AMERICAN ENGLISH SPEAKER ATTITUDES TOWARDS UNFAMILIAR LANGUAGES

by

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A THESIS

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Language perception is not neutral (Silverstein 2003). Linguistic perception judgments made by American English (AE) speakers can have international impact on linguistic attitudes and the treatment of language varieties in society (Seidlhofer & Jenkins 2003), including towards unfamiliar[1] languages. In the absence of semantic understanding, what influences perceptions of unfamiliar languages and their speakers? This study investigated how AE speakers perceived audios of a language unfamiliar to them (either Italian or Romanian) on scales related to beauty, status, and solidarity. AE speakers' perceptions of either language did not significantly differ if they were or were not informed of the language's identity beforehand. However, Italian was perceived more positively than Romanian (which was perceived neutrally). The findings suggest that increased exposure to a language based on the size of national speaker populations may lead to the creation of more language ideologies and thus non-neutral perception. These findings aim to increase understanding about language attitudes and the factors which influence linguistic bias as well as promote further research in this area to combat language-based discrimination.

[1] The terms *familiar* and *unfamiliar language* are used throughout this paper to discuss fluency and/or practical experience with a language. An individual is familiar with a given language when they can reasonably recognize and understand it out of context. This is done for purposes of accuracy and inclusion when discussing individuals' experiences with language (see Weissler et al. 2023; Ehlich 2009). It is important to note that these terms are not objective or innate to one language but instead refer to an individual's unique relationship with a given world language. See the methods section for elaboration on these terms as they are used in this study.

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Introduction

When exposed to a linguistic signal (for example, a spoken or written word; a hand sign), humans make socially-informed judgments about the signal as well as the individual(s) who produced the signal. These judgments *index* language producers and their language productions (Silverstein 1976). *Indexicality* is a "continuous process in which linguistic features of all sorts are continually imbued with a variety of meanings" (Eckert 2012:94). As sociolinguistic features are indexed, those indexations are reinforced through further exposure to a given feature and others' reactions and attitudes towards the feature. The result of this process is the formation of *language ideologies*: "a system of collectively held beliefs or dispositions toward language" (Wassink & Curzan 2004). The assignment of meaning to linguistic productions/producers and the subsequent formation of language ideologies are both largely unconscious processes. Of particular importance when considering language ideologies and their impact is the acknowledgement that they can be used to implicitly or explicitly justify and perpetuate the oppression of *nonstandard* language varieties[2] and their speakers (Lippi-Green 1994). Additionally, non-linguistic biases can affect linguistic perception and expectation (see Weissler 2022). Understanding the interactions between social perception and categorization in tandem with linguistic input and output is the primary motivation behind *sociolinguistics* research. Further, the motivation to disrupt and dispel harmful linguistic ideologies and their reinforcement of colonial power imbalances is paramount to the approach of *liberatory linguistics* (Hudley 2023).

[2] For definitions of *language*, *accent*, *dialect*, and other related terms as they overlap, see Wolfram & Schilling (2016).

Previous speech perception research has focused largely on listener perceptions towards speakers of the same *familiar* language. Such research has found that listeners make assumptions about speakers (for example, their race, socioeconomic status, or sexuality) based on their language use (Lippi-Green 2012; Painter et al. 2024). These assumptions create and interact with bias about language communities, their speakers, and their cultures to form language ideologies—in particular, *Standard Language Ideology* (SLI), the notion that language can and should be expressed in a single standardized way which is superior to other language varieties (Milroy 2001). These ideologies justify social categorizations based on linguistic variation and are ultimately "deployed in the interests of a society's dominant group and serve to justify social inequality" (Piller 2015:7). This can lead to social and legislative discrimination on both structural and individual levels against speakers of language varieties granted less prestige than languages labeled as *standard* or *high prestige* (Lippi-Green 1994; Rickford & King 2016).

The presence of the English language within global systems of power, especially regarding international business, language policy, and colonial and cross-cultural contexts, requires critical reflection. Individuals who speak English—particularly those who speak it as a first language (L1) and those who speak it within the United States, a nation with significant global hegemony—have the capability to influence language ideologies on national and international scales. This influence may, in addition to other avenues, spread through the status given to English (and particularly the Standard American English (SAE) dialect) as a lingua franca[3]. Understanding how American English (AE) speakers perceive unfamiliar non-English languages and how those perceptions affect their attitudes towards those languages may provide

[3] The term *lingua franca* has also been referred to as *contact language*, *trade language*, *bridge language*, etc. In short, it refers to a common language used between interlocutors who do not share a first language (Jenkins et al. 2011). For more on English as a Lingua Franca (ELF) and its sociolinguistic impacts, see Seidlhofer & Jenkins 2003 and Canagarajah 2006.

a valuable insight into the sources of linguistic ideologies and bias, which in turn highlights avenues through which to combat language-based discrimination.

Research on attitudes towards unfamiliar languages is comparatively limited and has not evaluated the impact of national exposure to a language on these ideologies. Thus, the current study aims to expand upon prior decades of accent perception and attitude research and apply their methodologies to research into perception and attitudes towards other languages, particularly those which the listener does not speak (i.e. with which they are not familiar).

The current study therefore presents American English speakers with audio clips of an unfamiliar language and either informs or does not inform participants of the language's identity beforehand. By evaluating the differences in perception between two related languages with similar sound systems but which differ in presence in the United States through this method, we may better understand the impact of socially developed language ideologies on language perception.

