

Foreign advantage, regional stigma:

A multivariate analysis of foreign and regional accent evaluations in job candidate assessment

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Abstract

While numerous studies have demonstrated the presence of accent bias in hiring contexts, the mechanisms underlying different types of accent bias – such as bias against foreign versus regional accents – remain underexplored. This study investigated how accent type (foreign vs. regional) and accent strength (slight vs. strong) jointly influence social evaluations of job candidates. A multivariate 2 (accent type: foreign vs. regional) \times 2 (degree of accentedness: slight vs. strong) between-subjects verbal guise experiment was conducted with Dutch participants (N = 358). Participants rated audio recordings of job applicants speaking with slight or strong foreign (i.e., French or German) or regional (i.e., Limburgish or Twents) accents, or with a Standard Dutch accent (control condition), on a range of social dimensions: processing fluency, inferred motive, social categorization, attitudinal evaluations (competence, status, likeability, and dynamism), and hirability. Results revealed that strongly regionally accented speakers were consistently evaluated less favorably than strongly foreign-accented speakers across multiple dimensions – including the perceived intention to communicate clearly, dynamism, competence, status, likeability, and hirability. Surprisingly, foreign-accented speakers were rated as positively as standard-accented speakers. These findings highlight the importance of examining both accent type and strength and underscore the need for a multivariate approach to capture the complex interplay of factors shaping listeners' judgements. This study revealed a persistent bias against regional accents, suggesting they may carry a unique social stigma not shared by certain foreign accents. This underscores the complexity of accent-based bias and calls for a more nuanced account of how linguistic variation shapes social judgments.

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1. Introduction

While everybody speaks with an accent, research has consistently highlighted a positive bias toward standard-accented speakers, reinforcing a linguistic hierarchy that prioritizes standard accents (Montgomery & Acheme, 2022). An accent reflects variation in pronunciation within a language (Alford & Strother, 1990; Bent et al., 2016; Fuertes et al., 2012; Mai & Hoffmann, 2014; Spence et al., 2024) with grammatical, syntactical, morphological, and lexical aspects corresponding with the standard variety (Giles, 1970). A standard language variety adheres to codified norms prescribing correct spoken and written language, while nonstandard varieties deviate from these norms (Dragojevic, 2018). Nonstandard accents arise from regional variations (e.g., Limburgish in the Netherlands), ethnicity (e.g., African American Vernacular English), or language acquisition (e.g., nonnative or foreign accents). Even though an accent is by definition no indication of the competence of its speaker – since an accent is only an indication of pronunciation (Alford & Strother, 1990; Fuertes et al., 2012) – nonstandard-accented speakers often receive lower evaluations in comparison to standard-accented speakers (Dragojevic et al., 2016; Dragojevic et al., 2024; Kang & Yaw, 2024; McKenzie & Carrie, 2018; Nejari et al., 2012; Roessel et al., 2018). This process is called linguistic discrimination (Drożdżowicz & Peled, 2024).

Researchers have studied the discriminatory effects of nonstandard accents in several contexts, including media (Dragojevic et al., 2016), politics (Foucart et al., 2020), commercials (Hendriks et al., 2019; Hendriks & Van Meurs, 2022a), job applications (Hosoda et al., 2012; O'Brien et al., 2024; Schulte et al., 2024; Spence et al., 2024), law (Levon et al., 2021; Levon et al., 2022), education (Baratta & Halenko, 2022), business (Mai & Hoffmann, 2014; Roessel et al., 2020), and everyday life (Fuertes et al., 2012; Gluszek & Dovidio, 2010). In job hiring contexts, speaking with a nonstandard accent could lead to less hiring recommendations and thus less job prospects (Fuertes et al., 2012; Spence et al., 2024). Even though accent-based discrimination is observed in society, it is often overlooked compared to racial and gender discrimination (Hansen et al., 2014; Spence et al., 2024). Therefore, it is crucial to discover the underlying mechanisms of accent bias. More research should focus on this 'why' of accent discrimination (Foucart, 2020; Gluszek & Dovidio, 2010; Mai & Hoffmann, 2014; Roessel et al., 2019; Shah, 2019).

Furthermore, research has mainly compared nonstandard accents to the standard accent, leaving possible differences between evaluations of nonstandard accents understudied (but see Bent et al., 2016; Fuse et al., 2024; Goslin et al., 2012; Spence et al., 2024). Regional and foreign accents may elicit different biases, as regional accents are typically associated with native identity (Gluszek & Dovidio, 2010; Roessel et al., 2019), whereas foreign accents can signal out-group membership (Gluszek & Dovidio, 2010) and language proficiency concerns (Dragojevic & Giles, 2016). Discovering differences in evaluations of these two commonly researched nonstandard accent types (Spence et al., 2024) provides a more detailed understanding of the mechanisms underlying accent bias. Therefore, this study aimed to provide insights into these underlying mechanisms by investigating the differences in evaluations of foreign-accented and regionally accented speakers in the Netherlands.

1.1 Accentedness

When people talk, their accent provides a wealth of information about the speaker, even when visual cues are not available (Hansen et al., 2017). Listeners may infer a speaker's gender, age, or region of origin, including whether they are a native or foreign speaker of the language (Bent et al., 2016). Children already as young as four to six years categorize people into two groups: those that speak like them and those that do not (Imuta & Spence, 2020), demonstrating early awareness of regional and foreign variation. In a meta-analysis of the role of linguistic cues in driving children's social preferences, results indicate that children prefer

native-like speakers over nonnative-like ones (Spence et al., 2021). Foreign accents were believed to be more contrasting to the own speech than regional accents (Spence et al., 2021), showing the salience of a foreign accent. This holds for adult listeners as well (Bent et al., 2016). In a classification study of foreign and regional English accents, listeners differentiated between foreign and native accents, clustering native (including regional) accents together, and foreign accents (Bent et al., 2016), hereby showing a sensitivity to foreign accents (Bent et al., 2016). The classification of languages could be used to predict language intelligibility when communicating with a foreign-accented speaker; the closer the first language is classified in relation to the second (and target) language, the better the intelligibility will be (Bradlow et al., 2010). Foreign accents are said to originate from the contact of two languages in the mind of the speaker (Bent et al., 2016), where the first language influences pronunciation in the second language. Regional accents stem from the contact of the regional language variety and the standard variety (Bent et al., 2016). Thus, differences between regional accents arise within a single language and regional accents are more similar to one another than to foreign accents (Bent et al., 2016). This shows that foreign accents and regional accents lead to different types of variation in pronunciation (Bent et al., 2016), which again provides evidence for the salience of foreign accents.

While much research highlights the salience of foreign accents, regional accents can also serve as important social cues. Alford and Strother (1990) have shown that listeners (both native and foreign) can reliably differentiate between regional accents, suggesting that regional accents, too, are perceptually salient. A more recent study investigated in-group bias toward regionally accented speakers (Welsh and Southeast English) where speakers of the Welsh language showed both an implicit and explicit positive bias toward Welsh-accented speakers, demonstrating own-accent bias (Bestelmeyer, 2024). This study highlights regional accents as a salient cue for group membership. All in all, both foreign and regional accents carry social significance, but in different ways. Foreign accents are salient in terms of variation in pronunciation (Bent et al., 2016), whereas regional accents serve as important cues for in-group identification (Bestelmeyer, 2024).

For both regional and foreign accents, accent strength is a salient cue for listeners' perceptions of speaker characteristics. Speakers with a stronger accent receive lower attitudinal evaluations than speakers with a slight accent, the latter often not even significantly different from the standard accent (Deprez-Sims & Morris, 2013; Fuse et al., 2024; Grondelaers et al., 2019; Hendriks et al., 2019; Hendriks et al., 2023; Nejjari et al., 2012; Roessel et al., 2019). Accentedness or accent strength refers to the listener's perception of the degree of distinctiveness of a person's accent compared to the standard variety (Munro & Derwing, 1995). Fuse et al. (2024) found that a stronger accent was more acceptable for the regional Southern American accent than for the nonnative Russian accent, and Grondelaers et al. (2019) showed how regional accent strength reduced an asymmetry between the low-prestige Limburg accent and the high-prestige Randstad accent in the Netherlands. Mild versions of the Limburg accent were evaluated more positively on superiority and dynamism while the broad Randstad accent was evaluated more negatively on superiority but not on dynamism (Grondelaers et al., 2019), demonstrating the influence of accent strength on evaluations. In another study, regional accent strength had no effect on listener evaluations even though the variation in accent strength was recognized (Hendriks et al., 2019). For foreign accents, a stronger accent almost always correlates with lower evaluations, Deprez-Sims and Morris (2013) found that this was due to understandability. Hendriks et al. (2023) concluded that moderately foreign-accented speakers were evaluated more negatively than speakers with a slight (i.e., native-like) accent, but this depended on the listener. Dutch listeners were harsher on speakers with a moderate Dutch accent in their English than international and native English listeners, suggesting that listeners are more critical about

speakers they share a first language with (Hendriks et al., 2023). The downgrading of a foreign-accented speaker therefore is quite salient. For instance, Roessel et al. (2019) revealed with their study that job candidates with a strong foreign accent were rated low in hirability, no matter what they said, and Nejjari et al. (2012) showed how stronger the foreign accent, the lower the affect and intelligibility ratings. Foreign-accented speakers only receive higher ratings in a strong compared to a slight accent on solidarity and warmth as a stronger foreign accent is perceived as less competitive and threatening by native speakers (Birney et al., 2020). This study indicates that listeners rely heavily on accent strength to form interpersonal perceptions.

In conclusion, accent strength is an important factor in speaker evaluations of both foreign and regional accents. While stronger foreign accents consistently lead to lower evaluations (Roessel et al., 2019), the effect of regional accent strength appears to be more dependent on context (Grondelaers et al., 2019). This highlights the importance of taking accent strength into account when investigating listener-based speaker evaluations.

1.2 Processing fluency

Evaluations of nonstandard speech may stem from various psychological processes. One explanation for accent bias stems from the *processing fluency principle* – the ease with which the listener can process information during interactions (Dragojevic & Giles, 2016; Montgomery & Acheme, 2022; Spence et al., 2024). Processing fluency can influence language attitudes through naïve theories – reflecting people’s assumptions about what makes it easy or difficult to process information – and indirectly through affect, when easier processing elicits a more positive affective reaction that promotes more positive status and solidarity evaluations (Dragojevic & Giles, 2016; Montgomery & Acheme, 2022). These influences are not mutually exclusive, but reduced comprehension can result from both negative attitudes and objective processing difficulties (Dragojevic, 2018). Processing fluency is measured via both this objective comprehensibility (i.e., intelligibility), meaning how much people can actually understand someone’s speech, and subjective comprehensibility, i.e., how easy it feels to understand someone, or the perceived comprehensibility (Gluszek & Dovidio, 2010; Spence et al., 2024). It is mainly the perceived comprehensibility that poses difficulties in communication for nonstandard accented speakers (Gluszek & Dovidio, 2010).

Listeners often justify their negative attitudes toward – predominantly – nonnative speakers based on the argument that their speech is difficult to process (Dragojevic, 2018). Several studies have found evidence for lower evaluations of foreign speech that is perceived to be harder to process (e.g., Dragojevic & Giles, 2016; Dragojevic, 2020; Montgomery & Acheme, 2022; Yi et al., 2014). Other studies found comprehension to be a mediating factor for lower evaluations. For instance, Hendriks et al. (2023) showed that comprehensibility mediated the effect of accent strength on teaching quality, a finding that is in line with Dragojevic et al. (2017) who found a stronger accent leading to less comprehension and in turn, lower status perceptions. Similarly, Hendriks and Van Meurs (2022b) did not find a direct effect of comprehension on using the nonnative compared to the native language in an education setting. Instead, comprehension mediated the evaluations of teachers, suggesting that the effectiveness of a nonnative language as means of education “may be a matter of perceptions rather than actual comprehension issues” (Hendriks & Van Meurs, 2022b, p. 8). Research on hiring recommendations also showed contradicting findings for the influence of comprehension. In one study, Deprez-Sims and Morris (2013) found that negative perceptions of comprehensibility led to less hiring recommendations, but in an earlier study, they found no such effect (Deprez-Sims & Morris, 2010). A meta-study on accent bias in hiring decisions found no effect for comprehension as moderator of hiring bias, providing evidence against the processing fluency principle (Spence et al., 2024).

