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What does your accent say about you? The perception of Cuban and Peninsular Spanish varieties by native and non-native speakers of Spanish

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Abstract: Individuals can make judgments on a person's personality and socioeconomic status in as little as 30 s after hearing their voice. This study investigates the perceptions of Cuban and Peninsular Spanish varieties by native Cuban and Peninsular Spanish speakers, second language (L2) Spanish learners, and monolingual English speakers. Specifically, it analyzes whether (i) these speakers differ in their ability to recognize these varieties, and (ii) the perceptions of these groups differ to determine unconscious biases. Fifty adult listeners rated 5 Cuban (Havana) and 5 Peninsular (Madrid) disguised female voices. They completed a Bilingual Language Profile (BLP) questionnaire and a survey to examine unconscious accent categorization and perceptions. The results revealed that individuals do in fact make unconscious assumptions on an individual's voice, as the Peninsular variety was often attributed to higher education and income levels and was closely associated with a higher rank (CEO) position compared to the Cuban variety on behalf of all groups. Furthermore, native Cuban listeners were found to outperform all groups in correct categorization of the accents heard. This study illustrates how perceptions toward stigmatized language varieties transcend native speakers of a language.

Keywords: accent perception and bias; Cuban; Peninsular; Spanish; non-native accent perceptions

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1 Introduction

Languages serve as an important tool for communication in the daily lives of many individuals. Similarly, accents also play a vital role, as they can influence the development of attitudes, biases, and potentially stigmas associated with certain accents (e. g. Alfaraz 2002; Carter and Callesano 2018; Woolard and Gahng 1990; Woolard and Schieffelin 1994). A language can have distinct pronunciations that vary across countries known as geographic varieties, accents, or dialects (Hualde 2014). This variation in pronunciation can ultimately lead to the formation of judgments and stereotypes of another person's accent which has been found to occur in as little as 30 s after listening to someone speak (Agarwal 2021). Therefore, this study aims to investigate the perception(s) of Cuban and Peninsular Spanish varieties by native Cuban and Peninsular Spanish speakers, second language (L2) Spanish leaners, and monolingual English speakers. Specifically, the study strives to examine whether (i) native Cuban and Peninsular Spanish speakers, second language (L2) learners, and monolingual English speakers differ in their categorization or ability to recognize these varieties, and (ii) whether the perceptions of these individuals differ from each other. As such, the study will address if there is a predominant stigma or notion of prestige attributed to one of these varieties and how language experience may modulate these perceptions. This study aims to fill a current gap in accent perception research through the inclusion of non-native Spanish speakers and individuals with no knowledge of Spanish. The perceptions of individuals beyond native speakers of a language are largely understudied. This variety of participant groups can help solidify whether notions of stigma and prestige toward a language variety is present among non-native speakers of a language. Furthermore, accent perception research tends to focus predominantly on varieties of English or foreign-accented speech (e. g. Mai and Hoffmann 2011; Mitterer et al. 2020) leaving gaps as to whether similar perceptions are found in other languages, such as Spanish.

Languages, and their varieties, are not fixed linguistic units, but rather vary across countries, regions of a country, and can have much sociolinguistic variability (e. g. across gender, socioeconomic status, etc.), as well as the potential to change across an individual's lifetime. However, there are certain patterns that can unite groups of language varieties together, due to phonological similarities. It is also important to mention that not only can accents differ from one Spanish-speaking country to another, but there can also be regional variation within the same country. For instance, the Spanish spoken in Spain can be divided into two main categories: north-central Spanish and meridional or "Andalusian" Spanish, broadly speaking (Hualde 2014). Although these regions are both within Spain, they contain their own phonological verbal markers, with the major distinction being the absence of the

distinction between /s/ and /θ/, colloquially referred to as the 'Spanish lisp', in Andalusian Spanish (Hualde 2014). Nonetheless, these broad distinctions do not consider regions within Spain that speak languages other than Spanish such as Catalonia and the Basque Country, which also influence the accents of individuals from these regions beyond geographical boundaries (Hualde 2014). In Cuba, on the other hand, /s/ is frequently aspirated (e. g. <pescado> /peskado/ [peh.ˈka.ðo] 'fish') and/or deleted (e. g. <pescado> /peskado/ [peø.ˈka.ðo] 'fish'), with aspiration occurring at a higher rate in the Western region in comparison to the Eastern portion of the country (Press 2012). For the purposes of this study, the terms "Peninsular" and "Cuban" will be applied to describe the Spanish spoken in the north-central region of Spain and the Western portion of Cuba, respectively. As will become apparent, we chose to focus on these regions of Spain and Cuba respectively, because both areas contain the phonological markers that characterize what 'typical' Cuban and Peninsular accents sound and what speakers commonly associated these varieties with (see Hualde 2014).

Implicit and explicit dialectal perceptions is an understudied area among Spanish varieties; therefore, this study will also contribute to this growing body of literature (see Alfaraz 2002; Carter and Callesano 2018; Callesano and Carter 2019; Chappell 2016; Fernández-Mallat and Carey 2017, among others). The present study aims to address two main research questions:

1. Do native Cuban and Peninsular Spanish speakers, L2 Spanish learners, and monolingual English speakers differ from each other with respect to their categorization of Cuban and Peninsular Spanish?
2. Do native Cuban and Peninsular Spanish speakers, L2 Spanish learners, and monolingual English speakers differ from each other with respect to their perception/attitudes toward Cuban and Peninsular Spanish?

2 Literature review

The literature review for this study has been divided into the following sections. Section 2.1 discusses the major phonological properties that differentiate the Cuban and Peninsular Spanish varieties. Section 2.2 lays the foundation and theoretical framework of the study with some of the major theories underlying accent perceptions, and thus, this study. Section 2.3 focuses on the role of categorization in accent perception research. Sections 2.4 and 2.5 discuss the perceptions that have been associated with Cuban and Peninsular varieties based on previous studies, while Section 2.6 addresses some of the additional factors that are involved in making judgements based on an individual's accent such as the background of the listener rating the accent. Section 2.7 focuses on the understudied area of non-native

perceptions on dialect variation. The literature review culminates with Section 2.8, which highlights the empirical work done before and the remaining concerns in accent perception research. This section (1) reviews testing techniques and protocols employed in previous research, (2) provides a basis for the methodological approach of the current study, and (3) synthesizes the prior research discussed. The detailed examination of previous work reinforces the need for a study such as this one.

2.1 Cuban and Peninsular Spanish varieties

The Cuban and Peninsular Spanish varieties were chosen in part because they contain many phonological and phonetic differences (see Hualde 2014; Lipski 1994; Martínez-Celdrán et al. 2003). Additionally, previous studies (e. g. Hualde et al. 2012; Lipski 1994) have contextualized the prestige disparity that exists between Peninsular and Cuban Spanish, or the variety spoken in the Caribbean in general. However, where the gap in the literature arises is whether these notions of prestige and stigmatization translate across not only to native speakers, but also to individuals whose first language is not Spanish or who perhaps do not speak the language at all.

2.1.1 Phonological and phonetic characteristics of Cuban Spanish

Many of the phonological features found in Cuban speech today have a long withstanding history that is rooted in Spanish colonization from the arrival of Cristopher Columbus in 1492. Over the course of the 14th to 18th centuries, Cuba was under the rule of Spain, which slowly started changing the linguistic landscape of the country from the usage of Taino indigenous languages to Spanish (Clements 2009). One of the predominant groups living in Cuba at the time were individuals from Andalusia and the Canary Islands, regions which contain numerous phonological similarities (e. g. aspiration of /s/, and deletion of /d/ in intervocalic and word final positions, among others) to the Spanish that is spoken in Cuba today (Clements 2009; Cuza 2017; Hualde 2014).

The predominant features that characterize Cuban Spanish are the different realizations of /r/, /d/, and /s/. The /r/ sound in Cuban Spanish commonly undergoes a process known as lateralization which involves the substitution of the /r/ sound with an /l/ when found in the coda position word finally such as <calor> /kalor/ 'heat' being pronounced as [ka.'lol] (Hualde 2014). This phenomenon can also occur word medially (e. g. <puerto> /puerto/ [puel.'to] 'port'). The /d/ sound in Cuban Spanish is commonly deleted when found in an intervocalic or word-final position such as <cansada> /kan.sa.ða/ 'tired' which is produced as [kan.'sa] (Hualde 2014). Finally, the /s/ sound in Cuban Spanish tends to either undergo elimination (e. g. <isla> /isla/

'island' is realized as [iø.ˈla]), or aspiration which involves replacing the [s] sound with that of an [h] (e. g. <isla> /isla/ 'island' is realized as [ih.ˈla]) (Hualde 2014). This feature is heavily documented in previous literature and is one of the most pervasive features that characterizes Cuban Spanish (Penny 1991; Terrell 1979).