Background

Accent Perception and Attitudes Research

The study of language variation, especially in the context of accents and accent perception, began with Labov 1966's study. This research determined that speech patterns in New York City English varieties aligned with various social classes, such as age, gender, and ethnicity. This provided a foundation for subsequent decades of research into how and why language varies as well as the ideas humans have about language variation.

Accent and dialect continued to be a primary focus of sociolinguistics research. For example, perception of *accentedness* (i.e. the subjective degree to which an individual is perceived to speak a certain, often nonstandard, accent/dialect/language variety) towards the same auditory linguistic information (i.e. spoken words) was found to vary depending on concurrent visual social information, such as the ethnicity of the individual associated with the linguistic information (Babel & Russell 2015). In this case, participants' accuracies when transcribing heard speech differed depending on the ethnicity of the speaker. According to the authors' conclusions, this difference was due to the listeners' predictions of how accented each ethnicity *would* sound rather than how the speech objectively sounded. This suggests that visual information, paired inevitably with social assumptions and ideologies, influences auditory language perception—at least for languages that are intelligible (i.e. familiar) to the listener.

Dragojevic & Goatley-Soan (2020) expanded upon this by discovering that Americans rate verbal stimuli of non-Standard American English (SAE) accent varieties as both harder to understand and as sounding more "foreign" than SAE. They also tended to attribute these non-SAE varieties less status and solidarity, though not all non-SAE varieties were denigrated in the same way. This has implications for our understanding of language ideology in national and

international contexts: world languages are perceived differently along social axes and a speaker's perceived intelligibility (and as a result, the perceived familiarity of their language variety) impacts perceptions of their membership within the local community.

Linguistic experience and social information impact perception of linguistic audio signals early on in human development, at least by 4½ months (Fecher & Johnson 2019). Hay & Drager (2010) also found that New Zealand English speaking children who were presented with stuffed animals associated with either Australia (kangaroo) or New Zealand (kiwis) would perceive vowels heard in audio stimuli to reflect accents associated with those regions. This further suggests that social information and expectation impacts speech perception, at least in familiar languages.

Unfamiliar Language Perception

Previous research into unfamiliar language attitudes in the manner of prior dialect-focused studies is limited, though it has seen an increase in attention in recent years (Cowan & Olmstead 2023). Most previous research regarding language attitudes towards unfamiliar languages has focused on second language learner attitudes, evaluating attitudes of those who already have some familiarity with the language. However, individuals have attitudes towards even languages they do not know and cannot reliably recognize out of context (Christiner et al. 2023; Fleming et al. 2014), so research into perceptions of unfamiliar languages must also be emphasized.

A recent study determined that aesthetic ratings of languages by non-speakers are not universal and are instead influenced by phonetic similarity and social attitudes (Anikin et al. 2023). However, American English speakers were not in the participant pool. English speaking participants instead spoke British English and were recruited from the United Kingdom and

therefore likely have significantly different opinions due to a greater geographic proximity to both Italian and Romanian speakers and different political histories compared to that of American English speakers. Participants were asked also asked one question regarding their perception of the language: "How much do you like the sound of this language?" The current study aims to expand this framework by asking additional questions related to the language's status, solidarity, competence, and warmth (e.g. Ogden 2020).

Wadas 2020 used methods similar to those proposed in the current study to investigate American stereotype-influenced attitudes towards German, contrasted with Dutch due to their phonetic similarity. Participants were recruited from a single university population, which may limit its application to a broader United States context. The current study aims to build upon this precedent by including American English speaker participants from a variety of backgrounds and geographic locations within the United States. Additionally, while this prior study examined the roles of German-specific stereotypes in impacting language perception, the current study aims for a more general perceptions approach that may be applied to all world languages.

Another study (Levy et al. 2019) found that children with greater exposure to regional, nonstandard accents experienced a mental processing advantage when presented with different, unfamiliar regional accents of that same language. There was no processing advantage found in monolingual listeners compared to bilingual listeners or vice versa, suggesting that experience with other unrelated languages does not provide an overall advantage for discriminating between sounds in an unfamiliar dialect. This precedent may reasonably be extended beyond dialect to language as well, though familiarity with other languages was not a focus of the current study.

The Current Study

The prior studies described above have not focused on individual familiarity with a given language and often include in analysis participants who can speak or have some personal familiarity or substantive experience with the language(s) in question. We may expect individuals with formal, personal experience learning a given language, even for a short period of time, to develop considerably different attitudes towards that language than those with functionally no personal experience with the language. Familiarity with a language's sound systems and the additional sociolinguistic information gained through exposure to the language, its users, and associated culture(s) may encourage the development of different language ideologies than those with only surface-level exposure. Familiarity with a language has shown to significantly impact language attractiveness ratings, for example (Reiterer et al. 2020:186), so the attitudes of listeners unfamiliar with the language must also be considered.