Studies on the actual intelligibility of nonstandard accents have shown foreign-accented – or nonnative – speech to be more difficult to process than regionally accented speech (Goslin et al., 2012; Tamati et al., 2021). Yet, the processing fluency principle can also hold for regionally accented speech. Dragojevic et al. (2024) found that attitudinal variation toward different British accents was associated with listeners' perceived processing difficulty, and Bestelmeyer (2024) proposed that regional accents unfamiliar to the listener could also be more difficult to process. However, according to Gluszek and Dovidio (2010), native accents (like regional accents) are less likely to interfere with the process of perceived and actual comprehension. This was confirmed by Hendriks et al. (2019), who found that regional accent strength did not decrease comprehension.

So, the processing fluency principle plays an important part in the explanation of accent bias since listeners tend to evaluate speech more negatively when it is perceived as being more difficult to process (Dragojevic & Giles, 2016; Dragojevic, 2020; Dragojevic et al., 2024; Montgomery & Acheme, 2022; Yi et al., 2014). While intelligibility difficulties may exist between regionally and foreign-accented speech (Goslin et al., 2012), the perceived comprehensibility is the predominant reason for bias, especially for foreign compared to regional accents. Despite findings indicating that processing fluency can indeed influence negative attitudes toward regionally accented speakers (Bestelmeyer, 2024), processing fluency remains a more convincing explanation for foreign accent bias than for regional accent bias.

1.3 Social categorization

Apart from processing fluency, evaluations of nonstandard speech may be based on social categorization and stereotypes, which is explained in the *prejudice perspective* (Dragojevic, 2018; Spence et al., 2024). Nonstandard accents signal 'otherness', which in turn will lead to lower evaluations of its speaker (Hansen et al., 2014; Jiang et al., 2018; Roessel et al., 2020). These lower evaluations are not a response to differences between certain varieties, but rather reflect social perceptions of the speakers that use that linguistic variety (Dragojevic et al., 2016). Accents can reveal a person's cultural and geographical background, often creating social divisions (Imuta & Spence, 2020). Accent is thus a salient cue to group membership and indicates that language attitudes are learned (Dragojevic et al., 2016; Dragojevic, 2018; Gluszek & Dovidio, 2010).

A recent meta-analysis concluded that its findings were more complicit with the prejudice perspective than the processing fluency principle (Spence et al., 2024). Nonstandard accents seemed to work against job candidates when they already battled minority status, indicating that negative hiring recommendations are influenced by broader prejudices that appear when accents make salient someone's 'otherness' (Spence et al., 2024). This cue of 'otherness' is salient for both foreign as regional accents; Jiang et al. (2018) found in-group voices to be judged more positive than out-group (regional and foreign) voices, arguing that the implicit evaluations of out-group voices is associated with negative social repercussions.

Gluszek & Dovidio (2010) suggest that nonnative speakers form their own group distinct from native speakers (including regionally accented speakers), contributing to the feeling of 'otherness' associated with a nonnative or foreign accent. Foreign accents serve as a cue to trigger social categories, leading to discrimination (Lindemann, 2003; Lindemann, 2005; Deprez-Sims & Morris, 2010). In a study from 2013, Deprez-Sims and Morris found that speakers that were perceived as more similar to the listener, received more positive hiring recommendations, due to in-group bias. Speakers who were considered less like the listener, i.e., nonnative speakers, were grouped into the out-group due to their lack of similarity and thus received lower hiring recommendations (Deprez-Sims & Morris, 2013). Nonnative speakers furthermore received more negative hiring recommendations when they scored low

on understandability. The authors conclude that lower understandability resulted in lower perceived similarity – which formed the basis for out-group classifications – and therefore to lower hiring recommendations (Deprez-Sims & Morris, 2013). Weyant (2007) found evidence for a reduction of prejudice against foreign-accented speakers when participants were asked to take the perspective of the speaker. Weyant (2019) explained this bias reduction, stating that the foreign-accented speaker was immediately placed in the out-group, which resulted in negative bias toward this speaker, but this effect was reduced when respondents were asked to take the perspective of the speaker. These findings demonstrate that foreign-accented speakers are immediately categorized as belonging to the out-group and receive out-group bias, which has a negative influence on speaker evaluations.

Regional accents are unlikely to be perceived as ‘foreign’ or ‘other’, according to Gluszek and Dovidio (2010) and Roessel et al. (2019), since own accents are more likely to trigger positive warmth associations (Roessel et al., 2019). For instance, Bestelmeyer (2024) showed in-group bias for regional accents, even when measured implicitly, as did Mauchand and Pell (2022) in their study on intergroup relations in Montreal. They found a positive bias toward in-group members, i.e., French listeners had an implicit preference for French speakers compared to Québécois (French Canadian) speakers and Québécois listeners did not show any preference for either group, possibly due to Québécois people being more familiar with the French accent than French people are with the Québécois accent (Mauchand & Pell, 2022). These results extend the in-group bias to regional accents.

In a study on the use of regional accents in a job application for a law firm, negative regional evaluation differences were linked to treatments of perceived in- or out-group (Levon et al., 2021). Older participants and participants from the south of the United Kingdom were less positive toward speakers with a working-class accent than toward speakers with a standard (Received Pronunciation and Northern) accent, possibly due to the listeners perceiving working-class accents as belonging to the out-group, and therefore rating those accents more negatively (Levon et al., 2021). This effect could also be due to exposure to different accents (Levon et al., 2021) which is investigated in a later study. In that study, Levon et al. (2022) showed that early broad categorization is based on recognition of the accent and is constantly updated. Yet for Multicultural London English (MLE), updating is delayed so when a negative stereotype is already in place, it is difficult to change (Levon et al., 2022). Thus, regional accents can trigger bias based on prejudice.

Whereas foreign accents are predominantly associated with out-group bias (Lindemann, 2003; Lindemann, 2005; Deprez-Sims & Morris, 2010), regional accents can elicit both in-group and out-group biases (Bestelmeyer, 2024; Levon et al., 2021; Levon et al., 2022). Accent-based biases are thus rooted in social categorization and stereotypes. Investigating how foreign and regional accents shape social categorization and how accent strength plays a role in this process is crucial to understanding how these biases are formed.

1.4 Inferred motive

Another possible explanation for accent bias is *inferred motive*, which is related to Communication Accommodation Theory (CAT; Gasiorek & Giles, 2015; Giles et al., 1991; Giles et al., 2024). CAT provides a lens through which to understand how interactional behavior can provoke prejudice (Giles et al., 2024). It suggests that individuals modify their communication during social interactions to regulate social distance and express their attitudes toward others, aiming to promote positive personal and social identities (Dragojevic, 2018), as well as how others perceive those modifications (Gasiorek, 2015; Gasiorek & Giles, 2012; Gasiorek & Giles, 2015; Giles et al., 2024). CAT proposes that communication skills should be interpreted within their context, considering intergroup and interpersonal histories,

as well as the motivations, intentions, and responses to others' behavior (Gallois et al., 2018; Giles et al., 2024).

Accommodation is the constant movement of speakers and listeners toward and from each other, by changing their communicative behavior (Giles et al., 2006). From a speaker's point of view, accommodation during communication is via adjustments such as convergence and divergence (Giles et al., 1991), and from a listener's point of view, accommodation is defined by the perceived appropriateness of the adjustments made by the speaker (Gasiorek, 2015). When the adjustments are perceived as appropriate, these adjustments are called accommodative, whereas when they are not perceived as appropriate, they are called nonaccommodative (Gasiorek, 2015; Gasiorek & Giles, 2012; Gasiorek & Giles, 2015). Nonaccommodation can be realized as overaccommodation (i.e., the speaker surpasses what the listener considers appropriate adjustments) and underaccommodation (i.e., the speaker does not adjust their communication enough for the needs of the listener; Gasiorek, 2015; Gasiorek & Giles, 2015).

CAT is premised on the assumption that intergroup relations are maintained and mediated by communication (Gallois & Giles, 1998). As such, it regards the intentions and motives underlying speakers' choices and the interactants' perception, evaluation, and reaction to these choices, which brings us to the principle of inferred motive (Gasiorek & Giles, 2012). Inferred motive is "the motive that a recipient attributes to a speaker" (Gasiorek & Giles, 2012, p. 311). In other words, inferred motive is the content of perceived intentions, including their positive or negative tone, when actions are interpreted as deliberate (Gasiorek & Giles, 2015). Perceptions of negative inferred motive contribute to less positive evaluations than perceptions of positive motive, for identical spoken words (Gasiorek & Giles, 2012). Through two experiments, Gasiorek and Giles (2012) found that when people perceive nonaccommodative communication as intentional and driven by negative motives, they judge both the communication and the speaker more harshly than if the behavior is seen as unintentional or intentional but with positive motives.

Within the context of accent bias, language attitudes are influenced through both processing fluency and inferred motive. Research suggests that processing fluency influences listeners' perceptions of a nonnative speaker's cognitive traits, such as competence, effectiveness, and efficiency. Together, processing fluency and inferred motive affect evaluations of status and solidarity (Montgomery & Acheme, 2022). In interactions between nonnative and native German speakers, nonaccommodation is common, with nonnative speakers frequently feeling that they are not being accommodated – especially experiencing underaccommodation rather than overaccommodation (Petrou & Dragojevic, 2024). While foreign-accented speakers perceive this negatively, native speakers tend to attribute communication difficulties (such as under-informativeness or underaccommodation; Petrou & Dragojevic, 2020) to the nonnative speakers' inability rather than unwillingness. This tendency gives foreign-accented speech a processing advantage over regional speech, as demonstrated in a study comparing a Chinese-accented speaker to a speaker with a Boston accent (Fairchild et al., 2020).

In conclusion, inferred motive shapes language attitudes and accent bias, as it influences how listeners interpret communicative adjustments (Gasiorek, 2015; Gasiorek & Giles, 2012; Gasiorek & Giles, 2015, Giles et al., 2024). When speakers fail to accommodate appropriately, they receive harsher evaluations (Gasiorek & Giles, 2012). Interestingly, foreign-accented speech may elicit a more positive inferred motive than regionally accented speech, since communication difficulties are often attributed to inability rather than unwillingness (Fairchild et al., 2020). This indicates that inferred motive operates differently for foreign-accented and regionally accented speech, highlighting its significance in understanding accent bias across different linguistic backgrounds.

1.5 Attitudinal evaluations

Language attitudes are mostly investigated by evaluating speakers with accents on several *social dimensions* (Giles, 1970; Grondelaers et al., 2010). Since language attitudes are assessed through speaker evaluations, this implies that social meanings do not derive from differences in characteristics of accents but reflect social perceptions of the people who use those accents (Dragojevic et al., 2016; Grondelaers et al., 2019; Nejjari et al., 2012). Language-based attitudes are organized along two main evaluative dimensions: status (or competence) contains traits like the speaker's intelligence, education, and success; and solidarity (or warmth) holds traits such as the speaker's friendliness, pleasantness, and honesty (Dragojevic, 2018). The status dimension shows an association between high status and standard varieties, further reinforcing the acceptance of the belief that the standard variety is the 'best' form of language (Dragojevic et al., 2016; Dragojevic, 2018; Montgomery & Acheme, 2022). However, notions of inherent linguistic superiority are not based on linguistic fact (Dragojevic, 2018). Ratings of solidarity, in contrast, reflect in-group loyalty (Dragojevic, 2018). Furthermore, a third dimension is revealed by factor analysis on speaker evaluations in language attitude research: dynamism, which should be added in future studies to broaden the attitude-determining factors (Grondelaers et al., 2010; Grondelaers et al., 2019). Dynamism is associated with evaluations of modern, cool, hip, and assertive (Grondelaers et al., 2019).

Evaluations of accents presume there is some kind of hierarchy with certain accents being evaluated more positively on all dimensions than others (Baratta & Halenko, 2022; Giles, 1970). Yet, in a classification study with several different accents (foreign and regional), no strong hierarchy was found (Giles, 1970). Nevertheless, French and North American accents held positions of high prestige and were attributed higher status than any British regional accent (Giles, 1970). Although British regional accents would not complicate understanding, "regional accents might still be perceived negatively based on a presumed lack of prestige" (Baratta & Halenko, 2022, p. 2). A more recent study on accent classifications had North Americans classify different accents into groups (Standard American, foreign-Anglo i.e., non-American but Anglo, foreign-other i.e., all foreign non-Anglo accents, and native regional) and rate their appearance on American television (Dragojevic et al., 2016). The study showed similar findings to Giles (1970) since all groups scored equally on solidarity but not on status (Dragojevic et al., 2016). Standard American and other foreign-Anglo accents were rated most favorably on status, followed by regional American accents and other foreign accents (Dragojevic et al., 2016). Even though nonstandard varieties are consistently downgraded on status traits, they can possess covert prestige when nonstandard-accented speakers are positively evaluated on solidarity traits by members of their own linguistic community (Dragojevic, 2018; Gruffydd et al., 2025).