Within Cuba, there can be small differences in an individual's accent based on the specific region of Cuba, but this variation is not nearly as noticeable as is the case in Spain. Additionally, different sociolinguistic groups (e. g. women, older individuals, etc.) may exhibit differences in the rate of lateralization, deletion, and/or aspiration (Hualde 2014). Nonetheless, this variation does exist, and hence, when referring to the Cuban variety in this paper, we will be referring to the variety spoken in Havana as it contains all the phonological markers mentioned previously.

2.1.2 Phonological and phonetic characteristics of Peninsular Spanish

In most varieties of Peninsular Spanish, there tends to be a distinction between /s/ and /θ/, whereby the graphemes z and c are pronounced as the English equivalent "th", while /s/ retains its pronunciation, as in many varieties of Latin America (Hualde 2014). Among Latin American Spanish varieties, there is no distinction in the pronunciation of <s>, <c>, and <z>. This pronunciation distinction observable in Peninsular Spanish can help to distinguish between words that are spelt with either letter but changes the meaning, as illustrated by <casa> /kasa/ 'house' and <caza> /kaθa/ 'to hunt'. This phenomenon can be further exemplified by the word <cocina> /kosina/ 'kitchen' which is often pronounced as [ko.ˈθi.na] in the northern and central regions of Spain (Hualde 2014). Moreover, except for Andalusia, /r/, /d/, and /s/ tend to be retained among Peninsular speakers. It is evident that the Spanish spoken in Cuba and Spain are very different from each other and while there may be individual aspects such as pitch or intonation that are also distinct, these are the main segmental differences between Cuban and Peninsular varieties.[1]

2.2 Theories on accent perception

2.2.1 Accent prestige theory

Before discussing the perceptions associated with the Cuban and the Peninsular accents, it is necessary to introduce the accent prestige theory. It is fundamental to

1 We have chosen the focus of this paper to be phonetic variation as opposed to variation on other linguistic levels in part because the varieties spoken in Cuba and Spain are very phonetically rich in terms of differences that can be easily recognizable.

the field of accent perceptions, originally proposed by Giles (1970) and largely based on Heider's (1958) attribution theory. The accent prestige theory posits that individuals make judgements on a speaker's accent and those with a 'standard' accent will be rated higher on variables surrounding income, education, social class, and even physical attributes such as attractiveness, when compared to non-standard accented speakers (Fuertes et al. 2002). Here 'standard' refers to the dominant language variety spoken in a given region or a variety that is predominantly heard in media outlets, but can oftentimes be a problematic term (Fuertes et al. 2002). According to Anderson et al. (2007) the accent prestige theory can be used to inform judgments made on (i) traits used to classify the perceived status of an individual such as their social class, level of income, success, etc. and/or (ii) ratings used to evaluate an individual's accent based on measures of friendliness, trustworthiness, and kindness. The accent prestige theory has been supported in many prior studies such as Fuertes and Gelso (2000) who examined the effect of a 'Hispanic' accent on counselors and found that participants in the United States were more likely to commit to long-term therapy with a non-Hispanic counselor without a "foreign accent" than with a Hispanic accented counselor. Similarly, in their comparative study of British English accents, Coupland and Bishop (2007) found that an accent from Wales was rated significantly higher on measures of prestige, social attractiveness, and correctness when compared to other accents found in the UK such as German-accented English. The accent prestige theory is integral in understanding attitudes towards accents and can potentially serve to uncover unconscious stigmas and biases. In the discussion of the empirical findings, this theory will serve to drive the interpretation of results. The theoretical framework of the current study will rely heavily on the accent prestige theory, as well as two related theories.

2.2.2 Social identity theory and own-accent bias

Two additional theories that are based on the accent prestige theory are the social identity theory and own-accent bias. Firstly, Tajfel and Turner's (1986) social identity theory states that individuals use social cues to help categorize another person's membership or belonging to a group simply based on their accent. Much like the accent prestige theory, members, according to the social identity theory, regard their own group as more prestigious and individuals belonging to the "in-group" are regarded more favourably (Mai and Hoffmann 2011). Secondly, the own-accent bias refers to a positive inclination, whether conscious or unconscious, toward others with the same accent and can result in higher ratings (Mitterer et al. 2020). In their study, the authors found that native German speakers rated their own altered voices higher when compared to the voices of other learners, even though they could not directly distinguish their own voice among the samples heard. These theories build

off of the tenants proposed by the accent prestige theory and help to explain how individuals rate certain accents more or less favourably than others.

2.3 The role of categorization

However, for these theories to describe the situation accurately, listeners need to have the ability to correctly discriminate between accents within and outside their membership. For instance, Díaz-Campos and Navarro-Galisteo (2009) examined the perceptual categorization of Peninsular, Chilean, Argentinian, Colombian, Costa Rican, and Mexican Spanish varieties among Peninsular and Venezuelan Spanish speakers. The authors contest that Spaniards and Venezuelans were not very accurate in the categorization of other Spanish dialects, but the Venezuelan participants performed better since they had more exposure to the dialects tested in comparison to the Spaniards. The study concludes that individuals who have regular contact and exposure to other dialects were better able to encode cues that help identify and categorize other speaker's accents, compared to those with less exposure. This relates to the social identity theory in that individuals could correctly categorize others based on speech and ascertain their membership within that group. It is evident that these theories help to explain different aspects as to why individuals may perceive accents the way they do, but they have not been widely applied to judgements made on varieties of Spanish. While native and heritage speakers were often aware of phonological distinctions in Spanish varieties due to their level of familiarity with Spanish accents, L2 learners had a harder time grasping some of these differences. For instance, Schmidt (2018) examined L2 speakers on their ability to pick up on certain phonological markers such as the aspirated /s/ in Venezuelan, Caribbean, and Argentinian Spanish varieties. The author found that while native and heritage participants were able to classify this sound as an aspirated /s/, intermediate L2 learners frequently ignored this aspiration cue and classified the sound as a deletion. In contrast, Chappell and Kanwit (2022) found that advanced L2 Spanish learners with phonetics training were more likely to overgeneralize speakers with /s/ elimination as Caribbean. Therefore, varying levels of familiarity and proficiency in a given language could potentially affect how individuals perceive certain accents in comparison to native speakers.

2.4 Perceptions toward the Cuban variety

The body of research that examines attitudes toward different Spanish varieties is growing. For instance, Carter and Callesano (2018) investigated how young adults

living in Miami-Dade County conceptualized Cuban, Colombian, and Peninsular accents based on socioeconomic class, income, and employment. They found that the Cuban and Colombian voices were consistently rated lower on most social factors when compared to a Peninsular Spanish voice from Madrid that distinguished between /s/ and /θ/. For example, in terms of income, the Peninsular voice was always assigned to a higher income bracket in comparison to the Cuban and Colombian voices (Carter and Callesano 2018). Partially, this was explained by the fact that speakers of a Caribbean variety are often perceived negatively or as uneducated. This was further demonstrated by a follow-up study by Callesano and Carter (2019) where the participants perceived Peninsular speakers significantly higher in terms of traits associated with competence (e. g. intelligibility, confidence, etc.) when compared to Cuban and Colombian speakers. This finding is surprising given the number of participants in this study that were of a Cuban or Colombian background, contrasting the tenants posed by the social identity theory and own-accent bias. This negative perception toward the Cuban variety can in part be attributed to the high prevalence of non-standard speech found in this region.