The current study intends to expand the current body of language attitudes research by investigating the potential impact that the label of a given unfamiliar language's identity (and all its associated social ideologies and biases) has on AE speaker perceptions of that language in the absence of personal familiarity with it. It aims to do this by comparing AE speakers' perceptions of two related languages, Italian and Romanian (two of the five main Romance languages), which have considerably different speech community sizes within the United States and subsequently different likelihoods of passive exposure among AE speakers who do not speak either language. Given that there are over four times more Italian speakers than Romanian speakers in the United States (U.S. Census Bureau 2021), AE speakers may be predicted to have more ideologies surrounding the Italian language. If AE speakers have more ideologies about Italian, then we may predict participants to subconsciously process auditory information to better

fit their preconceived notions (whether positive or negative) of how Italian should sound. Thus, this research hypothesizes that American English speakers listening to Italian will have significantly different attitudes towards Italian speech when they are informed of the language's identity beforehand i.e. when the language is *labeled*, compared to when they are not informed i.e. when the language is *unlabeled* (Wadas 2020), whereas attitudes towards Romanian speech will remain similar regardless of whether listeners are informed of the language due to differences in speech community sizes and therefore exposure to AE speakers.

***H_1**: AE speakers will perceive the same language differently depending on whether they are informed of the language's identity beforehand or not.*

***H_2:** AE speakers will perceive Italian and Romanian differently, with Romanian being rated close to neutral while Italian is rated at greater extremes, whether positive or negative.*

In other words, attitude variation within an individual language, depending on whether participants are informed of the language beforehand, would support the hypothesis that subjective, socially-influenced ideas about language (language ideologies) impact "objective" acoustic perception. Attitude variation between the two languages would also support the hypothesis that national passive language exposure, perhaps through the relative size of a language's speech community, leads to more ideologies surrounding the language in question and therefore impacts "objective" acoustic perception. If there is a significant difference between the *labeled and unlabeled conditions* and/or between the *large and small speech community language conditions* (Italian and Romanian respectively), that will suggest that language ideologies affect language perception.

Methods

The current study employs auditory speech perception methodology historically used to investigate perceptions of and attitudes towards familiar, intelligible languages (e.g. Babel & Russell 2015; Sedarous & Namboodiripad 2020).

Selection of Languages of Interest

Italian and Romanian were chosen as the target languages given that for contrastive analysis since they are related languages with similar sound systems. Notably, Italian is a Romance language with a considerable presence in United States media and culture, at least regarding the number of individuals in the United States who speak the language, making it an important subject of language attitude research. Many individuals in the United States therefore likely have some language ideologies surrounding Italian, given that they have likely been exposed to it in the media or by meeting Italian speakers, even if they do not have have significant firsthand familiarity with the language and its community enough to recognize it out of context.

Romanian is a less commonly spoken Romance language. Among the other Romance languages, it is most similar to Italian, particularly regarding lexical and phonetic distance (Heeringa et al. 2023). In other words, the overlap between words and sounds in both Italian and Romanian is relatively similar, at least when comparing Romanian to other major Romance languages such as Spanish or French. This makes it a useful language to compare with Italian when investigating the impact of ideology on language attitudes since it may mitigate effects of differential *phoneme* (individual unit of sound) familiarity or preferences among listeners (see Williams et al. 2024).

Romanian has a relatively smaller presence in the United States consciousness perhaps due to smaller language communities within the United States. As of 2009-2013 United States Census data, the number of individuals in the United States who spoke Italian in the home was reported to be 708,966. The number of individuals who spoke Romanian in the home was significantly lower at 154,625 (U.S. Census Bureau 2021). This difference in presence may correlate to fewer ideologies about how the Romanian language sounds compared to ideologies about how Italian sounds, as we will investigate in this study.

Italian has relatively large speech communities in the United States but may be slightly less recognizable (correctly identified below 50% of the time) compared to other large speech community languages like Spanish or German (Anikin et al. 2023; see also Reiterer et al. 2020). In studies that examined unfamiliar language recognizability, recognition rates for English speakers listening to Romanian were rarely explicitly reported, if they were even recorded in the first place. In large-scale studies with numerous languages of interest, high levels of recognizability were usually mentioned while some languages with lower recognizability rates were omitted from explicit reporting. Given this, we may expect that AE speakers may less reliably recognize Romanian, at least compared to Italian or other more widely-spoken languages in the United States. The labeled and unlabeled conditions would likely be null for a language that is virtually always recognized by English speakers, so Italian and Romanian are ideal languages of study. Some recognizability is to be expected and not treated as a confound but rather valuable information about AE exposure to certain languages, though there must also be a sizable population of participants who do not recognize the language in order to accurately examine the effect of the language label (comparing attitudes with and without context).

Participants

118 American English speakers at least 18 years old were recruited for participation in the study through Cloud Research, an online website for recruiting participants in online surveys. Participant demographic data was retrieved from Cloud Research and processed in Excel and R Studio.

To ensure participants were exclusively American English speakers for the purposes of the study's framing, participation was limited to individuals on Cloud Research who (1) identified English as their "native language" and who (2) identified the United States as their country of residence. Additional questions were implemented in the Qualtrics survey to ensure participant eligibility (i.e. no history of speech or hearing impairments, in order to mitigate potential confounding perceptual differences between participants; no self-reported familiarity with Italian or Romanian – see below for explanation; their personal device e.g. their phone or computer had a working sound system through which to play the audio files).

Participants determined ineligible were removed from the study and their data was destroyed after ineligibility determination and/or was never collected or made accessible to the researcher to begin with. 19 individuals who began the study were determined ineligible based on these criteria and were not considered in analysis. Data from the 99 remaining participants was used for analysis.