Attitudinal evaluations of both foreign-accented and regionally accented speakers show differences in evaluations. Foreign-accented speakers are downgraded on the status dimension – but this is dependent on the specific language (Giles, 1970) – and foreign-accented and regionally accented speakers are rated similarly on the solidarity dimension (Dragojevic et al., 2016; Giles, 1970). Understanding these differences in evaluations of foreign-accented compared to regionally accented speech will lead to a better understanding of the mechanisms behind different types of accent bias (e.g., against foreign or regional accents).

1.6 Nonstandard accents in employment

Although accent-based discrimination is an issue for all sorts of contexts, it has been found to occur predominantly in work environments (Fuertes et al., 2012, Gluszek & Dovidio, 2010; Munro & Derwing, 1995). Accent-based bias is reflected in perceptions of job suitability,

hirability, and the likeliness of being promoted (Deprez-Sims & Morris, 2013; Hansen et al., 2014; Roessel et al., 2020). Despite identical skills and competence, nonstandard-accented job candidates are downgraded solely on their pronunciation.

A verbal interview is one of the most common assessment methods in job hiring, which is why the way someone speaks plays a big part in determining hirability (Deprez-Sims & Morris, 2013; Schulte et al., 2024; Spence et al., 2024). Irrespective of nonstandard accent (either foreign or regional), standard-accented candidates are considered more hireable than nonstandard-accented candidates (Schulte et al., 2024; Spence et al., 2024), particularly for female speakers (Spence et al., 2024) and especially for jobs that require extensive communication such as in human resource (Deprez-Sims & Morris, 2010; 2013; Fuertes et al., 2012; Spence et al., 2024). Similar effects are found for jobs that are high in status, like in software engineering (Hosoda et al., 2012), or working in law (Levon et al., 2021). Foreign-accented (Mexican-Spanish English) speakers were rated less suitable, less likely to receive a promotion, and less likely to be hired for a software engineering job than their standard American-English counterparts (Hosoda et al., 2012). Regionally accented candidates were also less likely to be hired for a job with a law firm, due to a perceived mismatch between a high-status job and a low-status linguistic variety (regionally accented British; Levon et al., 2021).

Overall, nonstandard-accented speakers are considered less competent, less hireable, and a little colder than applicants speaking standard language (Schulte et al., 2024). Yet, there might be differences in the evaluations of candidates with either a foreign or regional accent. Accent bias in the hiring context was found to be more noticeable for foreign accents than for regional accents (Spence et al., 2024), possibly because foreign accents more strongly signal out-group membership, triggering out-group biases (Lindemann, 2003; Lindemann, 2005; Deprez-Sims & Morris, 2010). In contrast, regional accents, while sometimes perceived as lower in status, may still be considered part of the broader linguistic community (Dragojevic, 2018; Gruffydd et al., 2025). Still, regional accents did not receive higher solidarity ratings compared to foreign accents (Spence et al., 2024). This is perhaps due to differences in inferred motive, with listeners ascribing communication difficulties to unwillingness for regional accents and inability for foreign accents, leading to a less positive view of regionally accented speakers (Fairchild et al., 2020). Therefore, regionally accented speakers might be perceived as less suitable for a job since they are considered less warm than standard-accented speakers (Schulte et al., 2024), and foreign-accented speakers might be seen as less competent for a job than standard-accented speakers (Hosoda et al., 2012). However, in some contexts, regional accents were appreciated, such as in a teaching job since it encouraged curiosity from the students (Baratta & Halenko, 2022). Regardless, other staff would not always agree, showing stigma of nonstandard regional accents (Baratta & Halenko, 2022). For foreign-accented teachers, a similar stigma holds; evaluations of a Dutch teacher lecturing in English (with a near-native proficiency) were more negative than for the same teacher when she lectured in Dutch (also the native language of the participant; Hendriks & Van Meurs, 2022b).

Although both foreign and regional accents can be stigmatized in professional contexts, the degree and nature of that stigma depends on contextual factors such as job expectations and linguistic norms (Deprez-Sims & Morris, 2010; 2013; Fuertes et al., 2012; Spence et al., 2024). This can result in negative consequences (Schulte et al., 2024) but these may differ between foreign-accented or regionally accented job candidates. It is therefore crucial to determine whether regionally and foreign-accented candidates are evaluated differently from one another in job hiring contexts.

1.7 Research gap and current research

Numerous studies have provided evidence for accent bias in job hiring contexts (Deprez-Sims & Morris, 2013; Hansen et al., 2014; Hosoda et al., 2012; O'Brien et al., 2024; Schulte et al., 2024; Spence et al., 2024) as well as in other contexts of society (Baratta & Halenko, 2022; Dragojevic et al., 2016; Foucart et al., 2020; Fuertes et al., 2012; Hendriks et al., 2019; Hendriks & Van Meurs, 2022a; Levon et al., 2021; Mai & Hoffmann, 2014; Roessel et al., 2020). While these studies also researched possible mechanisms underlying negative consequences of speaking with a nonstandard accent, a research gap remains concerning whether there are different mechanisms that drive different types of accent bias (e.g., bias against foreign accents or regional accents). Research on this topic has mainly compared the effects of a nonstandard accent to a standard accent on evaluations about its speakers (Fuertes et al., 2012). Even though a recent study has found accent bias in hiring contexts to be more prevalent for foreign compared to regional accents (Spence et al., 2024), to the best of my knowledge, no study has directly compared the effects of foreign and regional accents on speaker evaluations in a hiring context in order to determine what drives these biases.

Another research gap is that studies do not always measure the impact of accent strength on speaker evaluations despite the fact that research has found convincing evidence for stronger nonstandard accents eliciting more negative evaluations (Deprez-Sims & Morris, 2013; Fuse et al., 2024; Grondelaers et al., 2019; Hendriks et al., 2019; Hendriks et al., 2023; Roessel et al., 2019). In the current study, four distinct accents (regional: Eastern Dutch, i.e., Twents, and Southern Dutch, i.e., Limburgish; and foreign: French- and German-accented Dutch) were examined as case examples to investigate how Dutch listeners evaluate nonstandard Dutch speech. These accents were selected as representative examples for comparing regional and foreign accents, with each accent examined in two degrees of strength. This allowed for an analysis of how accent strength, as well as processing fluency, social categorization, inferred motive, and attitudinal evaluations, influenced listener perceptions.

The four accents were chosen since they likely are recognizable to the Dutch listener. Twents, for instance, is part of the Low Saxon minority language which has received the status of a regional language from the European Charter for Regional or Minority Languages and shall be protected as such (1992). This means that the Low Saxon language, of which Twents is a part, is different from the official language (ECRML, 1992). Features that make the Twents accent distinct from Standard Dutch are therefore likely to be recognized. Speakers from Limburg typically have a characteristic accent that is easily recognizable by native speakers of Dutch (Grondelaers et al., 2010), and are also officially recognized as regional language (ECRML, 1992). For the two foreign varieties, both were often correctly recognized by U.S. students, with the French accent especially noticeable since it is said that French people do not want to speak English, so when they do, it blends with their French (Lindemann, 2005). This reasoning could apply to French-accented Dutch. Some foreign accents are thus easily recognizable. Another example is the German accent, which is easy to recognize for U.S. citizens (Deprez-Sims & Morris, 2010; Lindemann, 2005). German-accented speakers are also likely to be recognized by Dutch speakers since German and Dutch are Germanic languages and share some features, besides, a substantial number of German students is studying in universities close to the border such as Radboud University and Maastricht University (Witteman et al., 2013).

Lastly, the possible mechanisms responsible for accent bias explained in the previous sections do not operate independently of one another (Dragojevic, 2018). Comprehensibility has been shown to influence perceived similarity, which in turn affects hiring decisions (Deprez-Sims & Morris, 2013). Other studies also found comprehension to mediate lower hirability and lower evaluations (Dragojevic et al., 2017; Hendriks & Van Meurs, 2022b;

Hendriks et al., 2023; Roessel et al. 2019). Furthermore, given that inferred motive is closely linked to processing fluency (Montgomery & Acheme, 2022), these concepts are best examined together to understand their joint influence on attitudinal evaluations (Gasiorek & Giles, 2015). Whereas research generally uses either a stereotyping or a processing fluency perspective to explain accent bias (Hideg et al., 2022), Dragojevic and Dayton (2025) conclude that their findings support both the processing fluency and the stereotyping approach which suggests that these mechanisms can operate simultaneously. Recent literature reviews therefore argue for adopting an intersectional perspective between theories and outcomes to further enrich our understanding of the influence of accents on the workplace, considering how various social categories intersect (Hideg et al., 2022; Hideg et al., 2024). A call that is not new, as the interrelations of communication strategies and styles, and the multiple social and psychological dimensions that contextualize them have always been related and should be studied as the fusion they are (Giles et al., 1991).

In conclusion, to address these interconnected mechanisms and outcomes, the current study adopts a multivariate approach examining multiple levels of speaker evaluations. The research question is as follows:

RQ: How do Dutch listeners evaluate nonstandard Dutch speakers in a hiring context, in function of accent type (foreign vs. regional) and accent strength (slight vs. strong) across the following dimensions:

- *Processing fluency (measured by comprehension)*
- *Social categorization (assessed as in-group or out-group membership)*
- *Inferred motive (evaluated through perceived intent to speak clearly and/or align socially)*
- *Attitudinal evaluations (measured by likability, status, competence, and dynamism)?*

To further unpack the interrelation between processing fluency and inferred motive, the current study examined how these are jointly affected by accent type and strength. While processing fluency – or the perceived comprehensibility – is shown to be a factor contributing to foreign accent bias in some studies (Deprez-Sims & Morris, 2013; Dragojevic & Giles, 2016; Dragojevic, 2020; Montgomery & Acheme, 2022; Yi et al., 2014), in others it is not (Deprez-Sims & Morris, 2010; Spence et al., 2024). In comparison to foreign accents, regional accents are less likely to interfere with the process of perceived and actual comprehension (Gluszek & Dovidio, 2010). Hendriks et al. (2019) have also shown that regional accents were not influenced by comprehensibility. Nevertheless, attitudinal variation toward British accents could be associated with the listeners' perceived processing difficulty (Dragojevic et al., 2024), and regional accents unfamiliar to the listener could be more difficult to process (Bestelmeyer, 2024). The downgrading of nonstandard accents based on comprehension difficulties is more prominent when a stronger accent is used (Deprez-Sims & Morris, 2013; Nejjari et al., 2012). Furthermore, processing fluency is closely linked to inferred motive (Montgomery & Acheme, 2022). Although foreign-accented speakers often face bias, they may benefit in some cases from being perceived as making an effort to accommodate, as listeners tend to attribute their low comprehensibility to ability rather than unwillingness (Fairchild et al., 2020). In comparison. Regionally accented speakers may be perceived as showing less effort, though little empirical evidence explores whether standard-accented listeners view nonstandard accents as controllable or intentional (Montgomery & Acheme, 2022). Together, these insights result in the following hypothesis:

H1: The type of accent (foreign or regional) and the accent strength (slight or strong) will have a combined effect on listeners' evaluations of processing fluency and inferred motive. Stronger accents, particularly foreign ones, are expected to be associated with lower processing fluency. However, foreign-accented speakers are also expected to be attributed more favorable inferred motive than regionally accented speakers.

Social categorization explains foreign accent bias since foreign or nonnative speakers form their own group distinct from native (including regional) speakers, and thus trigger social categories and a feeling of being 'other' (Deprez-Sims & Morris, 2010; Gluszek & Dovidio, 2010; Lindemann, 2003; Lindemann, 2005). Foreign accents are furthermore believed to be less familiar, contributing to their categorization of 'other', also compared to stigmatized native accents (Lindemann, 2005). Regional accents are unlikely to be perceived as 'other' (Gluszek & Dovidio, 2010; Roessel et al., 2019) and elicit in-group bias (Bestelmeyer, 2024; Mauchand & Pell, 2022). Interestingly, while stronger accents generally elicit more negative biases, some studies suggest that strong foreign accents may evoke higher ratings of similarity, possibly due to them being perceived as less of a threat to native speakers (Birney et al., 2020). These observations led to the following hypothesis:

H2: The type of accent (foreign or regional) and accent strength (slight or strong) will significantly affect listeners' evaluations of social categorization. Foreign-accented speakers are expected to be perceived more as out-group members than regionally or standard-accented speakers. However, strongly foreign-accented speakers may be perceived as higher in similarity than weakly foreign-accented speakers.