Interestingly, the Cuban variety may have not always had this negative connotation attached to it. In a study by Alfaraz (2002), Cubans living in Miami rated a variety of different Spanish accents, such as Puerto Rican, Dominican, and Peninsular, among others. Also included in this study was the variety of Spanish spoken in Cuba, which was divided into Cuba 1 and Cuba 2 to highlight the variety of Spanish spoken before (Cuba 1) and after (Cuba 2) 1959, which is the mark of the Cuban Revolution. As the author expected, the Peninsular variety was attributed the highest ratings, but when the two Cuban varieties were compared to each other, the pre-1959 variety was rated higher on all measures such as correctness and pleasantness (Alfaraz 2002). When asked, the participants stated that the variety of Spanish spoken in Cuba currently is 'horrible' and 'sloppy,' while others attributed the linguistic impoverishment of the post-1959 variety due to the moral and political stance of the country (Alfaraz 2002). Additionally, Díaz-Campos and Killam (2012) propose that the speech used in educational settings can oftentimes represent a form of standard speech in which anything that deviates is seen as ungrammatical. Caribbean speech is often viewed with this lens, as it contains many forms of deviated speech, such as /s/ aspiration and deletion, lateralization, and deletion of /d/, among other 'non-standard' speech forms.

2.5 Perceptions toward the Peninsular variety

A great majority of studies dealing with attitudinal perceptions among Spanish accents have dealt with the Peninsular variety in some way. Spain is a very

linguistically diverse country, meaning that while many languages are spoken aside from Spanish, there are also many different regional accents that have been analyzed in prior studies to determine whether stereotypes occur at the regional level. As previously mentioned, Carter and Callesano (2018) found that the Peninsular accent was rated higher on most social factors such as occupation, income, and level of educational attainment. These results were consistent among all participant groups, including those that did not speak Spanish within Miami-Dade (Carter and Callesano 2018). In terms of stereotypes within Spain itself, Gallego and Rodríguez (2012) examined the attitudes towards 10 regional varieties of Spanish in Spain (e. g. Madrid, Canarian, Catalan, Andalusian, etc.) and found that Castilians preferred their own variety of Spanish when compared to other regional Spain varieties, but they exhibited no predominant negative associations toward other regional accents found in Spain. The most notable differences were found in terms of age, where both older and younger, but not middle-aged, participants demonstrated a slight dislike towards the Catalan Spanish variety (Gallego and Rodríguez 2012). For the most part, however, the Peninsular variety tends to be one of the most favourably rated in prior research. In sum, while there is regional variability in the accents found within Cuba, the differences are not as pronounced as in Spain. Furthermore, although all the accents found within Cuba, as is the case with Caribbean Spanish in general, tend to be stigmatized all together, in the case of Spain, it is primarily the Andalusian or Canarian Spanish that are stigmatized (see Hualde 2014; Lipski 1994; Martínez-Celdrán et al. 2003).

2.6 Additional factors involved in modulating accent perceptions

Besides the general trend that can be seen in Sections 2.2 and 2.3, with the Peninsular variety being perceived as the most prestigious and the Cuban accent with the most negative association, several other studies have examined a host of additional factors that could have a role in modulating accent perceptions. For instance, Winke et al. (2013) found that the background of the raters themselves can pose an effect as some individuals may favour certain accents over others based on which accent sounds most familiar to them. This is supported by Stotts (2014), who compared attitudes toward Peninsular and Mexican Spanish among individuals living in either Spain or Mexico who were learning Spanish as a second language. Stotts noted that speakers attributed a higher rating to the accent they could understand the easiest, but there was also a general tendency to rate the Peninsular accent higher, even among the participants that were most familiarized with Mexican Spanish. Additionally, in a study examining Mexican Spanish and English, the Mexican Spanish accent was found to be rated lower on a variety of social and linguistic measures, especially by

female participants (Alvord and Thompson 2020). As Aguilar (2018) explains, females tend to attribute higher ratings to 'prestigious' and more mainstream languages and their subsequent varieties, as shown in the previous examples with Peninsular Spanish and English. These studies have examined Spanish speakers' perceptions of Peninsular Spanish, in particular, as well as factors outside of nationality and familiarity. A small amount of research has examined dialect perceptions by speakers of other languages, which will be discussed in the next sub-section.

2.7 Non-native perceptions on dialect variation

Non-native perceptions are an important consideration stemming from the ideas presented in the previous section. Specifically, L2 speakers and individuals with no knowledge of the perceived language can make dialectal judgments. When accent perception studies do include non-native speakers of a language, non-native individuals are often the speakers as opposed to the listeners, as is the case with foreign accent perception studies (e. g. Fuse et al. 2018). While accent perception research is abundant among varieties of English and the perceptions of native speakers, few studies have considered the perceptions of non-native speakers of another language. For example, Trimble (2014) demonstrated that intermediate-advanced English learners of Spanish rated varieties with an abundance of consonant deletion (e. g. Caribbean and Rioplatense) as more difficult to understand and subsequently less intelligible compared to the Spanish spoken in Mexico and the highlands of Colombia. Schmidt and Geeslin (2022) found similar perceptions attributed to the Puerto Rican variety examined in their study. The authors explained that the negative perceptions attributed to stigmatized varieties may be due to a combination of factors characterizing the L2 speaker, such as linguistic repertoire, exposure to a single variety in the classroom, etc. Notwithstanding, more studies including non-native speakers are needed to understand how these perceptions develop in the acquisition of Spanish.

2.8 Testing techniques and protocols in previous research

A great deal of previous research (e. g. Carter and Callesano 2018; Fernández-Mallat and Carey 2017) has used what is known as a matched guise technique to analyze unconscious attitudes toward a given accent. The matched guise technique, developed in 1960 by Lambert, Hodgson, Gardner and Fillenbaum, involves presenting listeners with auditory samples of a language or language variety in the form of a recorded passage. Typically, directly after playing a speech sample, individuals are asked to rate the speaker on a variety of measures (e. g. intelligence) to determine

their unconscious biases toward the voice. One important note about this method is that it is typically used to measure nonlinguists' perceptions toward a given language or language variety (Preston 2011). This method allows for the evaluation of an individual's unconscious perceptions since simply asking a person what their outward attitudes are towards an accent may yield in their conscious attitudes, stereotypes, and individuals may not be inclined to share how they truly perceive the accent (Lambert et al. 1960). Therefore, since the individual does not know the identity of who they are listening to, the researcher can attempt to isolate the voice and evaluate perceptions much more clearly. In terms of recorded speech, samples in prior studies tended to range anywhere from 25 s to 2 min, with most hovering in the 30 s range (Carter and Callesano 2018; Fuertes and Gelso 2000). After presenting the participants with the recordings of each accent, this is commonly followed by either the administration of a survey, conducting an interview, or both to gauge perceptions toward each language or accent.

Based on previous literature, it is evident that while there is a substantial growing body of research in this area, much is still unknown regarding the factors modulating accent perceptions. While most studies have focused on the Peninsular variety, very little is known about perceptions toward Cuban accents with the latter being examined primarily within the context of Miami. Furthermore, studies that have examined accent perceptions from a comparative standpoint are scarce. Thus, this study will contribute to the existing gap in the literature not only by having native speakers rate two varieties that are found on opposite ends of the prestige spectrum, but also by including the perceptions of non-native speakers to gain further insight into how these groups formulate accent perceptions in languages that are not indicative of their mother tongue.

3 Hypotheses

Based on the previous literature presented and in accordance with the tenets proposed by the accent prestige theory, social identity theory, and own-accent bias, several hypotheses will be tested:

H1. Cuban and Peninsular Spanish speakers will outperform L2 Spanish learners and monolingual English speakers in correctly categorizing the Cuban and Peninsular varieties (Schmidt 2018).

H2. Based on the accent prestige theory (Fuertes et al. 2002) in addition to results from Callesano and Carter (2019), Carter and Callesano (2018), Carter and Lynch (2014), Stotts (2014), and Winke et al. (2013), native Cuban and Peninsular Spanish

speakers, L2 Spanish learners, and monolingual English speakers' perceptions of Cuban and Peninsular Spanish varieties will differ from each other. Specifically, it is predicted that:

(a) Whereas native Spanish speakers (Cuban and Peninsular Spanish) will attribute higher levels of education, income, and employment to their own varieties, L2 Spanish learners and monolingual English speakers will attribute higher levels of these factors to the Peninsular variety.
(b) Whereas native Spanish speakers will attribute more positive associations with speech characteristics (i.e., likeable, intelligible, pleasant, friendly, correct, attractive, warm, funny, trustworthy, and confident) to their own varieties, L2 Spanish learners and monolingual English speakers will rate the Peninsular variety more positively on these measures.
(c) Whereas native Spanish speakers will find their own varieties less difficult to understand, L2 Spanish learners and monolingual English speakers will rate the Peninsular variety as being less difficult to understand.