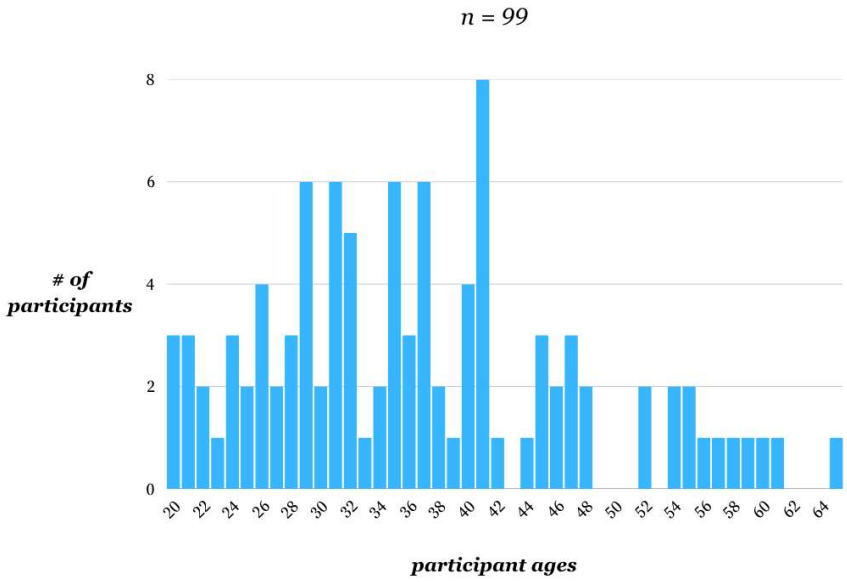

Figure 1. Summary of participant ages in years.

Participant ages ranged from 20-65 years (see Fig. 1). Of the 99 participants, 59 participants reported as male, 39 reported as female, and 1 participant chose not to disclose their sex.[4] The race/ethnicity (categorized interchangeably within Cloud Research) breakdown for participants can be found in Table 1.

Race/Ethnicity	***n***	**%**
Asian Indian	1	1.01
Black or African American	16	16.16
Chinese	6	6.06

[4] It is important to note here that Cloud Research only provides demographic information of this nature using the label of *sex* without including a *gender* category. Particularly within sociolinguistics research, gender (the collection of social roles performed by an individual based on socially-determined internal and/or external gender assignment) is often a crucial factor in speech perception. Gender variation is robust just as language variation is. Thus, the effects of speaker and listener gender, including those identities outside of the Western normative binary, on language perception are an important consideration in sociolinguistic scholarship (Bedin et al. 2024). Given the constraints of the participant recruitment platform used in the current study, future research may benefit from investigating whether perceptual differences exist between more fine-grained, socially-constructed gender identities.

Filipino	5	5.05
Korean	1	1.01
Vietnamese	1	1.01
White	63	63.64
An ethnicity not listed here	4	4.04
Other	1	1.01
Prefer not to say	1	1.01

Table 1: Participant race/ethnicity.

Speakers of all American English subvarieties (broadly defined, deliberately unspecified in the survey) were included in the study. Participants were asked in the Qualtrics survey whether American English is their first language. Participants were given the option to state whether they spoke another first language in addition to English. Participants were then asked to state their familiarity with the five primary Romance languages to ensure no familiarity with Italian or Romanian that might affect perceptions based on an understanding of the audios' contents (see Fig. 2 & Fig. 3).