Both foreign and regional accents have been associated with perceptions of low status (Roessel et al., 2019). However, the status of the foreign-accented speaker may depend on the specific language spoken. For instance, French and German accents tend to carry higher prestige than regional accents, although the German accent is often perceived as slightly lower in prestige than the French accent by UK and US listeners (Giles, 1970; Lindemann, 2005). The expectation is that German and French accents would elicit higher ratings of prestige than regional accents in Dutch, although it remains an open question whether these perceptions extend to Dutch listeners. In terms of solidarity, foreign and regional accents often receive similar evaluations (Dragojevic et al., 2016; Giles, 1970; Spence et al., 2024). Therefore, we expect evaluations of competence and status (status-related traits) to differ between regional and foreign accents but expect no meaningful difference in likeability and dynamism (solidarity-related traits). Furthermore, stronger accents – regardless of origin – have been consistently associated with more negative evaluations (Deprez-Sims & Morris, 2013; Fuse et al., 2024; Grondelaers et al., 2019; Hendriks et al., 2019; Hendriks et al., 2023; Nejjari et al., 2012; Roessel et al., 2019), and this effect is particularly evident for foreign-accented speakers (Fuse et al., 2024). Given that attitudinal responses to accent are shaped by both perceived status and solidarity, and these dimensions tend to covary, we analyze competence, status, likeability, and dynamism jointly to better understand the combined impact of accent type and strength. This led to the following hypothesis:

H3: The type of accent (foreign or regional) and accent strength (slight or strong) will have a combined effect on listeners' evaluations of competence, status, likeability, and dynamism. Strong foreign accents will elicit the least favorable evaluations on status-related traits. No differences are expected between foreign and regional accents on solidarity-related traits.

Accent-based bias is particularly prevalent in hiring decisions, where a nonstandard accent can negatively influence perceptions of a candidate's competence, suitability, and likelihood of being hired or promoted (Deprez-Sims & Morris, 2013; Hansen et al., 2014; Roessel et al., 2020). Standard-accented speakers are generally rated as more hireable than speakers with regional or foreign accents, with foreign-accented speakers being more disadvantaged than regionally accented speakers (Lindemann, 2005; Deprez-Sims & Morris, 2010; Dragojevic, 2018). Accent strength further impairs these perceptions; candidates with a strong foreign accent received low hirability ratings (Nejjari et al., 2012; Fuse et al., 2024; Roessel et al., 2019). Therefore, it is important to examine how both accent type and accent strength affect hirability evaluations, leading to the following hypothesis:

H4: The type of accent (foreign or regional) and accent strength (slight or strong) will significantly affect listeners' evaluations of hirability. Regionally or standard-accented speakers are expected to be more hireable than speakers with strong foreign accents.

The theoretical relevance of this study lies in the insights into the psychological processes involved in accent bias it generates, especially since no direct comparison has been made between foreign and regional accents before. This will result in crucial information about the mechanisms underlying regional and foreign accent bias, which is particularly pressing as it improves efforts to address accent-based bias in hiring and beyond. Understanding the mechanisms underlying such biases can inform targeted interventions (Paluck et al., 2021), aimed to decrease bias specifically against either foreign- or regionally accented speakers. This understanding will ultimately help to reduce discrimination and encourage inclusion in professional and social settings (Paluck et al., 2021; Roessel et al., 2020).

2. Method

The research question was investigated with a Qualtrics questionnaire using a verbal guise experiment with nine conditions. These conditions were based on a 2 (accent type: foreign (French and German) vs. regional (Limburgish and Twents)) \times 2 (degree of accentedness: slight vs. strong) design, with an additional control condition using the Standard Dutch accent.

2.1 Materials

The stimulus material consisted of audio recordings of five women reading a text based on a translated interview script by Hosoda et al. (2012; see Appendix 1). Four of the five women read the script with either a slight or a stronger accent and the fifth woman read the script in standard Dutch.

An audio recording was chosen because of its popular use in attitudinal research (Dragojevic, 2018; Grondelaers et al., 2010; Munro & Derwing, 1995). Because the verbal interview is one of the most common assessment methods in job hiring (Deprez-Sims & Morris, 2013; Schulte et al., 2024; Spence et al., 2024), audio recordings are sufficient to determine the hirability of nonstandard-accented speakers. The same speaker was chosen for the slight and strong accent conditions per accent variety to not cause a third variable effect due to the influence of different speech styles in the different conditions. A pre-test (see section 2.1.1) was conducted to select speakers per accent variety who could believably and noticeably strengthen their accent for participants to perceive the stronger accent as a different degree of accentedness.

The script by Hosoda et al. (2012) was selected for two reasons. Firstly, the script is written for a software engineer job application, i.e., a job with less emphasis on communication and therefore able to result in more neutral results regarding nonstandard accents as an influence on the job (Deprez-Sims & Morris, 2013). Standard-accented speakers are preferred over nonstandard-accented speakers when applying for high-status and high-communication jobs (Spence et al., 2024). This bias could be reduced when participants apply for jobs requiring less communication (Spence et al., 2024). In previous studies on the influence of nonstandard accents for high-status jobs, foreign- and regionally accented speakers were less likely to be hired (Hosoda et al., 2012; Levon et al., 2021). Selecting a low-status job could potentially skew the results in favor of nonstandard-accented speakers, which would not be because accent-based discrimination does not exist, but because these speakers are seen as low-status, which results in a perceived match between low-status job and low-status linguistic variety (Levon et al., 2021). Secondly, the script consisted of qualifications for an entry-level software engineer, which was developed with the help of an actual software engineer, contributing to its ecological validity (Hosoda et al., 2012). However, in the original script, the GPA was somewhat low for a software engineer so in the current translation, the GPA was omitted (Hosoda et al., 2012). Additionally, the script consists of both positive and negative information about the applicant (Hosoda et al., 2012). Stereotypes are argued to be most influential in ambiguous contexts, and this script would thus maximize the effect of an applicant's accent (Dovidio & Gaertner, 2000; Hosoda et al., 2012).

2.1.1 Speaker pre-test

The speaker pre-test aimed to select a speaker per accent variety (Twents-, Limburgish-, German-, French-, and standard-accented Dutch) for the recordings used in the main experiment. The selection criteria were that the speaker could demonstrate a variety of accent strengths and had an identifiable accent, most noticeably in the strong accent condition. To test this, three women recorded the interview script based on Hosoda et al. (2012) in their

Standard Dutch variety and seventeen women recorded the interview script in their regular (slight) accent, and in a strengthened accent. Of the seventeen women who spoke with an accent, five were excluded from the pre-test since they did not speak with a recognizable accent in the strong accent condition – or implemented dialect words in the case of one Limburgish woman – and one speaker was excluded since her variety of Dutch was Flemish Dutch. This resulted in the inclusion of a total of fifteen speakers in the pre-test. Their speech was slightly edited with the software program Mixpad (12.64) (NHC Software, 2024) to keep the speech tempo and pauses in all recordings similar. In a between-subjects design, participants were randomly presented with three recordings, evenly distributed over the different accents, and asked to indicate the speaker’s nationality and perceived accent strength. Furthermore, speech quality, rate, and confidence were measured to test whether the selected speakers sounded comparable on these variables in their slightly and strongly accented recordings. The entire questionnaire can be found in Appendix 2. The average time spent on the questionnaire was $M = 7.94$ ($SD = 3.23$) minutes. Analyses were performed with JASP (0.18.3) (JASP Team, 2024).

Participants were recruited via the snowballing method. In total, 118 participants started the questionnaire, of whom 101 finished. These participants’ mean age was $M = 35.11$ ($SD = 15.42$), with the oldest participant being 73 years old, and the youngest 18 years old. The sample included 69 females (68.3%), 28 males (27.7%), 1 non-binary/third gender participant (1.0%), and 3 participants who preferred not to disclose their gender (3.0%). The most common level of education (ranging from secondary education to university level) was university level with 65 participants (64.4%). A little more than half of the participants indicated they did not speak with an accent (52 participants; 51.5%), and 49 participants did (48.5%). The most common accent was Brabants (32 participants; 31.7%) followed by Limburgish (8 participants; 7.9%). Since the most common accent was Brabants, it is unsurprising that most of the participants grew up in the province of North-Brabant (43 participants; 42.6%) and still live there (35 participants; 34.7%). Many participants also currently live in Utrecht (30 participants; 29.7%). The participants indicated to what extent they were familiar with the four chosen nonstandard accents on a 7-points Likert scale ranging from “completely disagree” to “completely agree”. Participants were most familiar with the Limburgish accent ($M = 4.55$, $SD = 1.96$) and least with the French accent ($M = 2.42$, $SD = 1.51$). Participants were relatively unfamiliar with the Twents ($M = 3.02$, $SD = 1.78$) and German accent ($M = 3.64$, $SD = 1.92$).

In the following sections, three speakers per accent were evaluated in terms of accent strength and speech characteristics to select one speaker per accent for the main experiment. Perceived accent strength was measured on 7-point Likert scales (“completely disagree” – “completely agree”) with the statements: “This speaker sounds like a native speaker of Dutch”, “This speaker speaks with a regional accent”, and “This speaker speaks with a foreign accent”. Due to low reliability ($\alpha < .68$), only the item “This speaker speaks with a regional accent” was used in subsequent analyses for the Twents and Limburgish speakers, only the item “This speaker speaks with a foreign accent” was used for the German and French speakers, and only the item “This speaker speaks with a standard accent” was used for the Standard Dutch speakers. Speech characteristics, i.e., speech quality, rate, and confidence, were measured with the statement “This speaker...” and 7-point Likert scales (“completely disagree” – “completely agree”) were used to measure speech quality with the items “sounds natural”, “has a pleasant voice”, “sounds monotonous” (reversed) and “sounds lively”, speech rate with the items “speaks fast” and “speaks hesitantly” (reversed), and confidence with the items “sounds confident” and “has a powerful voice” (based on Bayard et al., 2001; Jesney, 2004).

2.1.1.1 Twents-accented speaker

Since it was important for participants to be able to correctly identify the origin of the (strongly) Twents-accented speakers as Twents, it was investigated which speaker was most frequently identified as Twents. This was measured with the open question: “Where do you think this speaker is from?”. For the strong accent condition, Speaker 1 was correctly identified as from Twente by 12 out of 12 participants (100%), followed by Speaker 2 (8 out of 10 participants; 80%) and Speaker 3 (3 out of 6 participants; 50%). Since all speakers enhanced their accent to sound more Twents, this condition needed to be perceived as Twents by listeners. For the slight accent condition, Speaker 1 was again correctly identified by the most participants (7 out of 11 participants; 63.6%), followed by Speaker 2 (4 out of 11 participants; 36.4%) and lastly Speaker 3 (2 out of 10 participants; 20%). Thus, Speaker 1 had the most identifiable accent across both conditions.

In order to ensure that Speaker 1 had an identifiable accent that differed in strength across conditions, an independent samples t-test was conducted on perceived accentedness. The t-test found a significant difference between the slight ($M = 5.27$, $SD = 1.49$) and strong ($M = 6.75$, $SD = 0.62$) accent conditions of Speaker 1 ($t(21) = 3.15$, $p = .005$, 95% CI [-2.21, -0.40], Cohen's $d = -1.32$). An independent samples t-test for Speaker 2 also found a significant difference between the slightly ($M = 4.00$, $SD = 2.15$) and strongly ($M = 6.20$, $SD = 1.23$) accent recordings ($t(19) = 2.84$, $p = .01$, 95% CI [-2.17, -0.29], Cohen's $d = -1.24$) as did an independent samples t-test for Speaker 3 ($t(14) = 3.86$, $p = .002$, 95% CI [-3.22, -0.72], Cohen's $d = -1.99$) with the strong accent recording ($M = 6.67$, $SD = 0.52$) being perceived as more regional than the slight accent recording ($M = 3.80$, $SD = 1.75$). Despite $M_{diff} = 2.87$ for Speaker 3, $M_{diff} = 2.2$ for Speaker 2 and $M_{diff} = 1.48$ for Speaker 1, Speaker 1 was chosen for the main experiment due to the more identifiable accent.