4 Methodology

4.1 Participants

The present study included a sample size of 50 adult listeners, 68 % of which were female, who rated five Cuban (Havana) and five Peninsular (Madrid) female voices. This total participant pool was composed of 13 native Cuban Spanish speakers, 10 native Peninsular Spanish speakers, 13 L2 Spanish learners, and 14 monolingual English speakers, who were all recruited using the snowball sampling technique. The native Spanish speakers did not report speaking any other languages aside from Spanish, except for a few reporting low-to-intermediate proficiency in English. Both native listener groups were living in distinct parts of Spain, Canada, or the United States at the time of task completion. As for the L2 Spanish learners, this group reported speaking English as their L1, learning Spanish after the age of 16, and had studied Spanish until at least an intermediate/advanced level through a formal institution, study abroad/exchange program, or a combination of the two. The sub-sample of L2 Spanish learners in this study received exposure to distinct varieties of Spanish depending on where their instructor was from or if they participated in a study abroad experience offered through their institution. Study abroad trips tended to take place in Cuba, Spain, or Mexico. As for their instructors, several came from Cuba or Spain, but many also come from other countries, with a high proportion from Mexico and Colombia. Therefore, not all L2 Spanish learners would readily

have access to Cuban or Peninsular input through their instructor, as their instructors may have been from other countries.

The monolingual English groups did not report prior knowledge of any other languages besides English. However, it is important to mention that in Ontario, French is mandatory from grade 4 until grade 9. Therefore, the latter two groups mentioned, completed their schooling in Ontario and were required to take French until the mandatory level. Individuals who had participated in an immersive French program before grade 4 or took French beyond the mandatory grade 9 level were excluded from participating in the study. Participants in the English monolingual group were still considered to be monolingual speakers since they reported that they did not recall any knowledge of French from their previous schooling and did not use the language at all in their day-to-day life. Furthermore, this group served as a control group for the study to assess whether other aspects of the speakers' voice (e. g. pleasantness of the voice) could have skewed the results. Since this group did not know the content of the recordings, they were used as a baseline of comparison for the other groups. Some of the listeners in this group did report prior travel to various Spanish-speaking countries such as the Dominican Republic, Cuba, Mexico, and Spain. This included approximately five out of the 14 monolingual English speakers tested, for a percentage around 36 %.

As mentioned previously, the speakers consisted of five voices each from Cuba (Havana) and Spain (Madrid) Spanish, for a total of 10. All speakers were female to avoid introducing a gender bias in the listeners' ratings. As is evident from the literature review section, there can be much accent variability within a Spanish-speaking country itself. Hence, we chose to recruit participants from Cuba and Spain that came from Havana and Madrid respectively, as these cities contain the phonological markers that are characteristic of these accents, while also limiting accent bias toward other regions within the same country. All speakers were residing in their home country, had no knowledge of other languages besides Spanish, and had never lived in another country or region within their home country. When asked informally prior to completing the recording task (see Subsection 4.2.1), all speakers reported having a university or college degree or in the process of obtaining one. Their occupations mainly consisted of office jobs, schoolteachers, housewives, and technical support. As for socioeconomic status, the speakers from Madrid all ranged around a middle-level income. For the speakers from Havana, they tended to range in a lower income bracket when compared to the Madrid speakers, due to base salaries for distinct occupations in Cuba. While in most North American and European societies there tends to be a stark difference between different occupations (e. g. the annual salary of a professor vs. that of a cashier), this distinction does not exist to this extent in Cuba, thereby explaining the socioeconomic differences observed in our speaker group.

More than one speaker from each variety was included to provide the participants with a more holistic representation of what each accent typically sounds like. Additionally, since many voices from the same geographic location can vary on individual measures such as pitch, nasality, or other defining markers, including more than one speaker from each of the varieties under study ensured that listeners rated the voices on the accent itself and not on features in the individual speakers' voices. All participants were over the age of 18 and instructions for the tasks were provided to the participants in English or Spanish depending on the language they felt most comfortable with.

4.2 Tasks

4.2.1 Recording task

As mentioned in Section 4.1, the speakers were screened beforehand to ensure they were either from Havana to represent the Cuban accent, or Madrid to represent the Peninsular accent. Once this was determined, one of the researchers met with the speakers online to complete the recording task. As is the case with most remotely conducted work, the participants had a variety of computers/laptops. It would not have been feasible to control for the recording device given the participants were in different regions. Participants were instructed to record in a quiet room free of any external noises or other distractions. Post-recording, we examined the recordings acoustically and perceptually and determined they were clear, and all features of interest were perceptually salient, and therefore we proceeded to the analysis phase. The participants were also instructed to read a short prompt (see Section 4.4) out loud three times, while their responses were recorded. The prompt utilized in the current study was adopted from studies by Carter and Lynch (2014), Carter and Callesano (2018) and Callesano and Carter (2019), who all included the same prompt for their speakers. The speakers were instructed to read the prompt using their voice as they would in an everyday conversation. The speakers were asked to read this prompt three times in order to obtain the most 'natural' recording of their accent, which also allowed them to become more familiar with the prompt as the task went on, and mitigated nervousness or prolonged pauses that may have occurred during the first recording or exposure to the prompt. These recordings were then embedded into the survey, which is detailed in Section 4.2.3. We chose not to include distractor voices in our study as the voices included served as distractors in and of themselves. In other words, the Peninsular voices served as distractors for the Cuban listeners and vice versa.

4.2.2 Bilingual language profile

The first task for the listeners was a questionnaire, the Bilingual Language Profile (BLP; Birdsong et al. 2012) administered via Qualtrics. The BLP was used to assess language dominance and proficiency and was created by researchers at the University of Texas at Austin for this purpose. The BLP questionnaire contained four sections, namely, language history, language use, language proficiency, and language attitudes that were intended to yield a holistic score indicative of an individual's level of dominance toward a given language (Birdsong et al. 2012). In the case of this study, language dominance was assessed for English and Spanish. However, the BLP questionnaire was only given to the native Spanish speakers who reported speaking English, regardless of proficiency, and to the L2 Spanish learner group since the monolingual English speakers spoke only one of the languages. Using this questionnaire yielded a unique score for each participant which represented their level of bilingualism and dominance in English or Spanish and allowed for further reinforcement of correct group placement.

4.2.3 Spanish perceptions survey

The second task for the listeners was a survey in which they were required to listen to each recording once and asked to answer a series of questions regarding categorization and perceptions, after each recording (see Appendix A). Participants were first asked to identify where they believed the speaker was from based on a predetermined list containing five options (i. e. "Cuba", "Colombia", "Mexico", "Spain", "cannot tell"). "Colombia" and "Mexico" were added as distractor responses to not give away that all the speakers were from either Cuba or Spain. To disguise the origins of each speaker, they were labelled as Speaker 1, Speaker 2, Speaker 3, etc. for each of the ten speakers. The speakers were also randomized so that the participants were not listening to a Cuban voice five times proceeded by five Peninsular voices or vice versa. For the purposes of consistency, the questions that were asked for one speaker are included in Appendix A, but this same set of questions was repeated for each of the 10 speakers. The overall purpose of this survey was to gauge how the listeners rated the speakers on measures of personality and other social factors. Personality was divided into 11 distinct traits (i. e. likeable, difficult, intelligible, pleasant, friendly, correct, attractive, warm, funny, trustworthy, confident) while the social factors included level of education, income bracket, and occupation with five pre-set occupations provided (i. e. a CEO of a company, a professional dancer, a cashier at a smoothie stand, an owner of a coffee shop, a telemarketer). The employment positions varied to coincide with distinct education and income levels. Additionally, the occupations were worded in this manner because previous studies

(e. g. Carter and Callesano 2018) have found that the more descriptive a job occupation is, the more likely a listener is able to envision that speaker in x position and is subsequently more likely to engage to a higher degree with the survey overall. Not only did we select the occupations in accordance with diverse income levels, but also with a consideration of the 11 traits analyzed since some of the occupations selected could be perceived as more or less warm, confident, etc. A Likert 5-point scaling method was provided to the listeners to indicate how they would rate each voice heard on measures surrounding personality. For instance, participants were prompted with "On a scale of 1–5, please rate how likeable the speaker's voice is," then asked to pick between the values. This same process was done for each of the 11 personality traits mentioned previously. This survey was created in consultation with several prior works focusing on accent perceptions of distinct Spanish varieties (e. g. Carter and Callesano 2018; Callesano and Carter 2019; Díaz-Campos and Navarro-Galisteo 2009, among others).