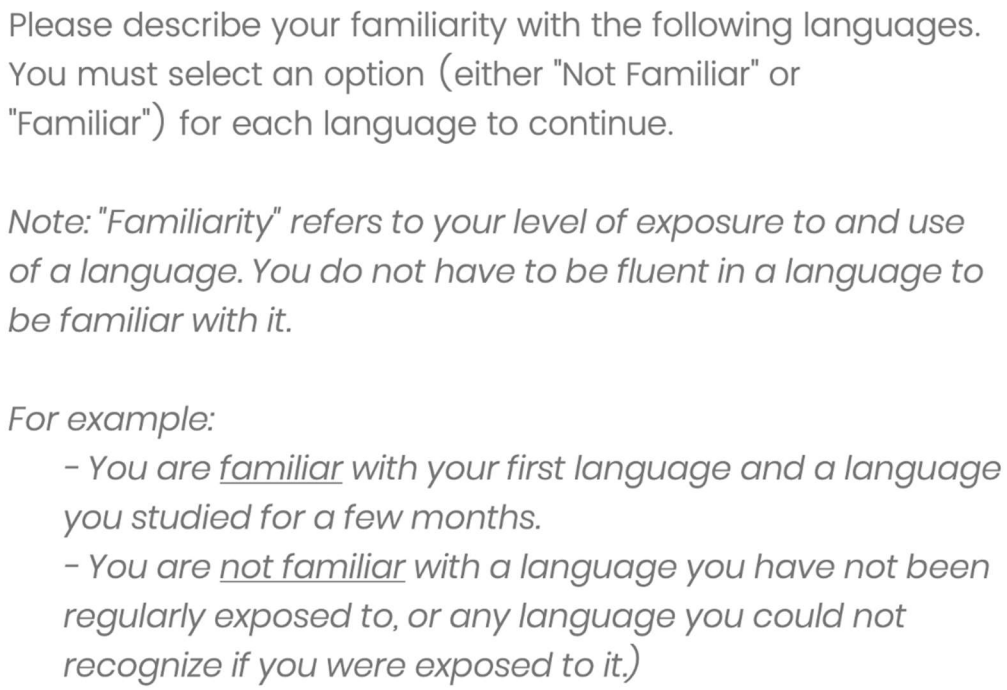

Figure 2. *Language familiarity* as described to participants in the survey

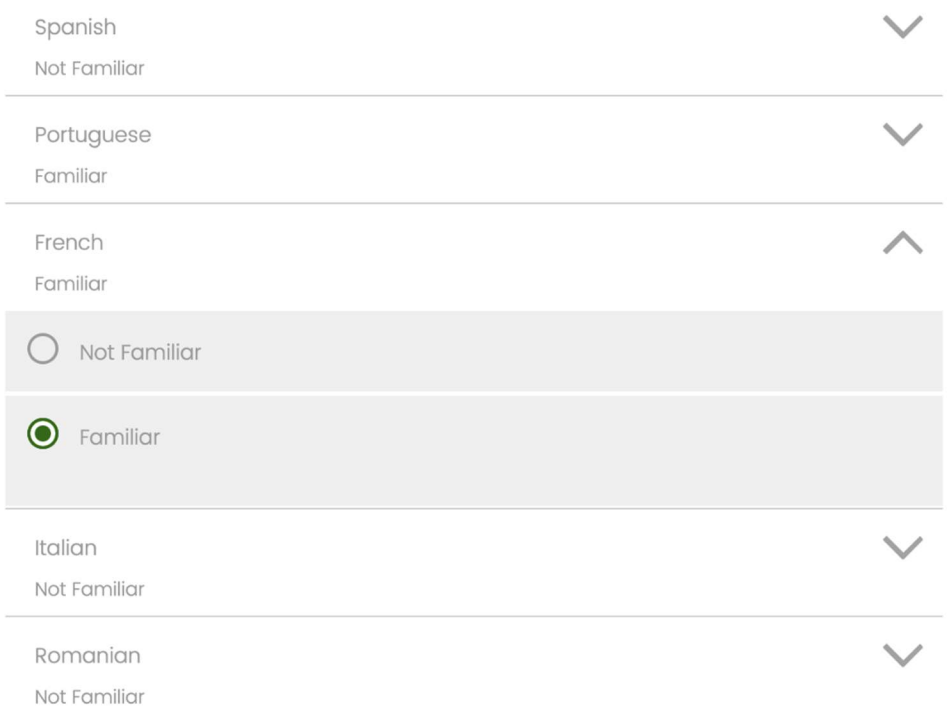

Figure 3. Language familiarity reporting

After confirming their consent to participate in the study, participants were randomly assigned through Qualtrics to one of four participant groups: 1. listening to Italian and the language in the audios is identified beforehand as Italian (**Italian-Labeled**), n=25; 2. listening to Italian and the language in the audios is not identified (**Italian-Unlabeled**), n=25; 3. listening to Romanian and the language is identified beforehand as Romanian (**Romanian-Labeled**), n=25; 4. listening to Romanian and the language in the audios is not identified (**Romanian-Unlabeled**), n=24.

All data and information were stored on a password-protected computer, Cloud Research account, and Qualtrics account through the University of Oregon to which only the research team had access. Participants were only identifiable by codes that cannot be linked to their names or any other personal, identifying information. Human subject data collection occurred after approval from the University of Oregon's Institutional Review Board.

Experiment

Audio Stimuli

Audio excerpts were sourced from a large spoken language corpus used in Anikin et al. 2023. The researchers of that study cleaned and categorized audios of the same film dubbed in various languages. This was done to obtain audios in a large variety of languages, contexts, and speakers while being able to minimize confounding variables of potential perceptual differences based on differences in content, which may still be present despite a lack of familiarity with the target language.

Each participant heard only one language, either Italian or Romanian. Each language had seven audios of similar length (~8-15 seconds per audio). Each audio corresponded to an audio of the same section of dialogue in the other language. In both languages, Audios 1 & 2 are produced by female speakers while Audios 3-7 are produced by male speakers.

It should be noted that no specific variety of either language was isolated for when selecting the audios. Non-speakers of a given language have been shown to be unreliable when distinguishing accents in that unfamiliar language (Georgiou 2024), so any potential effect of language variety differences on auditory perception is unlikely to significantly affect results.

For copies of the audios used in the survey, see the attached materials.

Audio Perceptions Survey

The survey was created through Qualtrics. Before starting the actual task, all participants tested their audio during a brief task orientation. Avar from the Nakh-Daghestanian family in northern Caucasus was chosen as the task orientation language since it is a language rarely recognized by English speakers (Anikin et al. 2023) to avoid any unintentional perceptual effects. It was ensured that the movie excerpt chosen for Avar did not overlap with one of the excerpts used in the Italian and Romanian stimuli to mitigate any potential extraneous perception effects. Participants were not informed of the task orientation audio's language.

After confirming their audio was working properly, participants began the task. Participation was estimated to last 15-30 minutes, though completion times ranged from 5-30 minutes with most averaging around 10 minutes.

