investigate how these stereotypes have evolved in recent years.

## 5. Conclusion

Over the course of this study, students identified and rated four different sound clips of foreign-accented English: French, Spanish, Italian, and Mexican. Two questions were asked:

**QUESTION 1:** Can American college students correctly identify foreign-accented English from different countries?

**QUESTION 2:** What personality traits do each of these accents evoke?

In regard to the first question, it seems that students were, generally speaking, able to identify accents from the sound clips provided. Raters were capable of determining language of origin, although country of origin proved problematic in the case of Spanish-speaking dialects. French was the most frequently identified, while Italian proved more difficult for participants, with only 21% of subjects successfully identifying it—although this was much higher than one might expect if raters were picking from the 15 possible countries at random.

As for the second question, it was investigated through both exploratory and analytical statistics. First, a comparison of the means between those participants who successfully identified the countries and those who did not found certain characteristics as being tied to cultural stereotypes. Those means which did not vary as a function of country selection were deemed to have been judged based on phonetic qualities of the speaker’s voice, rather than on any preconceived notions about the countries in question.

Second, a hierarchical agglomerative cluster analysis grouped both the countries and the characteristics according to their behavior. While this information could not be used on this same set of data for any further statistical tests, it did provide some helpful insight into the manner in which participants perceived the four countries: the clustering of Spain and Mexico as similar to one another yet opposed to

France and Italy suggested that participants had grouped both Spanish-speaking nations under a single Hispanic ideal, an ideal which likely meant Mexican culture due to geographical proximity of the American subjects. This Hispanic stereotype contrasted with a European one in the form of France and Italy. Additionally, a clustering of the 9 personality traits into 2 distinct groups indicated that these traits correlated according to the *social attractiveness* and *competence* dimensions accounted for in other studies.

The final part of the second question identified three variables affecting a rater's selection of accent: **Actual Country**, **Poor/Rich**, and **Inefficient/Efficient**. This information was used to expand the chart of stereotypes assembled in Section 4.2.1.

It was found that a particular stereotype did not exist for each one of the 36 possible combinations of country and personality trait. Still, a number of traits were shown to be connected to each accent (summarized in Table 4), confirming the psychological reality of claims in outside literature and popular culture.

In terms of future studies, the most important factor in expanding the present work would be to reduce the number of variables at play. Several suggestions are as follows:

First, although this study only investigated male voices, there were too few participants to effectively divide data according to rater gender or any other demographic factors without encountering issues of data sparsity. Interestingly, despite the testing population being drawn from an Iberian Linguistics class and a sizable number of students being heritage speakers of Spanish, the results of this study still reflected the conclusions expected from previous literature. This suggests that the students' demographic background did not dramatically alter their perceptions, but a more diverse group of participants would give a better picture of students' attitudes as a whole.

Second, by choosing to use real speakers from each country under investigation, the study opted for natural language in lieu of the more artificial matched guise technique; while this had the benefit of providing more felicitous, authentic accents, it did introduce a confounding variable in the form of individual phonetic variance between speakers (as opposed to isolating first-language influenced phonetic variance). The conclusions of this study would be strengthened if similar results could be obtained without this phonetic variance by conducting a second study via a matched guise technique.

Finally, it would be wise to limit the number of accents under investigation. Including varieties of Spanish from both Mexico and Spain caused a deal of confusion in the identification task by implicitly requiring participants to distinguish between the speakers' dialects in addition to their L1, the former being a daunting task even in one's native language. Future studies should limit the voice clips to one accent from each language, unless nationality is a specific factor under investigation.

Even so, this confusion led to perhaps the most notable result of this study: the dichotomy between Hispanic and European accents. Spain was conflated with Mexico, both in terms of accent recognition and characteristic ratings, and neither did it seem to benefit from the positive stereotypes toward Western European accents mentioned by Lindemann (2005). France and Italy, on the other hand, behaved quite similarly, with positive stereotypes attached to each. Both of these factors are suggestive of a lack of cultural awareness on the part of American students. Particularly in the case of Spain, a greater emphasis on cultural awareness could be made in language pedagogy. Spanish training is becoming increasingly important in

the United States due to the growing Latino population, and foreign-language classes would constitute a perfect opportunity to teach students that not all Spanish-speaking countries share Mexican culture. Authors such as Durocher (2007) have called for instruction on cultural topics from the very first year of language study onwards, and the results of the present study indicate that such training would be in the best interest of American students.

On a broader level, this study's results speak to the existence of prejudices—both positive and negative—even in a highly-educated sector of the populace. This has far-reaching sociocultural consequences, and one of the benefits of language attitude studies is that they allow researchers to keep a finger on the pulse of these prejudices and how they evolve over time. These studies should continue to be conducted in order to gauge stances towards particularly polemic groups; the rise in anti-Islamic sentiment in the United States in the new millenium, for example, would likely be reflected in language attitudes and could be a useful target of investigation. Understanding prejudices is a necessary step to breaking them down and moving past them, and it is hoped that studies such as these can provide empirical motivation for fostering healthy attitudes toward foreign ethnicities.

### **Appendix A—Elicitation Passage**

The elicitation passage used in the George Mason Speech Accent Archive is as follows:

“Please call Stella. Ask her to bring these things with her from the store: Six spoons of fresh snow peas, five thick slabs of blue cheese, and maybe a snack for her brother Bob. We also need a small plastic snake and a big toy frog for the kids. She can scoop these things into three red bags, and we will go meet her Wednesday at the train station.”

### **Appendix B—Testing Materials**

#### **Characteristics Questionnaire**

##### **Part I**

*Please listen to each voice sample and answer the questions below. You will hear 4 different accents from 4 different countries—no two will be from the same country.*

##### **Voice #1**

1. What country do you think this person is from?

Germany	India	Italy	Greece	Portugal
Mexico	Brazil	France	Morocco	Egypt
Spain	Russia	Poland	Sweden	China

2. Are there any personality traits that come to mind regarding this person based on their accent?

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3. How long do you think this person has been studying English?

Less than 6 months	6 months-2 years	2-5 years	5+ years
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4. Would you have problems understanding this person if they were a TA?

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5. How would you feel about going on a date with this person?

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**Part 2:**

*Please rate the following personality traits of each person based on their accent.*

**Voice #1**

Lazy	1	2	3	4	5	6	Hard-working
Poor	1	2	3	4	5	6	Rich
Simple-minded	1	2	3	4	5	6	Intelligent
Unattractive	1	2	3	4	5	6	Attractive
Inefficient	1	2	3	4	5	6	Efficient
Unsophisticated	1	2	3	4	5	6	Refined
Annoying	1	2	3	4	5	6	Pleasant
Sluggish	1	2	3	4	5	6	Energetic
Uncaring	1	2	3	4	5	6	Friendly

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