4.3 Stimuli

All the speakers read the same prompt to ensure consistency in content between recordings (see Appendix B). Each speaker was recorded a total of three times reading the prompt. These recordings were then transferred to Audacity where the clearest sound file free of long pauses was chosen. All the sound files were cut to a similar length to maintain uniformity and consistency. The recordings ranged from 18 s to 31 s as some speakers naturally spoke more quickly than others. The stimuli used in this study were adopted from the experimental procedures found in Carter and Callesano (2018), Carter and Lynch (2014), and Callesano and Carter (2019). Similarly to these studies, these prompts were used to divert the attention away from language perceptions and focus attention on an arbitrary topic to avoid revealing the real purpose of the study to the speakers. Additionally, the passage contained instances of words containing the following letters: <c>, <z>, <s>, <d>, and <r>. These letters reflect sound segments that tend to be produced distinctly among speakers of the two varieties being examined.

4.4 Data analysis

To address the research questions in this study, nonparametric statistical analyses were used. Specifically, a series of Fisher's exact tests were used to examine the group differences on multicategory nominal dependent variables and Mann–Whitney U tests were used to compare the groups on ordinal dependent variables. In

addition to these tests, a series of chi-square tests of independence were also conducted to determine significance level.

5 Results

The participants in this study listened to 10 speech prompts in Spanish and categorized each prompt according to the perceived regional origin of the speaker. The listeners were also asked to assign each prompt with their perception of the speaker on measures of personality, education, income, and employment. The results of the statistical analyses conducted to address the hypotheses in this study are presented in the following sections.

5.1 Categorization of Cuban and Peninsular Spanish varieties

Our first hypothesis predicted that native Cuban and Peninsular Spanish speakers would outperform L2 Spanish learners and monolingual English speakers in correctly categorizing the Cuban and Peninsular varieties (Schmidt 2018). To investigate the rate of categorization, chi-square tests of independence and Fisher's exact tests were performed to compare the percentage of speakers in each group that were able to correctly identify which of the voices were Cuban and which were Peninsular. Both tests yielded significant results, $\chi^2(3) = 78.38$, $p < 0.001$ for the Cuban prompts, and $\chi^2(3) = 133.06$, $p < 0.001$ for the Peninsular prompts. The effect size of the group differences as measured by Cramer's V was large for both the Cuban (0.56) and Peninsular (0.73) speech prompts. The rates of categorization for both Cuban and Peninsular voices among the four listener groups is displayed in Figure 1.

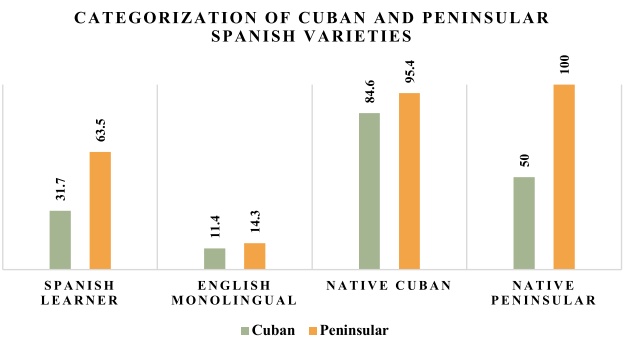

Figure 1: Categorization of Cuban and Peninsular Spanish varieties by all four listener groups.

Not surprisingly, the native Cuban group was able to identify Cuban speakers better in comparison to the other three groups. However, the percentage of native Peninsular speakers who correctly recognized the Cuban Spanish variety was not significantly different from the monolingual English group. The lowest and significantly different group compared to the other three listener groups was the rate of recognition of the Cuban Spanish variety in the monolingual English group.

As for the Peninsular Spanish variety, both groups of native speakers recognized it at a significantly higher rate compared to the other two groups. Additionally, the L2 Spanish learner group recognized this variety at a higher rate compared to monolingual English speakers.

5.2 Perceptions of all listener groups towards Cuban and Peninsular Spanish varieties

5.2.1 Perceptions regarding socioeconomic status (SES) attributes

Based on the accent prestige theory (Fuertes et al. 2002) in addition to results from Callesano and Carter (2019), Carter and Callesano (2018), Carter and Lynch (2014), Stotts (2014), and Winke et al. (2013), our second hypothesis predicted that native Cuban and Peninsular Spanish speakers', L2 Spanish learners', and monolingual English speakers' perception of Cuban and Peninsular Spanish varieties would differ from each other. This hypothesis was tri pronged. Specifically, the first part of the hypothesis predicted that whereas native Cuban and Peninsular Spanish speakers would attribute higher levels of education, income, and employment to their own varieties, L2 Spanish learners and monolingual English speakers would attribute higher levels of these factors to the Peninsular variety (H2. [a]).

The subsample of native Cuban and Peninsular Spanish listeners was used to explore whether these groups attribute their own varieties with higher levels of education, income, and employment (Figure 2). A series of chi-square tests of independence were conducted to address this question. The results of these tests and effect size measures (Cramer's V) are reported in Table 1.

As can be seen from Table 1, in the native Cuban group, there were significant differences (at a level of 0.05) in the perception of income and job occupation between Cuban and Peninsular speakers. However, the effect size of those differences, as measured by Cramer's V, was small. Contrary to Hypothesis 2(a), Cuban speakers attributed lower levels of income to their own variety of Spanish (Figure 2). In addition, they attributed the CEO job occupation less often and the dancer occupation more often to their own variety of Spanish. There was no difference in attribution of educational level to the two Spanish varieties among this group of listeners.

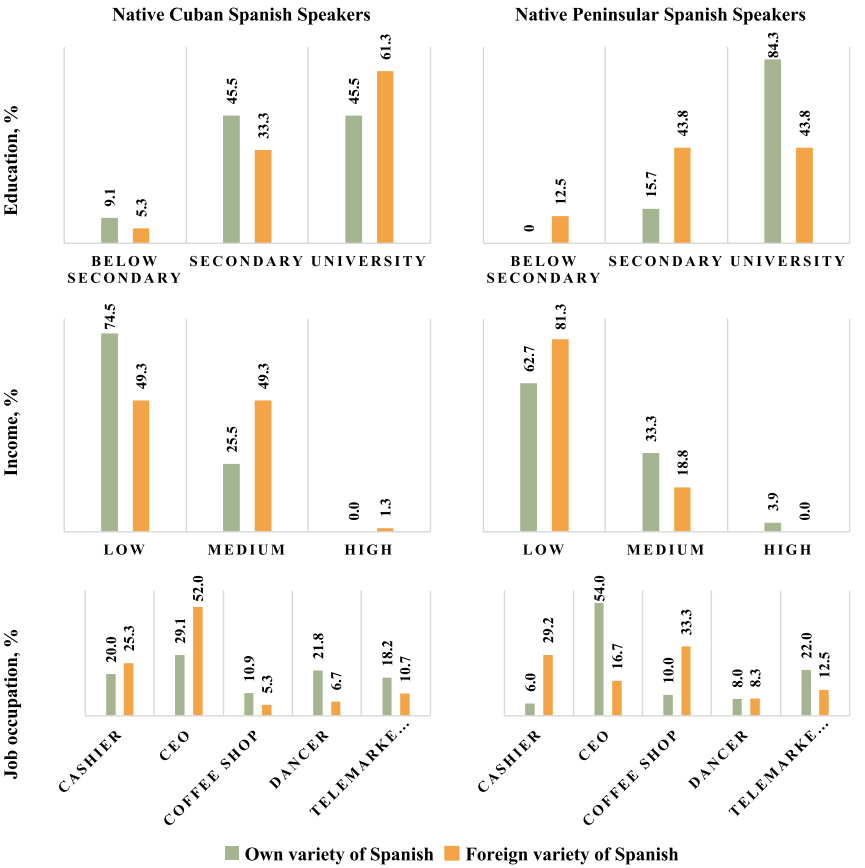

Figure 2: Perceived SES attributes of Cuban and Peninsular Spanish varieties among native Cuban and Peninsular listener groups, divided per variable.

Table 1: Perceived SES attributes of Cuban and Peninsular Spanish varieties among native Cuban and Peninsular listener groups.