Finally, the perceived speech quality, speech rate, and confidence of Speaker 1's slightly and strongly accented recordings were compared. Reliability ratings of the items corresponding to speech quality yielded an acceptable Cronbach's alpha ($\alpha = .70$, 95% CI [0.42, 0.86]) thus all four items were combined into a compound variable. For speech rate, the Cronbach's alpha was poor ($\alpha = .55$, 95% CI [0.04, 0.81]) and the two items were analyzed separately. Confidence yielded a questionable Cronbach's alpha ($\alpha = .67$, 95% CI [0.27, 0.86]) so the items were analyzed separately. Independent samples t-tests found no significant differences between the slightly and strongly accented recordings of Speaker 1 in terms of speech quality ($t(21) = 0.24$, $p = .81$, 95% CI [-0.72, 0.92], Cohen's $d = 0.10$), speaking fast ($t(21) = 0.18$, $p = .86$, 95% CI [-0.75, 0.89], Cohen's $d = 0.07$), speaking hesitantly ($t(21) = 0.37$, $p = .72$, 95% CI [-0.67, 0.97], Cohen's $d = 0.15$), sounding confident ($t(21) = 0.16$, $p = .88$, 95% CI [-0.88, 0.76], Cohen's $d = -0.07$), and for having a powerful voice ($t(21) = 0.54$, $p = .60$, 95% CI [-0.60, 1.04], Cohen's $d = 0.22$). An overview of the means and standard deviations can be found in Table 1.

Table 1

The means, standard deviations (between round brackets) and number of observations [between square brackets] for speech quality, “speaks fast”, “speaks hesitantly”, “sounds confident”, and “has a powerful voice” (1 = low, 7 = high) in function of Twents Speaker 1’s slightly and strongly accented recording.

Dependent variable	Recording Twents Speaker 1	
	Slightly accented <i>M</i> (<i>SD</i>) [<i>n</i>]	Strongly accented <i>M</i> (<i>SD</i>) [<i>n</i>]
Speech quality	4.27 (1.10) [11]	4.17 (1.04) [12]
Speaks fast	4.27 (1.49) [11]	4.17 (1.40) [12]
Speaks hesitantly	5.82 (0.98) [11]	5.67 (0.99) [12]
Sounds confident	5.00 (1.27) [11]	5.08 (1.31) [12]
Has a powerful voice	4.64 (1.63) [11]	4.25 (1.82) [12]

2.1.1.2 Limburgish-accented speaker

Similarly to the Twents speakers, it was investigated whether the Limburgish-accented speakers were correctly identified as Limburgish. For the strong accent condition, the region of origin was correctly identified by 9 out of 10 participants (90%) for Speaker 1, followed by Speaker 2 (7 out of 10 participants; 70%) and lastly Speaker 3 (2 out of 9 participants; 22.2%). For the slight accent condition, Speaker 1 was correctly identified by 7 out of 12 participants (58.3%), Speaker 2 by 5 out of 9 participants (55.6%) and Speaker 3 by 4 out of 10 participants (40%). Thus, Speaker 1 had the most identifiable accent across both conditions.

Next, it was investigated whether Speaker 1’s accent strength was considered different between the two conditions. An independent samples t-test found no significant difference between the slight ($M = 6.42$, $SD = 0.67$) and strong ($M = 6.70$, $SD = 0.48$) accent conditions of Speaker 1 ($t(20) = 1.12$, $p = .28$, 95% CI [-1.33, 0.38], Cohen’s $d = -0.48$). Independent samples t-tests for Speaker 2 and Speaker 3 were not significant ($p > .10$). Since Speaker 1 had the most identifiable accent, she was asked to make new recordings which were evaluated by thirteen new participants (61.5% female) with a mean age of $M = 23.92$ ($SD = 1.26$) in a within-subjects design. A paired samples t-test found no significant difference between the slightly ($M = 6.46$, $SD = 0.88$) and strongly ($M = 6.54$, $SD = 0.52$) accented recordings of Speaker 1 ($t(12) = 0.27$, $p = .79$, 95% CI [-0.62, 0.47], Cohen’s $d = -0.07$). Therefore, another speaker was asked to record the script (Speaker 4). She was correctly identified as Limburgish by 13 participants (100%) in her strong accent, and by 1 participant (7.7%) in her slight accent. A paired samples t-test showed a significant difference between the slightly ($M = 5.62$, $SD = 1.26$) and strongly ($M = 6.69$, $SD = 0.48$) accented recordings of Speaker 4 ($t(12) = 3.74$, $p = .003$, 95% CI [-1.71, -0.34], Cohen’s $d = -1.04$).

Subsequently, the perceived speech quality, speech rate, and confidence of Speaker 4’s slightly and strongly accented recordings were compared. Reliability ratings of the items corresponding with speech quality yielded an unacceptable Cronbach’s alpha ($\alpha = .45$, 95% CI [-0.24, 0.79]), speech rate was questionable ($\alpha = .61$, 95% CI [0.02, 0.87]), and confidence was unacceptable ($\alpha = .44$, 95% CI [-0.60, 0.83]), so all items were analyzed separately. Paired samples t-tests found no significant differences between the slightly and strongly accented recordings of Speaker 4 for sounding natural ($t(12) = 0.12$, $p = .91$, 95% CI [-0.58, 0.51], Cohen’s $d = -0.03$), having a pleasant voice ($t(12) = 1.27$, $p = .23$, 95% CI [-0.22, 0.91], Cohen’s $d = 0.35$), sounding lively ($t(12) = 1.07$, $p = .30$, 95% CI [-0.85, 0.26], Cohen’s $d = -0.30$), speaking fast ($t(12) = 0.27$, $p = .79$, 95% CI [-0.62, 0.47], Cohen’s $d = -0.07$), speaking hesitantly ($t(12) = 0.00$, $p = 1.00$, 95% CI [-0.54, 0.54], Cohen’s $d = 0.00$), sounding confident ($t(12) = 0.56$, $p = .56$, 95% CI [-0.39, 0.70], Cohen’s $d = 0.16$), and

having a powerful voice ($t(12) = 1.11, p = .29, 95\% \text{ CI} [-0.26, 0.86]$, Cohen's $d = 0.31$), but Speaker 4 sounded significantly less monotonous in her strong ($M = 5.69, SD = 1.11$) compared to her slight ($M = 4.46, SD = 1.71$) accent ($t(12) = 2.62, p = .02, 95\% \text{ CI} [-1.33, -0.10]$, Cohen's $d = -0.73$). An overview of the means and standard deviations can be found in Table 2.

Table 2

The means, standard deviations (between round brackets) and number of observations [between square brackets] for “sounds natural”, “has a pleasant voice”, “sounds monotonous”, “sounds lively”, “speaks fast”, “speaks hesitantly”, “sounds confident”, and “has a powerful voice” (1 = low, 7 = high) in function of Limburgish Speaker 4’s slightly and strongly accented recording.

Dependent variable	Recording Limburgish Speaker 4	
	Slightly accented <i>M (SD) [n]</i>	Strongly accented <i>M (SD) [n]</i>
Sounds natural	5.39 (1.50) [13]	5.46 (1.56) [13]
Has a pleasant voice	5.15 (1.82) [13]	4.31 (1.44) [13]
Sounds monotonous	4.46 (1.71) [13]*	5.69 (1.11) [13]*
Sounds lively	4.15 (1.82) [13]	4.85 (1.41) [13]
Speaks fast	3.23 (1.24) [13]	3.31 (1.32) [13]
Speaks hesitantly	5.31 (1.38) [13]	5.31 (1.11) [13]
Sounds confident	5.23 (1.09) [13]	5.00 (1.23) [13]
Has a powerful voice	4.85 (1.35) [13]	4.15 (1.46) [13]

* $p < .05$

2.1.1.3 German-accented speaker

The country of origin was correctly identified for German Speaker 1 (10 out of 10 participants; 100%), and Speaker 3 (11 out of 11 participants; 100%) and by 6 out of 9 participants for Speaker 2 (66.7%) in the strong accent condition. For the slight accent condition, Speaker 2’s accent was correctly identified as German by 11 out of 11 participants (100%), followed by Speaker 3 (7 out of 12 participants, 58.3%) and Speaker 1 (5 out of 10 participants, 50%). Thus, Speaker 3 had the most identifiable accent across both conditions.

An independent samples t-test found no significant difference between the strongly ($M = 6.27, SD = 1.79$) and slightly ($M = 5.75, SD = 1.36$) accented recordings of Speaker 3 ($t(21) = 0.79, p = .44, 95\% \text{ CI} [-1.15, 0.50]$, Cohen's $d = -0.33$). Independent samples t-tests for Speaker 1 and Speaker 2 did not yield significant differences (all p 's $> .10$) on sounding foreign. Speaker 3 had the most identifiable accent and therefore was asked to make new recordings which were evaluated by thirteen new participants in a within-subjects design (the same participants as for the Limburgish speaker). A paired samples t-test found a significant difference between the strongly ($M = 6.46, SD = 0.52$) compared to the slightly ($M = 4.46, SD = 2.30$) accented recording of Speaker 3 ($t(12) = 3.53, p = .004, 95\% \text{ CI} [-1.63, -0.30]$, Cohen's $d = -0.98$).

Reliability ratings of the items corresponding with speech quality for Speaker 3 yielded a poor Cronbach's alpha ($\alpha = .59, 95\% \text{ CI} [0.06, 0.85]$), the items corresponding to speech rate yielded a questionable alpha ($\alpha = .64, 95\% \text{ CI} [0.12, 0.87]$), and the items for confidence yielded an acceptable alpha ($\alpha = .73, 95\% \text{ CI} [0.49, 0.88]$). Thus, only the items for confidence were combined into a compound variable. Paired samples t-tests found no significant differences between the slight and strong accent conditions of Speaker 3 in terms of sounding natural ($t(12) = 1.34, p = .21, 95\% \text{ CI} [-0.20, 0.93]$, Cohen's $d = 0.37$), having a pleasant voice ($t(12) = 1.75, p = .11, 95\% \text{ CI} [-0.10, 1.05]$, Cohen's $d = 0.48$), sounding monotonous ($t(12) = 1.10, p = .29, 95\% \text{ CI} [-0.86, 0.26]$, Cohen's $d = -0.31$), sounding lively

($t(12) = 0.81, p = .44, 95\% \text{ CI} [-0.77, 0.33]$, Cohen's $d = -0.22$), speaking fast ($t(12) = 0.56, p = .58, 95\% \text{ CI} [-0.70, 0.39]$, Cohen's $d = -0.16$), speaking hesitantly ($t(12) = 0.46, p = .66, 95\% \text{ CI} [-0.67, 0.42]$, Cohen's $d = -0.13$), and confidence ($t(12) = 2.17, p = .051, 95\% \text{ CI} [-1.19, 0.002]$, Cohen's $d = -0.60$). An overview of the means and standard deviations can be found in Table 3.

Table 3

The means, standard deviations (between round brackets) and number of observations [between square brackets] for “sounds natural”, “has a pleasant voice”, “sounds monotonous”, “sounds lively”, “speaks fast”, “speaks hesitantly”, and confidence (1 = low, 7 = high) in function of German Speaker 3's slightly and strongly accented recording.

Dependent variable	Recording German Speaker 3	
	Slightly accented <i>M (SD) [n]</i>	Strongly accented <i>M (SD) [n]</i>
Sounds natural	5.23 (1.17) [13]	4.62 (1.45) [13]
Has a pleasant voice	5.54 (0.88) [13]	4.77 (1.17) [13]
Sounds monotonous	4.46 (1.33) [13]	5.00 (1.29) [13]
Sounds lively	4.54 (1.39) [13]	4.85 (0.99) [13]
Speaks fast	3.15 (1.57) [13]	3.39 (1.39) [13]
Speaks hesitantly	5.31 (1.18) [13]	5.46 (0.97) [13]
Confidence	4.77 (1.03) [13]	5.19 (0.56) [13]

2.1.1.4 French-accented speaker

The country of origin was correctly identified as French for Speaker 3 by 11 out of 11 participants (100%) in the strong condition, followed by Speaker 2 (9 out of 10 participants; 90%) and finally Speaker 1 (11 out of 13 participants; 84.6%). For the slight accent condition, Speaker 2 was correctly identified as French by 6 out of 8 participants (75%), followed by Speaker 3 (7 out of 11 participants; 63.6%) and lastly Speaker 1 (2 out of 11 participants; 18.2%). Thus, Speaker 2 had the most identifiable accent in both conditions.

An independent samples t-test did not yield significant results for Speaker 2 with regard to perceived accentedness ($t(16) = 0.92, p = .37, 95\% \text{ CI} [-1.37, 0.51]$, Cohen's $d = -0.44$). The strongly accented recording of Speaker 2 ($M = 6.60, SD = 0.52$) did not sound more foreign than the slightly accented recording ($M = 6.38, SD = 0.52$). Thus, Speaker 2 was asked to make new recordings which were evaluated by thirteen new participants in a within-subjects design (the same as for the Limburgish and German speakers). A paired samples t-test showed a significant difference between the slightly ($M = 4.56, SD = 1.53$) and strongly ($M = 6.33, SD = 0.87$) accented recordings of Speaker 2 ($t(12) = 4.88, p < .001, 95\% \text{ CI} [-2.10, -0.58]$, Cohen's $d = -1.35$).