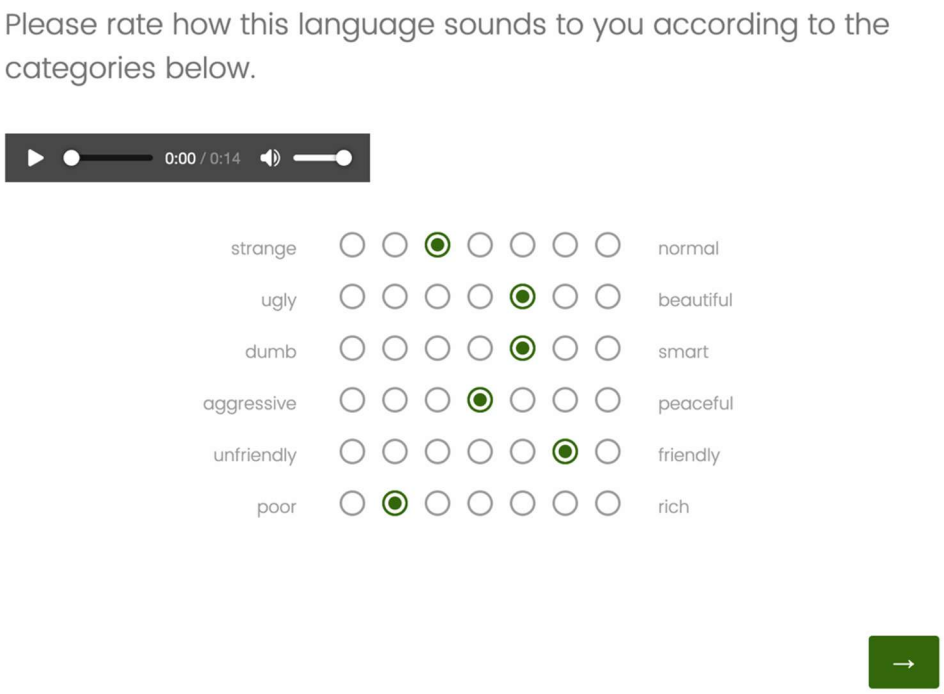

Figure 3. Semantic differential scale measuring language perceptions and attitudes

Participants rated each audio on a 7-point *semantic differential scale* (see Al-Hindawe 1996) as shown in Figure 3. The adjectives used were adapted from Schüppert et al. 2015 and Mooshamer et al. 2024 and aimed to measure various sociolinguistic attitude categories such as beauty, status, and solidarity. A 7-point scale was chosen based on the Mooshamer et al. 2024 paper (as opposed to a 5-point scale, as used in Schüppert et al. 2015) to allow participants to respond neutrally (see Stoklasa et al. 2019 for more considerations when constructing semantic differential scale construction considerations). Negative adjectives aligned with the left side of the scale while positive adjectives aligned with the right side. This structure was kept consistent throughout all perception questions to minimize confusion during the task.

For a copy of the full survey as it was presented to participants, see the attached materials.

Guessing the Unfamiliar Language

Following previous unfamiliar language perception studies (e.g. Schüppert et al. 2015), participants in the unlabeled conditions were instructed to guess the language they thought they heard after listening to all 7 audios in a free response structure. They were not forced to name a specific language and were explicitly told that *I don't know* is a valid response. The question was intentionally phrased to be somewhat vague about whether there were multiple languages in the audios; if participants thought they heard more than one language, that may have implications for AE speakers' unfamiliar language discernment abilities and perceptions given correct or incorrect guesses. Though not a primary focus of this study, this information will be included in results reporting.

Results

Survey response data was exported from Qualtrics into Excel and processed in R Studio. Response means were aggregated and then compared through one-way Analysis of Variance (ANOVA) and Tukey HSD tests ($p < 0.05$) to identify any statistically significant differences between means across the four participant groups and within individual languages.

Italian

Italian-Unlabeled

	Audio 1	*Audio 2*	*Audio 3*	*Audio 4*	*Audio 5*	*Audio 6*	*Audio 7*	***Overall***
strange—normal	5.33	5.13	4.13	4.54	4.79	4.83	4.96	**4.82**
ugly/beautiful	6.46	6.21	4.96	4.58	5.33	4.71	4.71	**5.28**
dumb—smart	5.54	5.50	4.38	4.92	5.25	4.71	5.25	**5.08**
aggressive—peaceful	6.13	6.08	3.96	3.38	4.96	4.96	4.42	**4.84**
unfriendly—friendly	6.00	6.21	4.08	3.79	5.04	4.88	4.67	**4.95**
poor—rich	5.46	5.50	4.58	4.63	5.29	4.67	5.08	**4.03**
Overall	**5.82**	**5.77**	**4.35**	**4.31**	**5.11**	**4.79**	**4.85**	

Table 2: Mean ratings for Italian-Unlabeled condition

All shown values have been rounded to two decimal points. Calculations were not rounded. Rating scale: e.g. 1=strange, 4=neutral, 7=normal

The average rating for the Italian-Unlabeled condition across all audios and semantic scales was 5.00 (see Table 2). Within this participant group, no statistically significant difference was found between the means across adjective categorizations. This aligns with expectations, suggesting that participants in this group perceived unlabeled Italian comparatively without

confounding individual audio effects (e.g. preference for one individual voice, preference for male voices over female, etc.).