SES attribute	Native Cuban Spanish speakers		Native Peninsular Spanish speakers	
	χ^2-test (p-value)	Cramer's V	χ^2-test (p-value)	Cramer's V
Education	3.32 (0.200)	0.16	19.32 (<0.001)	0.44
Income	8.71 (0.006)	0.26	5.07 (0.054)	0.23
Job occupation	12.47 (0.013)	0.31	24.63 (<0.001)	0.50

However, in the Peninsular Spanish group, Hypothesis 2(a) was partially confirmed. Specifically, Peninsular speakers were perceived as having higher levels of education and were attributed the CEO job occupation more frequently and cashier and coffee shop jobs less frequently compared to Cuban speakers. The effect size of these differences, as measured by Cramer's V, was moderately strong. No significant differences in perception of income were found for this group of listeners.

The subsample of L2 Spanish learners and monolingual English listeners was used to explore whether these population groups attribute higher levels of education, income, and employment to the Peninsular variety in comparison to the Cuban variety (Figure 3). A series of Fisher's tests was conducted to address this question. The results of these tests along with effect size measures (Cramer's V) are reported in Table 2.

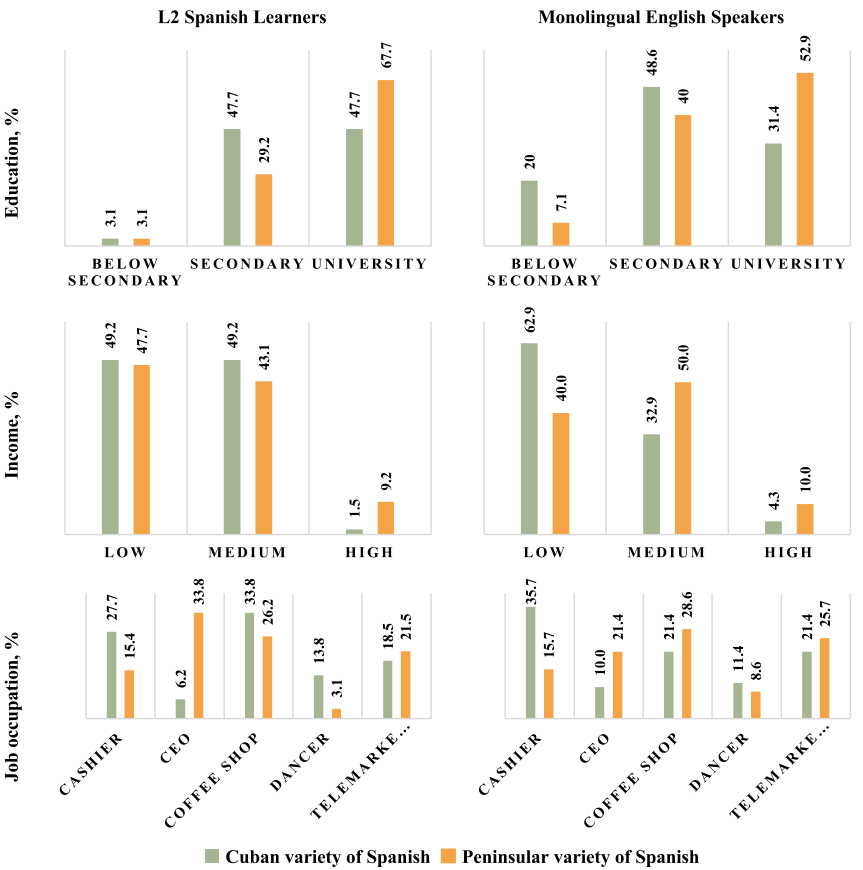

Figure 3: Perceived SES attributes of Cuban and Peninsular Spanish varieties among L2 Spanish learner and monolingual English speaker listener groups, divided per variable.

Table 2: Perceived SES attributes of Cuban and Peninsular Spanish varieties among L2 Spanish learners and monolingual English speaker groups.

SES attribute	L2 Spanish learners		Monolingual English speakers	
	χ^2-test (p-value)	Cramer's V	χ^2-test (p-value)	Cramer's V
Education	6.16 (0.058)	0.22	8.60 (0.013)	0.25
Income	3.71 (0.175)	0.17	7.54 (0.022)	0.23
Job occupation	21.02 (<0.001)	0.40	9.60 (0.046)	0.26

As can be seen from Table 2, in the L2 Spanish learner group, significant differences were only found at the level of perceived job occupation for Cuban and Peninsular speakers. More specifically, a significantly higher proportion of Peninsular speakers were perceived as having a CEO job in comparison to Cuban speakers for the same variable.

However, in the monolingual English group, significant differences were observed in the perception of all three socioeconomic factors: educational level, income, and job occupation. Specifically, Peninsular speakers were perceived as having higher levels of education and income in comparison to Peninsular speakers. At the level of occupation, Cuban speakers were perceived as having a cashier job occupation more often than Peninsular speakers.

5.2.2 Perceptions regarding personality attributes

The second part of our second hypothesis (H2. [b]) predicted that whereas native Spanish speakers will attribute more positive associations with speech characteristics (i. e. likeable, intelligible, pleasant, friendly, correct, attractive, warm, funny, trustworthy, and confident) to their own varieties, L2 Spanish learners and monolingual English speakers will rate the Peninsular variety more positively on these measures.

A series of Mann–Whitney U tests was conducted with the subsample of native Cuban and Peninsular speakers to investigate whether they have more positive associations on speech characteristics to their own varieties of Spanish. The results of significant tests are reported in Table 3. Mean ranks for comparison of the two groups of speakers on each attribute are presented in Figure 4. Nonsignificant differences are indicated in grey.

Hypothesis 2(b) was supported to some extent in both groups of speakers. Specifically, native Cuban listeners rated the Cuban Spanish variety as more correct, friendly, likeable, pleasant, trustworthy, and warm. In contrast, native Peninsular listeners ranked their own variety higher on confidence, correctness, and trustworthiness.

Table 3: A comparison of perceived speech attributes for Cuban and Peninsular varieties of Spanish among native Cuban and native Peninsular listener groups.

Speech attribute	Native Cuban Z (p-value)	Native Peninsular Z (p-value)
Confident		−3.26 (0.001)
Correct	−2.38 (0.018)	−2.96 (0.003)
Friendly	−2.71 (0.007)	
Likeable	−2.52 (0.012)	
Pleasant	−2.29 (0.022)	
Trustworthy	−2.70 (0.007)	−2.55 (0.011)
Warm	−2.33 (0.020)	

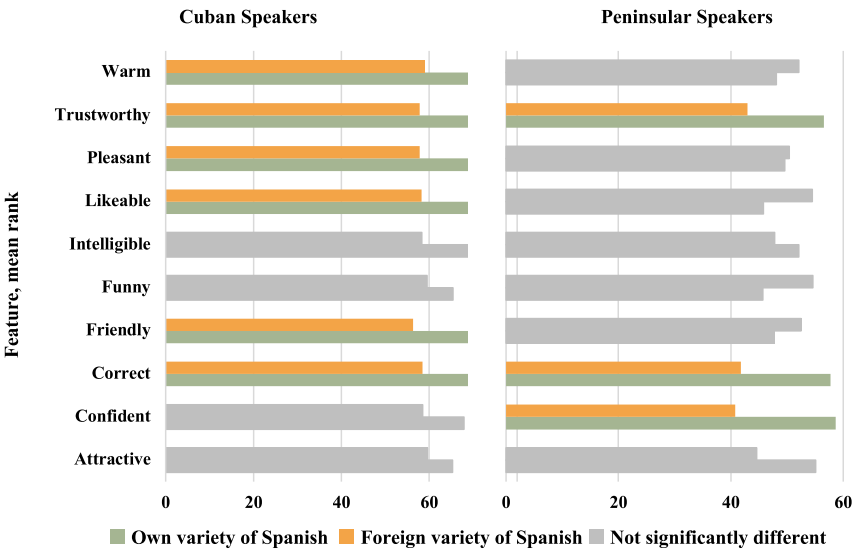

Figure 4: A comparison of perceived speech attributes for Cuban and Peninsular varieties of Spanish among native Cuban and native Peninsular listener groups, divided per attribute.