Furthermore, the perceived speech quality, speech rate, and confidence of Speaker 2's slightly and strongly accented recordings were compared. Reliability ratings yielded a questionable alpha for the items corresponding with speech quality ($\alpha = .62, 95\% \text{ CI} [0.10, 0.86]$) and speech rate ($\alpha = .64, 95\% \text{ CI} [0.09, 0.88]$), thus these items were analyzed separately. The items corresponding to the construct confidence were combined into a compound variable as the Cronbach's alpha was good ($\alpha = .84, 95\% \text{ CI} [0.57, 0.95]$). Paired samples t-test found no significant differences between the slight and strong accent conditions of Speaker 2 for sounding natural ($t(12) = 0.27, p = .79, 95\% \text{ CI} [-0.47, 0.62]$, Cohen's $d = 0.08$), having a pleasant voice ($t(12) = 0.16, p = .87, 95\% \text{ CI} [-0.50, 0.59]$, Cohen's $d = 0.05$), speaking hesitantly ($t(12) = 0.24, p = .82, 95\% \text{ CI} [-0.61, 0.48]$, Cohen's $d = -0.07$), and confidence ($t(12) = 2.08, p = .06, 95\% \text{ CI} [-1.16, 0.02]$, Cohen's $d = -0.58$). Speaker 2 spoke significantly less monotonous in her strong ($M = 5.62, SD = 1.04$) compared to her slight ($M = 3.92, SD = 1.38$) accent ($t(12) = 4.09, p = .002, 95\% \text{ CI} [-1.82, -0.42]$, Cohen's $d = -1.13$),

significantly more lively in her strong ($M = 5.39$, $SD = 0.96$) compared to her slight ($M = 3.54$, $SD = 0.97$) accent ($t(12) = 4.55$, $p < .001$, 95% CI [-1.99, -0.51], Cohen's $d = -1.26$), and significantly faster in her strong ($M = 4.46$, $SD = 1.81$) compared to her slight ($M = 3.23$, $SD = 1.09$) accent ($t(12) = 2.62$, $p = .02$, 95% CI [-1.33, -0.10], Cohen's $d = -0.73$). An overview of the means and standard deviations of Speaker 2 can be found in Table 4.

Table 4

The means, standard deviations (between round brackets) and number of observations [between square brackets] for “sounds natural”, “has a pleasant voice”, “sounds monotonous”, “sounds lively”, “speaks fast”, “speaks hesitantly”, and confidence (1 = low, 7 = high) in function of French Speaker 2's slightly and strongly accented recording.

Dependent variable	Recording French Speaker 2	
	Slightly accented $M(SD) [n]$	Strongly accented $M(SD) [n]$
Sounds natural	4.85 (1.41) [13]	4.69 (1.60) [13]
Has a pleasant voice	5.08 (1.66) [13]	5.00 (1.29) [13]
Sounds monotonous	3.92 (1.38) [13]*	5.62 (1.04) [13]*
Sounds lively	3.54 (0.97) [13]*	5.39 (0.96) [13]*
Speaks fast	3.23 (1.09) [13]*	4.46 (1.81) [13]*
Speaks hesitantly	4.77 (1.30) [13]	4.92 (1.75) [13]
Confidence	3.89 (1.53) [13]	4.65 (1.35) [13]

* $p < .05$

2.1.1.5 Standard Dutch speaker

To test the most suitable speaker for the standard-accented speaker, it was investigated which of the three women was correctly identified as being a standard-accented speaker. The origin of Speaker 1 was correctly identified as a speaker from the Randstad by 17 out of 21 participants (81.0%) followed by Speaker 3 with 12 out of 17 participants (70.6%) and Speaker 2 by 8 out of 18 participants (44.6%).

An independent one-way ANOVA showed no significant difference between the three speakers with regards to sounding native ($F(2, 26.21) = 1.79$, $p = 0.19$, $\eta^2 = 0.09$). However, Speaker 1 sounded the most like a native Dutch speaker ($M = 6.52$, $SD = 0.68$), followed by Speaker 3 ($M = 6.35$, $SD = 1.54$) and Speaker 2 ($M = 5.39$, $SD = 2.45$), although all differences were nonsignificant. Overall, participants experienced the least difficulty correctly identifying Speaker 1 and Speaker 1 sounded the most like a native speaker of Dutch, thus she was chosen for the main experiment.

Reliability analyses of Speaker 1 for speech quality, rate and confidence resulted in a Cronbach's alpha's of $\alpha = .84$ (CI [0.66, 0.93]) for speech quality, $\alpha = .51$ (CI [-0.07, 0.79]) for speech rate and $\alpha = .78$ (CI [0.51, 0.91]) for confidence. Thus, the four items for speech quality and the two items for confidence were combined into a compound variable. The two items for speech rate were analyzed separately. The means and standard deviations of the constructs can be found in Table 5. These show that Speaker 1 was rated neutral on speech quality and confidence, participants disagreed a little with the statement that Speaker 1 spoke fast, and participants rated Speaker 1 as not sounding hesitant.

Table 5

The means, standard deviations (between round brackets) and number of observations [between square brackets] for speech quality, “speaks fast”, “speaks hesitantly”, and confidence (1 = low, 7 = high) in function of Standard Dutch Speaker 1’s recordings.

Dependent variable	Recording Standard Dutch Speaker 1 <i>M (SD) [n]</i>
Speech quality	4.49 (1.24) [21]
Speaks fast	3.00 (1.30) [21]
Speaks hesitantly	5.81 (0.81) [21]
Confidence	4.74 (1.26) [21]

2.1.1.6 Comparison of the nonstandard speakers

To determine whether the recordings of the nonstandard speakers differed systematically in perceived speech characteristics, a series of one-way ANOVAs was conducted comparing the eight recordings of the nonstandard accented speakers (4 accent varieties \times 2 accent strengths). Prior to these analyses, the reliability of the scales was assessed. The items corresponding to speech quality yielded a questionable Cronbach’s alpha ($\alpha = .61$, 95% CI [0.46, 0.72]), the items corresponding to speech rate yielded an unacceptable alpha ($\alpha = .02$, 95% CI [-0.44, 0.34]), and the items for confidence yielded an acceptable alpha ($\alpha = .76$, 95% CI [0.65, 0.84]). Thus, only the items for confidence were combined into a compound variable; all other items were analyzed separately.

One-way ANOVAs found no significant differences between the conditions in sounding natural ($F(7, 93) < 1$, $p = .72$, $\eta^2 = 0.05$), speaking fast ($F(7, 93) = 1.84$, $p = .09$, $\eta^2 = 0.12$), speaking hesitantly ($F(7, 93) < 1$, $p = .46$, $\eta^2 = 0.07$) and perceptions of confidence ($F(7, 93) = 1.34$, $p = .24$, $\eta^2 = 0.09$). However, significant differences emerged for the perception of pleasant voice, monotony, and liveliness. For having a pleasant voice ($F(7, 93) = 4.48$, $p < .001$, $\eta^2 = 0.25$), the slightly and strongly Twents accented speaker and the slightly German and Limburgish accented speakers differed significantly (all p ’s $< .05$). The Twents speaker – both slightly ($M = 3.27$, $SD = 1.42$) and strongly ($M = 3.25$, $SD = 1.49$) accented – was perceived as having a less pleasant voice than the slightly accented German ($M = 5.54$, $SD = 0.88$) and slightly accented Limburgish ($M = 5.15$, $SD = 1.82$) speaker. The effect for speaking monotonous was also significant, $F(7, 93) = 2.82$, $p = .01$, $\eta^2 = 0.18$. The slightly accented French speaker ($M = 3.92$, $SD = 1.38$) was perceived as speaking significantly more monotonous than the strongly accented Limburgish speaker ($M = 5.69$, $SD = 1.11$, $p = .04$). Finally, for liveliness, a significant difference was found ($F(7, 93) = 2.50$, $p = .02$, $\eta^2 = 0.16$) showing that the French speaker was perceived as livelier in her strong ($M = 5.39$, $SD = 0.96$) compared to her slight ($M = 3.53$, $SD = 0.97$) accent, $p = .02$.

Overall, these results indicated that while most perceived speech characteristics were comparable across the recordings, some variation emerged in perceptions of pleasantness, monotony, and liveliness for specific speakers.

2.2 Design

The main experiment was conducted using a 2x2 between-subjects verbal guise design with the factors being accent type (regional vs. foreign) and degree of accentedness (slight vs. strong). Four distinct accents were examined as fixed exemplars to investigate how Dutch listeners evaluate nonstandard speech. The regional accents included Limburgish and Twents, and the foreign accents included French-accented and German-accented Dutch. Each of these four accents was presented in two strength variations. Because each accent variety (Limburgish, Twents, German, and French) was nested within its corresponding accent type

(regional or foreign), accent variety was not treated as an independent factor. Instead, the two accent varieties for regional speech were combined into the regional accent type and the two accent varieties for foreign speech were combined into the foreign accent type. Additionally, a standard-accented speaker was used as a control condition. In total, there were nine conditions across which the participants were randomly distributed.

2.3 Instrumentation

2.3.1 Main dependent variables

The main dependent variables of the experiment were processing fluency, inferred motive, social categorization, attitudinal evaluations, and hirability. Processing fluency was assessed through questions regarding the perceived comprehensibility, adapted from Hendriks et al. (2016). On 7-point Likert scales anchored by “completely disagree” to “completely agree”, participants indicated to what extent they agreed with the following statements: “The applicant speaks clearly”, “The applicant is barely audible” (reversed), “The applicant is difficult to understand” (reversed), “I do not understand what the applicant is talking about” (reversed), and “I do not understand what the applicant means” (reversed) (Cronbach’s $\alpha = .86$).

Inferred motive was measured via ten questions on 7-point Likert scales. Participants indicated to what extent they agreed (“completely disagree” – “completely agree”) with the following statements (based on Montgomery & Acheme, 2022; Gasiorek & Giles, 2012, Gasiorek, 2015; Giles et al., 2006): “The applicant wants to be seen as friendly”, “The applicant wants to be seen as approachable”, “The applicant does not care if the listener likes her” (reversed), “The applicant wants her communication to be clear”, “The applicant wants her speaking style to be effective”, “The applicant wants her speech to be comprehensible”, “The applicant intends to be helpful”, “The applicant intends to be hurtful” (reversed), “The candidate had bad intentions” (reversed), and “The candidate adjusts her communication to the listener” (Cronbach’s $\alpha = .75$).

Social categorization was measured with two questions on 7-point Likert scales anchored by “completely disagree” to “completely agree”. One question was based on Deprez-Sims and Morris (2010): “This person is similar to me”, and the other question is added to assess a feeling of similarity: “I feel connected to the candidate” (Cronbach’s $\alpha = .84$).

The dependent variable of attitudinal evaluations was measured via multiple constructs (i.e., competence, status, likeability, and dynamism) on 7-point Likert scales ranging from “completely disagree” to “completely agree”. The statement “The applicant sounds ...” was followed by twenty-one adjectives: “reliable”, “intelligent”, “hardworking”, “educated”, and “competent” for competence (Cronbach’s $\alpha = .89$), “influential”, “credible”, “self-confident” and “authoritative” for status (Cronbach’s $\alpha = .80$), “friendly”, “sympathetic”, “humorous”, “tactful”, “benevolent”, “warm”, “respectful”, and “polite” for likeability (Cronbach’s $\alpha = .87$), and “lively”, “energetic”, “cheerful”, and “active” for dynamism (Cronbach’s $\alpha = .91$) (based on Bayard et al., 2001; Grondelaers et al., 2019; Hendriks et al., 2016; Nejjari et al., 2012).

Hirability was added as a variable by using an adapted version of the hirability scale from Deprez-Sims and Morris (2010) and Hosoda et al. (2012). On 7-point Likert scales (“completely disagree” – “completely agree”), the following statements were rated: “I would recommend employing this applicant”, “I would feel satisfied if this applicant would be hired”, “I feel favorable toward this applicant”, “I would have the desire to work with this candidate”, “This applicant would be an asset to the company”, and “There is a high likelihood of this applicant being hired” (Cronbach’s $\alpha = .94$). The entire questionnaire can be found in Appendix 3.