For the unlabeled condition, the breakdown for guesses of which language was heard can be found in Table 3.

Language Guess	**n =**
French	3
Spanish	9
Italian	13
Portuguese	3
"I don't know"	2

Table 3: Romanian-Unlabeled language guesses

Free response question. Participants could guess multiple languages.

Some participants guessed multiple languages. It was unclear in most responses whether they perceived multiple languages in the audios or if they perceived only one language but were unsure of their guess and therefore guessed multiple.

Italian-Labeled

	Audio 1	*Audio 2*	*Audio 3*	*Audio 4*	*Audio 5*	*Audio 6*	*Audio 7*	***Overall***
strange—normal	4.80	4.84	4.12	3.80	4.72	4.00	4.48	**4.39**
ugly/beautiful	5.80	5.88	4.24	4.24	4.88	5.08	4.36	**4.93**
dumb—smart	5.08	5.12	4.36	4.68	4.96	4.76	4.84	**4.83**

aggressive—peaceful	5.64	5.76	3.04	3.28	4.24	5.16	4.12	**4.46**
unfriendly—friendly	5.72	5.72	3.60	3.76	4.52	4.96	4.44	**4.67**
poor—rich	5.08	5.20	4.68	4.40	4.76	4.36	4.76	**4.75**
Overall	**5.35**	**5.42**	**4.01**	**4.03**	**4.68**	**4.72**	**4.50**	

Table 4: Mean ratings for Italian-Labeled condition

All shown values have been rounded to two decimal points. Calculations were not rounded. Rating scale: e.g. 1=strange, 4=neutral, 7=normal

The average rating for the Italian-Labeled condition across all audios and semantic scales was 4.67. A statistically significant difference was also not found between the means across semantic for this participant group (p = 0.657), aligning with the other Italian condition.

The mean ratings score for both Italian conditions together was 4.84.

Romanian

Romanian-Unlabeled

	Audio 1	*Audio 2*	*Audio 3*	*Audio 4*	*Audio 5*	*Audio 6*	*Audio 7*	*Overall*
strange—normal	4.57	4.85	3.24	3.29	4.19	4.24	3.55	**3.99**
ugly/beautiful	5.62	6.00	3.14	3.24	4.05	4.52	3.64	**3.12**
dumb—smart	4.81	5.10	3.67	4.10	4.33	4.81	4.00	**4.40**
aggressive—peaceful	5.76	5.76	2.33	3.29	4.52	4.14	2.86	**4.09**
unfriendly—friendly	5.71	5.76	2.52	3.38	4.19	4.48	3.14	**4.17**
poor—rich	4.95	5.24	3.62	3.67	3.71	4.48	3.82	**4.21**
Overall	**5.24**	**5.45**	**3.09**	**3.50**	**4.17**	**4.45**	**3.50**	

Table 5: Mean ratings for Romanian-Unlabeled condition

All shown values have been rounded to two decimal points. Calculations were not rounded. Rating scale: e.g. 1=strange, 4=neutral, 7=normal

The average rating for the Romanian-Unlabeled condition across all audios and semantic scales was 4.20. A statistically significant difference was also not found between the means across semantic for this participant group ($p = 0.976$), aligning with prior conditions.

When participants guessed the unlabeled language, Romanian was not mentioned in the Italian condition, but Italian was guessed rather frequently in the Romanian condition. See Table 6 for the full breakdown of language guesses.

Language Guess	**n =**
Romanian	1
Arabic	1
French	8
“Eastern European language”	1
Italian	9
Portuguese	2
Spanish	3
Russian	1
“Islamic”	1
“I don’t know”	5

Table 6: Romanian-Unlabeled language guesses

Free response question. Participants could guess multiple languages at once.

Romanian-Labeled

	Audio 1	*Audio 2*	*Audio 3*	*Audio 4*	*Audio 5*	*Audio 6*	*Audio 7*	*Overall*
strange—normal	4.63	4.67	3.33	4.13	4.21	4.54	4.63	**4.31**
ugly/beautiful	5.33	5.67	3.46	4.04	4.21	4.63	3.46	**4.40**
dumb—smart	4.75	4.92	4.08	4.75	4.58	4.96	4.08	**4.59**
aggressive—peaceful	5.71	5.33	2.92	4.50	4.21	4.67	2.88	**4.32**
unfriendly—friendly	5.50	5.42	3.08	4.46	4.29	4.58	3.08	**4.34**
poor—rich	4.67	4.92	3.50	4.17	3.92	4.63	4.00	**4.26**
Overall	**5.10**	**5.20**	**3.40**	**4.34**	**4.24**	**4.67**	**4.69**	

Table 7: Mean ratings for Romanian-Labeled condition

All shown values have been rounded to two decimal points. Calculations were not rounded. Rating scale: e.g. 1=strange, 4=neutral, 7=normal

The average rating for the Romanian-Unlabeled condition across all audios and semantic scales was 4.37. A statistically significant difference was also not found between the means across semantic for this participant group ($p = 0.973$), aligning with all prior conditions.

The mean ratings score for both Italian conditions together was 4.28.

Comparison Between Conditions

A statistically significant difference was found between the average ratings for the Italian-Unlabeled & Romanian-Unlabeled ($p = 0.0000162$), Italian-Unlabeled & Romanian-Labeled ($p = 0.00108$), and Italian-Labeled & Romanian-Unlabeled ($p = 0.0234$) conditions. There was no statistically significant difference found between the other condition pairs.