The subsample of L2 Spanish learners and monolingual English listeners was used to explore whether these population groups attribute the Peninsular variety more positive speech characteristics (i. e. likeable, intelligible, pleasant, friendly, correct, attractive, warm, funny, trustworthy, and confident). A series of Mann–Whitney U tests was conducted to address this question. The results of significant tests are reported in Table 4. The mean ranks for each attribute in the two groups are displayed in Figure 5. Nonsignificant differences are indicated in grey shade.

Table 4: A comparison of perceived speech attributes for Cuban and Peninsular varieties of Spanish among L2 Spanish learner and monolingual English speaker listener groups.

Speech attribute	L2 Spanish learners Z (p-value)	English monolingual speakers Z (p-value)
Confident		−2.35 (0.019)
Friendly	−2.42 (0.016)	
Intelligible	−2.05 (0.041)	−2.66 (0.008)
Likeable	−2.87 (0.004)	
Pleasant	−2.18 (0.029)	
Trustworthy	−1.46 (0.144)	
Warm	−2.89 (0.004)	

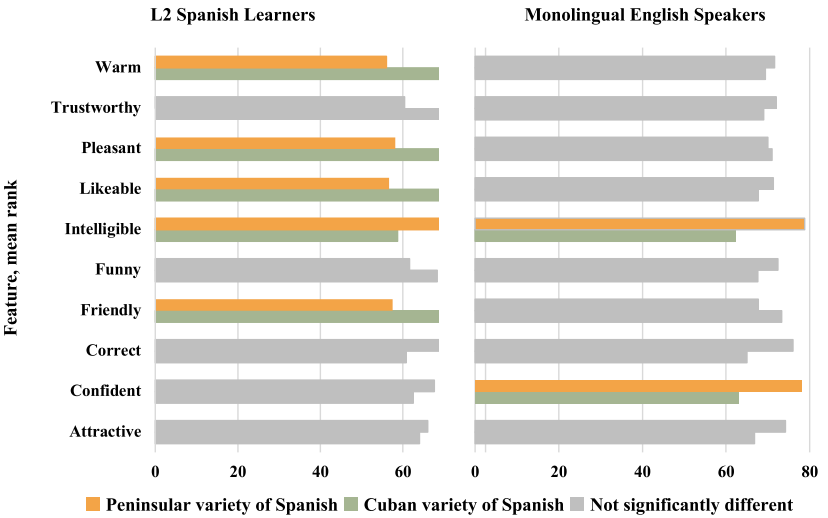

Figure 5: A comparison of perceived speech attributes for Cuban and Peninsular varieties of Spanish among L2 Spanish learner and monolingual English speaker listener groups.

The results in Table 4 indicate that the L2 Spanish learner listener group ranked Peninsular Spanish as more intelligible compared to Cuban Spanish (Figure 5). However, they ranked Cuban Spanish significantly higher compared to Peninsular Spanish on measures of friendliness, likeability, pleasantness, and warmth. The English monolingual listener group ranked Cuban Spanish significantly lower on confidence and intelligibility.

5.2.3 Perceived level of difficulty

The third portion of our second hypothesis (H3. [c]) predicted that whereas native Spanish speakers will find their own varieties less difficult to understand, L2 Spanish learners and monolingual English speakers will rate the Peninsular variety as being less difficult to understand.

The subsample of Cuban and Peninsular Spanish listeners was used to explore whether these population groups will find their own varieties of Spanish less difficult to understand. A Mann–Whitney U test was conducted to address this question for each of the two groups. The results of these tests were significant: $Z = -2.44$, $p = 0.015$ for Cuban Spanish listeners, and $Z = -3.44$, $p = <0.001$ for Peninsular Spanish listeners. An investigation of mean ranks indicated that Cuban Spanish speakers rated the Peninsular variety as more difficult to understand, while native Peninsular listeners rated Cuban variety as more difficult to understand.

The subsample of L2 Spanish learners and monolingual English listeners was used to explore whether these population groups will associate the Peninsular variety of Spanish as being less difficult to understand. A Mann–Whitney U test was conducted to address this question for each of the two groups. The results of these tests were not significant: $Z = -1.15$, $p = 0.250$ for the L2 Spanish learner group, and $Z = 0.46$, $p = 0.646$ for the English monolingual group. Therefore, there was no significant difference in the average scores for difficulty between the Peninsular and Cuban varieties of Spanish by these two non-native groups.

6 Discussion

6.1 Categorization of Spanish varieties

Our results generally confirm Hypothesis 1 since the two groups of native Spanish speakers (i. e. native Spanish speakers from Cuba and Spain) did outperform the L2 Spanish learners and monolingual English speakers in correctly categorizing the Cuban and Peninsular varieties as distinct with a higher rate of accuracy. However, categorization largely depended on the speaker that was heard, proving to be a difficult task even for native Spanish speakers. This is especially true for the Peninsular group in this study who correctly categorized the Peninsular voices with high levels of accuracy but not the Cuban voices. These findings corroborate the results from Díaz-Campos and Navarro-Galisteo (2009), who found that native speakers of a language sometimes have difficulty pinpointing a speaker's origin. The authors also found that Peninsular speakers had the greatest amount of difficulty stating where speakers from other varieties of Latin American Spanish were from, similarly to the current

study. One explanation for the difficulty of this group and the L2 Spanish learner group in identifying distinct Spanish voices is a lack of exposure to different varieties from Latin America, compounded by the fact that many Latin American dialects exhibit similar phonological and phonetic variants.

6.2 Perceptions of socioeconomic status (SES)

We predicted that native Spanish speakers, L2 Spanish learners, and monolingual English speakers would differ in their perceptions of Cuban and Peninsular varieties of Spanish. Specifically, H2. (a) predicted that whereas native Spanish speakers (Cuban and Peninsular Spanish) would attribute higher levels of education, income, and employment to their own varieties, L2 Spanish learners and monolingual English speakers would attribute higher levels of these factors to the Peninsular variety. The results generally supported that these groups differed from each other in their perceptions of Cuban and Peninsular Spanish, but only on certain measures (e. g. some speech characteristics, which will be further discussed in Section 6.3). With respect to the first part of the second hypothesis, the results partially support H2. (a), as we found that the native Peninsular listeners rated their own variety higher on level of educational attainment and associated Peninsular speakers as belonging to more prestigious job occupations (e. g. "CEO of a company"). This is consistent with the tenets of the accent prestige theory, social identity theory, and own-accent bias, which state that individuals who recognize someone as belonging to the same language variety as they belong will rate them higher on certain social and personal factors. However, these higher ratings did not transcend across all SES attributes, as there were no significant differences found at the level of income for this listener group.

Contrary to these theories is the performance observed by the native Cuban listeners. This group rated their own varieties lower on the SES attributes analyzed. In some instances, this group rated the Peninsular variety higher, as was the case at the level of occupation. There are a few explanations that could account for these specific results. First, the speakers in this study were individuals who were born and raised in Havana, Cuba, did not speak any other languages, and had not lived anywhere else at the time of testing. However, the corresponding listener group were individuals who were born in diverse regions of Cuba and were living elsewhere for a period longer than five years. Due to the current political landscape of Cuba, many individuals who immigrate to other countries may disassociate and not identify as strongly with their Cuban culture, which could result in the unconscious lower ratings found here. Secondly, many individuals who speak Cuban Spanish are aware of the stigmas of their variety which may have translated to their subsequent lower

ratings. Lastly, most of the Cuban listeners in this study were well aware of the economic situation in Cuba. By this we mean that even for jobs that would be paid higher wages (e. g. doctor, lawyer, etc.) in countries such as Canada and the United States, they would not earn such high wages in Cuba. Many Cubans in general are aware of these economic disparities and know that a higher education may not translate into a higher income, helping to explain the results obtained for this variable, specifically. In sum, a combination of the factors mentioned, in conjunction to biases existing at the regional level within Cuba, could help to explain the low SES attribution results obtained for the Cuban variety on behalf of speakers belonging to this same variety.

Regarding the L2 Spanish learner and monolingual English groups, we predicted that these individuals would rate the Peninsular variety higher on measures related to SES. The results obtained partially confirm this claim since the monolingual English group did rate speakers from the Peninsular variety as more likely to have a CEO position in addition to belonging to a higher income and education bracket. However, significant differences were found only at the level of job occupation for the L2 Spanish learner group, who rated the Cuban and Peninsular Spanish varieties more often with 'cashier' and 'CEO' positions, respectively. We see that the two non-native groups pattern more similarly to each other than to the native listener groups. This demonstrates that among groups with lower levels of exposure to Spanish, the prestige factor associated with Peninsular Spanish transcends proficiency. One reason why we might be seeing these trends, particularly among the L2 Spanish learner group, is due to the amount of unconscious exposure these learners receive toward Peninsular Spanish not only through academic means, but also through the heightened popularity of TV shows and movies available on streaming platforms in comparison to what is currently available on these viewing methods for Cuban Spanish.