2.3.2 Background questions

In addition to the main dependent variables, the following background questions were measured: age (open question), gender (male/female/non-binary or third gender/prefer not to say), current or highest completed level of education (secondary education/secondary vocational education (MBO)/higher professional education (HBO)/university education/other, namely ...), and whether the participant speaks with an accent (yes, namely .../no). Familiarity with the accent variety was measured using four 7-point Likert scales (“completely disagree” – “completely agree”) for the statements: “I regularly talk to people with a Southern Dutch (Limburgish) accent”, “I regularly talk to people with an Eastern Dutch (Twents) accent”, “I regularly talk to people with a German accent in their Dutch”, and “I regularly talk to people with a French accent in their Dutch” (based on Hendriks et al., 2023). The Cronbach’s alpha was questionable ($\alpha = .62$) so the items were analyzed separately. Furthermore, the background of participants was assessed with two questions regarding their own region of origin and the region where they currently live. The two questions “In which province did you grow up?” and “In which province do you currently live?” were followed by a drop-down menu with all twelve Dutch provinces. Furthermore, participants were asked to indicate their work experience on a 7-point slider ranging from “a little” to “a lot” and answer whether they had experience with holding job interviews (yes/no).

Finally, to measure participants’ specific and general prejudice toward accents, they were asked to rate statements on 7-point Likert scales ranging from “completely disagree” to “completely agree”. Specific speaker prejudice was assessed with two statements, slightly adapted from the Accent Beliefs Scale (Hansen, 2020): “The speaker sounds like she can adjust her accent” and “The speaker sounds as if she can speak without an accent”. General prejudice was measured using ten statements: “A person's accent says a lot about them”, “The strength of a speaker's accent is a sign of their personality”, “It is possible to predict how someone will act based on their accent”, “The strength of a person's accent has nothing to do with what kind of person they are” (reversed), “A person's accent is an important personality trait”, “You can learn a lot about someone based on their accent”, “You cannot draw conclusions about someone's intelligence based on the strength of their accent” (reversed), “People are able to get rid of their accent” (reversed), “Everyone has an accent, and they cannot change it, even if they try”, and “An accent is learned, so you can adjust it if necessary” (reversed) (based on Hansen, 2020).

The two items measuring specific prejudice yielded a questionable Cronbach’s alpha ($\alpha = .69$), but since it was on the border of being acceptable, the two items were combined into a compound variable. The ten items measuring general prejudice initially yielded a questionable alpha ($\alpha = .63$). Inter-item correlations showed that the statements “People are able to get rid of their accent” (reversed), “Everyone has an accent, and they cannot change it, even if they try”, and “An accent is learned, so you can adjust it if necessary” (reversed) correlated negatively and weakly with the other items ($r < -.22$) but correlated more strongly with each other ($r > .51$). The corrected item-total correlations for these items were low ($r < .09$), so it was decided to group them together separately. This resulted in acceptable reliability (Cronbach’s $\alpha = .78$) for these three items, which were combined into a composite variable called “accent adjustability beliefs” – higher scores indicate participants do not believe an accent can be changed. The remaining items also yielded an acceptable alpha (Cronbach’s $\alpha = .78$) and were combined into a composite variable called “accent trait beliefs” – higher scores indicate the belief that an accent is a personality trait.

2.3.3 Manipulation checks

Two manipulation checks were included in the current study. One check was included to assess the perceived accentedness of the speakers. This was measured to test whether there was a noticeable difference in accentedness between the slight and strong accent conditions per speaker. Therefore, the following three questions were answered on a 7-points Likert scale ranging from “completely disagree” to “completely agree”: “The candidate sounds like a standard speaker of Dutch”, “The candidate speaks with a regional accent”, and “The candidate speaks with a foreign accent” (based on Jesney, 2004). Participants who listened to a regionally accented speaker answered only the first two questions (“The candidate sounds like a standard speaker of Dutch” and “The candidate speaks with a regional accent”, $\alpha = .83$), participants who listened to a foreign accented speaker only answered the questions “The candidate sounds like a standard speaker of Dutch” (reversed) and “The candidate speaks with a foreign accent” ($\alpha = .73$), and participants who listened to the Standard Dutch speaker only answered the question “The candidate sounds like a standard speaker of Dutch”. The second manipulation check assessed whether participants could correctly identify the speaker’s country or region of origin. This was measured with the open question: “Where do you think the speaker is from? Think about a country or a specific region within the Netherlands”. The second phrase was added since participants in the speaker pre-test indicated having difficulty interpreting the question.

2.4 Subjects

A total of 404 people participated in the experiment of which 361 participants were eligible. Of the initial respondents, four were excluded because they did not give consent for participating in the experiment, nine respondents already participated in the speaker pre-test, six respondents did not get through the screening questions necessary for Prolific, and 24 respondents were excluded since they did not finish at least 75% of the questions belonging to the main variables.

The age of the remaining 361 respondents was $M = 31.89$ ($SD = 10.11$), ranging from 18 till 75 years old. Of the participants, 192 were female (52.2%), 163 were male (45.2%), four were non-binary/third gender (1.1%), and two people preferred not to say (0.6%). The most frequent level of education was university (178 participants; 49.3%). Participants had on average $M = 4.56$ ($SD = 1.89$) work experience (ranging from 0 = “none” to 7 = “a lot”) with 76 participants (21.1%) indicating they had a lot of work experience and almost half of the participants had sat on a hiring panel before (163 participants; 45.3%). The majority of the participants indicated they do not speak with an accent (257 participants; 71.1%) and of the participants who do speak with an accent (104 participants; 28.9%), a Brabants accent is the most frequent (19 participants; 18.3%). The most common province where participants grew up was South-Holland (70 participants; 19.4%) and this is also the province where the most participants currently reside (66 participants; 18.3%). Participants were the most familiar with the Southern Dutch accent ($M = 3.47$, $SD = 2.07$), followed by the Eastern Dutch accent ($M = 2.94$, $SD = 1.85$), the German accent ($M = 2.88$, $SD = 1.81$) and participants were the least familiar with the French accent ($M = 2.14$, $SD = 1.47$). On average, participants reported moderate levels of specific prejudice ($M = 3.45$, $SD = 1.32$) and accent adjustability beliefs ($M = 3.34$, $SD = 1.19$). The lowest mean score was observed for accent trait beliefs ($M = 3.01$, $SD = 1.01$).

The distribution of participants’ characteristics was measured across the nine conditions for age, the four items regarding familiarity, specific speaker prejudice, accent adjustability beliefs and accent trait beliefs. One-way ANOVA’s found equal distributions for age, familiarity, and accent trait beliefs (all p ’s > .08). The distribution was unequal across conditions for specific speaker prejudice ($F(8, 349) = 19.38$, $p < .001$, $\eta^2 = 0.31$) and for

accent adjustability beliefs ($F(8, 349) = 2.56, p = .01, \eta^2 = 0.01$). Bonferroni pairwise comparisons showed that the standard-accented speaker ($M = 4.68, SD = 0.97$) was perceived as more able to change her accent compared to the slightly accented French ($M = 2.72, SD = 1.04$) and Limburgish ($M = 3.56, SD = 1.44$) speakers, and compared to the strongly accented German ($M = 2.70, SD = 1.03$), French ($M = 2.82, SD = 1.18$), Limburgish ($M = 3.11, SD = 1.22$), and Twents ($M = 2.99, SD = 1.29$) speakers (all p 's < .001). The slightly accented Twents speaker ($M = 4.61, SD = 0.82$) was perceived as more able to change her accent than the slightly accented French and Limburgish, and the strongly accented German, French, Limburgish, and Twents speaker (all p 's < .002). The slightly accented German speaker ($M = 3.90, SD = 1.23$) was perceived as more able to change her accent than the slightly accented French, and strongly accented German, French, and Limburgish speakers (all p 's < .01). Lastly, the slightly accented Limburgish speaker was perceived as more able to change her accent than the strongly accented German and slightly accented French speakers (both p 's < .04). For the accent adjustability beliefs, a Bonferroni pairwise comparison showed that participants believed the accent for the strongly accented French speaker ($M = 3.81, SD = 1.12$) could not be changed whereas the accent could be adjusted for the standard-accented speaker ($M = 2.87, SD = 1.21, p = .01$). Chi-square tests found equal distributions across conditions for gender, education, speaking with an accent, work experience, and hiring experience (all p 's > .18).

2.5 Procedure

The experiment was conducted using a Qualtrics questionnaire. Participants were recruited via the platform Prolific, where respondents received payment for participation, and through snowball sampling within the researcher's own network. After receiving a short introduction and privacy statement, participants were asked to consent to taking part in the survey voluntarily. Upon completion of a couple screening questions, participants were informed that they were supposed to listen to an audio recording of a job application for a software engineer. Participants were instructed to listen carefully and answer some questions about the recording. They were randomly presented with one of the nine recordings, varying by accent strength (slight; strong), accent type (foreign: French/German; regional: Limburgish/Twents), or a control condition. A timer ensured they listened to at least 75% percent of the fragment before continuing.

The respondents were then asked to indicate to what extent they agreed to several statements measuring the main variables hirability, inferred motive, attitudinal evaluations, processing fluency, and social categorization. After the main variables, participants were asked to indicate the perceived accent strength of the candidate and to indicate the candidate's country or region of origin as manipulation checks. These questions were followed by specific accent beliefs questions and general accent beliefs questions (Hansen, 2020) to measure the participants' prejudice toward accented speakers. Furthermore, demographic questions were asked and questions measuring the familiarity with the Limburgish, Twents, German and French accents. Lastly, it was measured to what extent participants had a lot of working experience and experience with conducting job interviews. The average duration of the questionnaire was $M = 7.76 (SD = 4.89)$ minutes.

2.6 Statistical treatment

Two multivariate analyses of variance (MANOVA) were conducted to test the effects of the different accent types and accent strengths on processing fluency and inferred motive (H1), and on the four attitudinal evaluations (H3). The MANOVA test was chosen as it can analyze several response variables and predictors at the same time, while taking into account the relationship between them (Al-Abdullatif et al., 2019; Field, 2018; Smith et al., 2020). Since

the response variables were expected to be correlated (Dragojevic, 2018; Hideg et al., 2022; Montgomery & Acheme, 2022), MANOVA provided a more appropriate and powerful approach than conducting separate univariate ANOVAs. MANOVA can also detect small differences that would not be detected through univariate ANOVAs (Field, 2018), and reduces the risk of Type I error associated with running multiple tests on the same data set (Field, 2018; Smith et al., 2020). When the MANOVA results were significant, descriptive discriminant analyses were used as post-hoc analyses to further explore the nature of group differences. Discriminant analysis can identify the linear combination of dependent variables (discriminant functions) that best separate the groups, while preserving the multivariate perspective and retaining the relationships among the dependent variables (Al-Abdullatif et al., 2019; Field, 2018; Smith et al., 2020). This approach provided a clearer understanding of how the dependent variables together contribute to group differences and avoided the limitations of multiple univariate follow-up tests, such as ignoring correlations among outcomes and increasing Type I error risk. Furthermore, two-way ANOVAs were performed to assess the effects of accent type and accent strength on social categorization (H2) and hirability (H4). Data was processed with IBM SPSS 30 since JASP (0.18.3) (JASP Team, 2024) does not facilitate post-hoc analyses for MANOVA.

Assumption checking for all hypotheses showed that for H1, the Mahalanobis distance identified one extreme multivariate outlier greater than 13.82 which was removed. Scatter plots revealed linear relationships between dependent variables and conditions. The variables were correlated ($r = .47, p < .001$), supporting the choice for a MANOVA, and showing no signs of singularity or multicollinearity. The assumption of homogeneity of covariances was tenable based on Box's test, $M = 18.40, F(12, 358090.32) = 1.51, p = .11$. Levene's test showed a deviation from homogeneity of variance for processing fluency ($p = .01$). However, Levene's test can produce a significant result in large samples due to trivial differences in group variances, and in small samples it will only pick up on big differences (Field, 2018). Further inspection of the scatterplot between the standardized predicted values of the model and the standardized residuals did not result in severe deviations from a regular distribution, so no adjustments were made. As the group sizes were unequal and the assumptions of homogeneity of covariance matrices and multivariate normality were tenable, we can assume that Pillai's trace is accurate (Field, 2018). The assumption of homogeneity of variances was tenable for H2 based on Levene's test ($F(4, 353) = 2.27, p = .06$). Inspection of boxplots showed no significant outliers. Mahalanobis distance was checked for H3, identifying two extreme multivariate outliers greater than 18.47 which were removed. Scatter plots identified linear relationships between the dependent variables and conditions. Inspecting the correlations gave no concern for singularity or multicollinearity ($.37 > r < .66, p's < .001$) and provided support for the inclusion of these four variables in the MANOVA. The assumption of homogeneity of covariances was tenable based on Box's test, $M = 46.31, F(40, 152400.48) = 1.13, p = .27$. Levene's test showed no deviation from homogeneity of variance (all $p's > .11$). Since the group sizes were unequal (as for H1), but the assumptions of homogeneity of covariance matrices and multivariate normality were met, we can assume that Pillai's trace is accurate (Field, 2018). The assumption of homogeneity of variances was also met for H4 based on Levene's test ($F(4, 353) = 1.32, p = .26$), and no significant outliers were identified in the data.