Limitations

As with most cross-linguistic research and research using full sentences in audio excerpts, there may be suprasegmental features and other linguistic variables influencing perception, such as individual preferences towards specific voices rather than the language itself. (see Reiterer et al. 2020). Future research may benefit from using a matched guise study (Lambert et al. 1960) wherein a single speaker provides audio stimuli in different *guises* (i.e. language varieties). Future researchers therefore have the task of recruiting potentially multiple speakers equally familiar with speaking in both Italian and Romanian and creating scripts which contain the same content across both languages.

This study also chose to use a bipolar semantic differential scale for explicit attitude reporting instead of a Likert scale. The literature is divided on which scale is better to use with this methodology since participants, especially those from different cultures, may respond differently to attitude questions (Stoklasa et al. 2019). Both methods are used commonly in this area of study. In future research, it may be enlightening to address the same research question through use of Likert scales to see how responses differ, if at all. Since all participants originate from the same culture (though this is a very broad generalization and there are undeniably numerous subcultures within the United States which may or may not significantly differ in response behavior), we may expect the potential negative effects of this choice to be minimal in the current study.

The Qualtrics survey platform did not provide a means to ensure that participants listen to the audio before answering the questions, so it is possible that participants may have been able to complete the survey without listening to the audio excerpts. Based on participant responses,

particularly within the final survey question which asks for any feedback on the study participation experience, this is unlikely, but it is a potential consideration.

There may also be some unintentional priming of Romance languages given the restrictions of the Cloud Research participant recruitment platform. Determining eligibility explicitly within the survey may have primed participants to expect the sound of a Romance language and their expectations may have been confirmed or denied when they heard the actual language in the study. However, AE speakers could not reliably identify either language (especially Romanian, which was not always identified as a Romance language, much less as Romanian itself) despite this potential priming effect, so its impact on the study results is likely minimal.

There was occasionally background music or environmental sound effects (e.g. a bustling crowd, akin to cocktail party babble), which may have impacted perception of the language (Rubin 1992). However, the background music and noise were the same for each corresponding audio across both languages, so the effect should be the same across all groups.

It may also be a stretch to generalize these findings to all AE speakers, especially given the somewhat limited participant count and their demographics. However, this study achieves its aim to open the discussion about language attitudes and ideologies to encourage AE speakers, in all their diverse experiences and backgrounds, to critically reflect on their attitudes towards and treatment of other languages.

There may naturally also be some confounding effects given that data collection took place asynchronously rather than in a controlled lab environment. There may be perceptual differences based on individual test-taking factors outside of a lab, such as inconsistencies in the

test-taking environment or the sound system used for the audio clips, regardless of instructions included in the survey wording which attempt to mitigate differences.

Future studies on unfamiliar language attitudes would benefit from identifying methods to obtain more implicit attitude data as opposed to explicit attitudes as shown in this study, especially if there is a significant difference between explicit and implicit attitudes.

Lastly, future research should also investigate this potential phenomenon in non-WEIRD (Western, Educated, Industrialized, Rich, Democratic) and non-WISPy (Written, Institutionally supported, Standardized, Prestige) populations, who are currently overrepresented in this field of research, for both the language producer and language perceiver roles (Sedarous & Namboodiripad 2020).

Discussion

This study investigated American English speaker attitudes towards unfamiliar languages—in this case, Italian or Romanian.

The first hypothesis was that AE speakers would perceive either individual language differently depending on whether they were informed of the language beforehand. The data collected in this study did not support this hypothesis since both the Italian-Unlabeled & Italian-Labeled as well as the Romanian-Unlabeled & Romanian-Labeled pairs were rated similarly (i.e. not at a statistically significant difference) to each other. The language label is therefore determined to not significantly affect unfamiliar language perceptions.

The second hypothesis was that AE speakers would perceive Italian and Romanian differently, with Romanian being rated close to neutral and Italian being rated at greater extremes. This hypothesis was supported since unlabeled Italian was rated much more positively than Romanian in both Romanian conditions. Additionally, labeled Italian was rated more positively than unlabeled Romanian. With a perception score of 4.00 being neutral, the mean Romanian scores were not significantly different from a neutral score, while unlabeled Italian was labeled significantly more positively than a neutral score at 5.00. This suggests that exposure to Italian nationally through proximity to a relatively large number of speakers or other avenues may mean that Italian is subconsciously more familiar and therefore preferred, even in the absence of correct language identification. Labeled Italian scoring closer to neutral may be a result of the Observer's Paradox, where participants potentially adjusted their responses to reduce signs of their linguistic biases once they suspected the study would analyze their language ideologies.

These findings suggest that language ideologies and unfamiliar language exposure may influence language perception, though not in all cases. This encourages further research into the social variables which influence perception of unfamiliar languages. Future studies with larger participant sample sizes and a greater focus on specific variables, such as individual proximity to speakers of the language (geographic or social) or media exposure (e.g. how often they listen to songs or watch movies in the language), as well as studies investigating different language families will further illuminate this burgeoning area of sociolinguistic research.

Regardless, it is clear that attitudes towards unfamiliar languages are not uniform across all languages. It is likely that both linguistic and nonlinguistic factors contribute to unfamiliar language perception.

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