One important point to mention is that while the Peninsular variety was rated higher on certain measures of SES across all four groups, there were hardly ever any significant findings at the level of income, with the exception of the monolingual English group. As a reminder, the voices in the present study were female to control for the variable of gender which could have potentially influenced the perceived income level attributed by the listeners. This is supported by previous accent perception studies such as Carter and Callesano (2018), who included male voices and found that their listener group tended to rate most of the speakers as pertaining to an upper-middle level income bracket or higher. However, the potential role of gender in relation to perceived SES is outside the scope of this study and would add another layer of complexity that goes beyond judgements and biases towards speakers from a specific language variety.

6.3 Perceptions regarding personality attributes and difficulty

It was predicted that whereas native Spanish speakers would attribute more positive associations with speech characteristics (i. e. likeable, intelligible, pleasant, friendly, correct, attractive, warm, funny, trustworthy, and confident) to their own varieties, L2 Spanish learners and monolingual English speakers would rate the Peninsular variety more positively on these measures (H2. [b]). In general, the results partially supported this hypothesis as the Peninsular Spanish listeners did rate the Peninsular voices higher on certain measures (i. e. attractiveness, confidence, correctness, and trustworthiness), but the same was not true for the native Cuban listeners as they did not rate the Cuban voices higher on any of the personality traits. A similar explanation as provided in the section prior could motivate why we see similar results with this group. As for the L2 Spanish learners and monolingual English listeners, we can also only say that the results partially supported the claim that these groups would rate the Peninsular variety higher on measures of personality. While the L2 Spanish learners did in fact rate the Peninsular variety higher than the Cuban variety on some measures such as intelligibility, this group also ranked the Cuban variety higher on traits dealing with friendliness and likeability, among others. Regarding the monolingual English group, significant results were found only at the level of confidence and intelligibility, in that higher confidence and intelligibility were associated with the Peninsular variety. This finding highlights the fact that, even for listeners who do not speak Spanish, underlying characteristics of the Peninsular accent may result in higher ratings and, perhaps, the stigma attached to the Cuban variety may be transferred.

Difficulty was tested last. We had predicted that native Spanish speakers would find their own varieties less difficult to understand (H2. [c]). We found that the results supported our initial claim. This is illustrated by the native Cuban and Peninsular listeners rating the opposite set of speakers as harder to understand. Regarding the other two groups of listeners (i. e. L2 Spanish learners and monolingual English speakers), we originally predicted that these groups would find the Peninsular variety easier to understand, following with previous studies such as Stotts (2014). However, our results reject this initial hypothesis as there were no significant findings for any of the groups in the perceived difficulty of each variety. One explanation for this is that all of the speakers in our study were female. While the speakers did produce speech sounds that are characteristic of both Spain (e. g. distinction between /s/ and /θ/) and Cuba (e. g. /s/ aspiration, deletion of /d/, lateralization of /r/ to [l], etc.), these occur with a much lower frequency among females than among males in the case of Cuba, since the productions of /s/, /d/, and /r/ in Cuba are considered to be stigmatized. Studies such as Díaz-Campos and Killam (2012) and

Aguilar (2018) contextualize that female speakers tend to use more "prestigious" language forms and may be more aware of these stigmatized language forms when speaking, thereby making a conscious effort to minimize the use of these 'nonstandard' speech forms. This could explain why we did not find significant results for either of these groups regarding difficulty of understanding.

7 Conclusion and future work

This study contributes to the field of accent perceptions by highlighting the perceptions of a diverse population group (i. e. native Cuban and Peninsular Spanish speakers, L2 Spanish learners, and monolingual English speakers) towards Cuban and Peninsular Spanish. The current study helps to address the language gap in the literature, as most accent perception studies examine dialectal variation in English (e. g. Anderson et al. 2007; Coupland and Bishop 2007). Furthermore, the study includes the perceptions of individuals learning Spanish and those who do not speak Spanish at all, bringing a unique perspective as most studies deal solely with the perceptions of native speakers of a language. It can be concluded, based on the results, that these groups are also forming their own perceptions on the varieties under analysis and can lead to implications in other domains such as how intelligible, capable, etc. students view their educators when learning a language. These perceptions could also extend to other areas of the workforce as previous studies have shown a preference for certain accents in distinct fields such as customer service, health-related professions, among others (e. g. Aguilar 2018; Anderson et al. 2007; Fuertes and Gelso 2000). However, one important difference to keep in mind between those studies and the present one is that they predominantly deal with varieties of English or foreign-accented English. Nonetheless, the results highlight the ability of non-native speakers of a language to form perceptions of these varieties in the first place, which is an area that needs to be researched further to determine the implications of these attitudes in other domains.

However, this study does not come without its limitations. Firstly, future work should seek to include heritage speakers and speakers of other Spanish varieties to determine if there are additional underlying stigmas or notions of prestige associated with these or other varieties on behalf of other groups. Secondly, as mentioned before, the speakers in this study were born and raised in either Havana, Cuba or Madrid, Spain and had not resided in another country at the time of testing. However, the native listener groups, while also from Cuba and Spain, were residing in other countries such as Canada and the United States at the time of the study. This is of particular importance to the native Cuban group because there could be other factors influencing their judgements of the Cuban voices such as the current political

and economic landscape of Cuba, as contextualized in the discussion section. Thirdly, this study did not control for the age of the speaker which could have played a role in the perceptions of the listeners, especially those surrounding SES attributes. To conclude, future work could aim to control for the variable of age and test the perceptions of speakers living both within and outside of their home country to better determine the attitudes associated with different varieties of Spanish. These variables in addition to including an analysis of gender bias could lead to more insight in determining which additional factors modulate accent perceptions, especially among speakers belonging to stigmatized language varieties. Notwithstanding, the current study has highlighted the importance of including not only native, but other non-native speakers of a language and studying accent perceptions beyond varieties of English to expand the existing literature. Finally, the study also points to some of the broader systemic struggles that individuals coming from stigmatized language varieties face in various aspects of their daily lives.

Appendix

Appendix A: Attitudinal Survey

Speaker #1: You will hear a speaker read a short prompt. Once you have finished listening to the audio clip, please answer the following questions.

1. Can you identify the variety of Spanish the speaker speaks? Please indicate which country you think the speaker is from based on the options below.
2. On a scale of 1–5, please rate how (blank) the speaker's accent was.

	Strongly disagree (1)	**Somewhat disagree (2)**	**So-so (3)**	**Somewhat agree (4)**	**Strongly agree (5)**
Likeable					
Difficult (to understand)					
Intelligible					
Pleasant					
Friendly					
Correct					
Attractive					

(continued)

	Strongly disagree (1)	Somewhat disagree (2)	So-so (3)	Somewhat agree (4)	Strongly agree (5)
Warm					
Funny					
Trustworthy					
Confident					

3. Please indicate the level of education you think the speaker has.
   Below secondary school Secondary school University level education

4. Please indicate which income bracket you think the speaker falls into. (Circle the answer).
   - $0
   - $1 to $9,999
   - $10,000 to $24,999
   - $25,000 to $49,999
   - $50,000 to $74,999
   - $75,000 to $99,999
   - $100,000 to $149,999
   - $150,000 and greater
5. In response to the previous question, please provide a brief explanation of why you chose the income bracket that you did for the speaker.
6. Of the following occupations, which is this speaker most likely to have?
   - A CEO of a company
   - A professional dancer
   - A cashier at a smoothie stand
   - An owner of a coffee shop
   - A telemarketer

Appendix B: Stimuli

Instructions: You will be given a short passage to read out loud. Please read it in your natural, native accent (i.e., how you would normally speak on a day-to-day basis).

Es increíble como todavía las compañías de cigarrillos gastan billones de dólares cada año para promover el consumo de este producto. Es de conocimiento general

que el fumar y usar tabaco causan cáncer y enfermedades del corazón, pero en el caso de los niños, es más difícil que tomen conciencia acerca de este riesgo, ya que no entienden que hay enfermedades que pueden contraer al largo plazo.

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