After removing the three multivariate outliers, the number of eligible participants dropped to 358. Unfortunately, the assumption of univariate normality was not tenable for all eight variables based on the Shapiro-Wilk tests (all $p's < .05$). The results should therefore be interpreted with caution.

3. Results

The experiment aimed to investigate the differences between foreign- and regionally accented speakers regarding evaluations of processing fluency and inferred motive, social categorization, attitudinal evaluations (competence, status, likeability, and dynamism), and hirability. For all variables discussed in the following sections, higher scores indicate higher levels of the construct.

3.1 Manipulation checks

3.1.1 Perceived accentedness

An independent samples t-test found a significant difference between all the strongly ($M = 6.19$, $SD = 0.97$) and all the slightly ($M = 4.63$, $SD = 1.58$) accented speakers ($t(255.80) = 10.56$, $p < .001$, 95% CI [-1.85, -1.27], Cohen's $d = -1.19$). Independent samples t-tests found significant differences between the strongly ($M = 6.22$, $SD = 0.92$) and slightly ($M = 4.85$, $SD = 1.39$) accented German speaker ($t(67.19) = 5.22$, $p < .001$, 95% CI [-1.89, -0.85], Cohen's $d = -1.17$), between the strongly ($M = 6.37$, $SD = 0.63$) and slightly ($M = 5.51$, $SD = 1.16$) accented French speaker ($t(55.56) = 4.05$, $p < .001$, 95% CI [-1.28, -0.43], Cohen's $d = -0.93$), between the strongly ($M = 5.91$, $SD = 1.24$) and slightly ($M = 4.86$, $SD = 1.53$) accented Limburgish speaker ($t(78) = 3.38$, $p < .001$, 95% CI [-1.67, -0.43], Cohen's $d = -0.76$), and between the strongly ($M = 6.26$, $SD = 1.00$) and slightly ($M = 3.28$, $SD = 1.35$) accented Twents speaker ($t(68.16) = 10.99$, $p < .001$, 95% CI [-3.52, -2.44], Cohen's $d = -2.52$).

A two-way ANOVA with accentedness and accent variety showed a significant interaction effect ($F(3, 349) = 14.18$, $p < .001$, $\eta_p^2 = .11$), a significant main effect of degree of accentedness ($F(1, 349) = 151.24$, $p < .001$, $\eta_p^2 = .30$), and a significant main effect of speaker region ($F(3, 349) = 14.46$, $p < .001$, $\eta_p^2 = .11$). The significant interaction effect indicated that accentedness ratings of the speakers were affected by both the strength of their accents and their specific accent. Simple effects analysis revealed that in the slight accent condition, ratings of the Twents speaker were significantly lower than for the other accents (all p 's $< .001$), and ratings for the French speaker were significantly higher than for the German and Limburgish speakers (both p 's = .01), $F(3, 349) = 26.84$, $p < .001$, $\eta_p^2 = .19$. Inspection of the means indicated that the Twents speaker was considered the least accented, and the French speaker the most accented in the slight condition. No differences between speakers were found in the strong accent condition ($F(3, 349) = 1.20$, $p = .31$, $\eta_p^2 = .01$). The means and standard deviations for both degrees of accentedness for each speaker are presented in Table 6.

Table 6

The means, standard deviations (between round brackets) and number of observations [between square brackets] for the perceived degree of accentedness (1 = low, 7 = high) in function of accentedness and speaker.

	Speaker					Total $M(SD)$ [n]
	German $M(SD)$ [n]	French $M(SD)$ [n]	Limburgish $M(SD)$ [n]	Twents $M(SD)$ [n]	Standard Dutch $M(SD)$ [n]	
Slight	4.85 (1.39) [40]	5.51 (1.16) [38]	4.86 (1.53) [40]	3.28 (1.35) [38]		4.63 (1.58) [156]
Strong	6.22 (0.92) [41]	6.37 (0.63) [42]	5.91 (1.24) [40]	6.26 (1.00) [39]		6.19 (0.97) [162]
Total	5.54 (1.36) [81]	5.96 (1.01) [80]	5.39 (1.48) [80]	4.79 (1.91) [77]	6.03 (0.66) [40]	5.49 (1.46) [158]

3.1.2 Speaker's origin

The participants' answers regarding their perceptions of the speaker's country/region of origin were coded into four categories: "correct" (i.e., Germany/France/Limburg/Twente), "incorrect" (e.g., Morocco, Belgium, the Netherlands), "correct (miscellaneous)" (e.g., "Brabant or Limburg" for the Limburgish speaker), and "I don't know". A Chi-square test (see Table 7) showed a significant relation between the region of origin indications and the speaker's degree of accentedness ($\chi^2(6) = 93.96, p < .001$). The strongly accented speakers (61.7%) were more likely to be correctly identified than the slightly accented speakers (22.4%). Another Chi-square test (see Table 8) showed a significant relation between the region of origin indications and the speaker's region of origin ($\chi^2(12) = 72.02, p < .001$). Participants had the most ease identifying the Standard Dutch speaker (92.5%), followed by the German speaker (59.3%), the Limburgish speaker (47.5%), the Twents speaker (41.6%) and finally the French speaker (21.3%). Crosstabulation of degree of accentedness and region of origin – excluding standard speakers – showed no significant association between degree of accentedness and region of origin when listeners correctly identified the speaker's origin ($\chi^2(3) = 1.21, p = .75$). However, when the region of origin was incorrectly identified, the French and the Twents speaker were more likely rated as strongly accented compared to the other accents ($\chi^2(3) = 9.00, p = .03$). The analyses for listeners that were correct but miscellaneous, did not know the origin, and the overall analysis showed no associations between degree of accentedness and region of origin (all p 's $> .17$). Table 9 provides an overview of the observed counts and column percentages of the Chi-square tests for accentedness and region of origin.

To investigate whether correctly identifying the speaker's region of origin influenced the dependent variables, a one-way ANOVA with region of origin (correct/incorrect/correct (miscellaneous)/I don't know) was conducted for all main variables. No significant effects were found (all p 's $> .10$), thus being able to correctly identify the speaker's origin did not influence the main variables.

Table 7

Observed count and column percentages of the Chi-square test for accentedness by correct, incorrect, correct (miscellaneous), and "I don't know" country/region of origin indications.

Region of origin guesses		Degree of accentedness			
		Slight	Strong	Standard Dutch	Total
Correct	Count	35 _a	100 _b	37 _c	172
	Column %	22.4%	61.7%	92.5%	48%
Incorrect	Count	103 _a	42 _b	2 _c	147
	Column %	66.0%	25.9%	5.0%	41.1%
Correct (miscellaneous)	Count	15 _a	19 _a	1 _a	35
	Column %	9.6%	11.7%	2.5%	9.8%
I don't know	Count	3 _a	1 _a	0 _a	4
	Column %	1.9%	0.6%	0.0%	1.1%
Total	Count	156	162	40	358
	Column %	100%	100%	100%	100%

Note: Each subscript letter denotes a subset of the slight, strong, and Standard Dutch condition whose column proportions do not differ significantly from each other at the .05 level.

Table 8

Observed count and column percentages of the Chi-square test for speaker region of origin by correct, incorrect, correct (miscellaneous), and “I don’t know” country/region of origin indications.

Region of origin guesses		Region of origin					Total
		German	French	Limburgish	Twents	Standard Dutch	
Correct	Count	48 _a	17 _b	38 _a	32 _{a, b}	37 _c	172
	Column %	59.3%	21.3%	47.5%	41.6%	92.5%	48%
Incorrect	Count	25 _a	50 _b	29 _{a, c}	41 _{b, c}	2 _c	147
	Column %	30.9%	62.5%	36.3%	53.2%	5.0%	41.1%
Correct (miscellaneous)	Count	6 _a	13 _a	11 _a	4 _a	1 _a	35
	Column %	7.4%	16.3%	13.8%	5.2%	2.5%	9.8%
I don’t know	Count	2 _a	0 _a	2 _a	0 _a	0 _a	4
	Column %	2.5%	0.0%	2.5%	0.0%	0.0%	1.1%
Total	Count	81	80	80	77	40	358
	Column %	100%	100%	100%	100%	100%	100%

Note: Each subscript letter denotes a subset of the region of origin categories whose column proportions do not differ significantly from each other at the .05 level.

Table 9

Observed count and column percentages of the Chi-square test for speaker region of origin and degree of accentedness by correct, incorrect, correct (miscellaneous), and “I don’t know” country/region of origin indications.

Region of origin guesses			Region of origin				Total
			German	French	Limburgish	Twents	
Correct	Slight	Count	13 _a	3 _a	9 _a	10 _a	35
		Column %	27.1%	17.6%	23.7%	31.3%	25.9%
	Strong	Count	35 _a	14 _a	29 _a	22 _a	100
		Column %	72.9%	82.4%	76.3%	68.8%	74.1%
Total	Count	48	17	38	32	135	
	Column %	100%	100%	100%	100%	100%	
Incorrect	Slight	Count	20 _{a, b}	31 _b	26 _a	26 _{a, b}	103
		Column %	80.0%	62.0%	89.7%	63.4%	71.0%
	Strong	Count	5 _{a, b}	19 _b	3 _a	15 _{a, b}	42
		Column %	20.0%	38.0%	10.3%	36.6%	29.0%
	Total	Count	25	50	29	41	145
		Column %	100%	100%	100%	100%	100%
Correct (miscellaneous)	Slight	Count	5 _a	4 _a	4 _a	2 _a	15
		Column %	83.3%	30.8%	36.4%	50.0%	44.1%
	Strong	Count	1 _a	9 _a	7 _a	2 _a	19
		Column %	16.7%	69.2%	63.6%	50.0%	55.9%
	Total	Count	6	13	11	4	34
		Column %	100%	100%	100%	100%	100%
I don’t know	Slight	Count	2 _a		1 _a		3
		Column %	100%		50.0%		75.0%
	Strong	Count	0 _a		1 _a		1
		Column %	0%		50.0%		25.0%
Total	Slight	Count	40 _a	38 _a	40 _a	38 _a	156
		Column %	49.4%	47.5%	50.0%	49.4%	49.1%
	Strong	Count	41 _a	42 _a	40 _a	39 _a	162
		Column %	50.6%	52.5%	50.0%	50.6%	50.9%
	Total	Count	81	80	80	77	318
		Column %	100%	100%	100%	100%	100%

Note: Each subscript letter denotes a subset of the region of origin categories whose column proportions do not differ significantly from each other at the .05 level.

3.2 Main variables

The main variables were processing fluency and the perceived intent to speak clearly and/or align socially (inferred motive), social categorization, attitudinal evaluations (competence, status, likeability, dynamism), and hirability. Processing fluency and inferred motive were analyzed together in multivariate analyses, as were the four attitudinal constructs.

3.2.1 Processing fluency and inferred motive

A MANOVA with degree of accentedness (slight vs. strong) and accent type (foreign vs. regional) as factors and processing fluency and inferred motive as dependent variables found a significant main effect of accent type (Pillai's $V = 0.03$, $F(2, 352) = 6.00$, $p = .003$, $\eta^2 = 0.03$), a significant main effect of accent strength (Pillai's $V = 0.03$, $F(2, 352) = 5.40$, $p = .005$, $\eta^2 = 0.03$), and no significant interaction effect (Pillai's $V = 0.001$, $F(2, 352) = .24$, $p = .78$, $\eta^2 = 0.01$). The standard-accented condition served as a control group and was included in the subsequent post hoc analyses for the MANOVA.

Descriptive discriminant analysis as post hoc for the main effect of accent type revealed two discriminant functions. The first function explained 93.8% of the variance (canonical $R^2 = .03$) and the second function explained 6.2% of the variance (canonical $R^2 = .002$). Both functions combined significantly differentiated between the accent types, Wilks' $\Lambda = .96$, $\chi^2(4) = 12.97$, $p = .01$, but removing the first function indicated that the second function did not significantly differentiate the accent types, Wilks' $\Lambda = 1.00$, $\chi^2(1) = 0.82$, $p = .37$, thus the differences in accent type can be explained by two underlying dimensions in combination. The correlations between outcomes and the discriminant functions are presented in Table 10. Inferred motive loaded highly onto the first function ($r = .93$) but not onto the second ($r = .36$), while processing fluency loaded highly onto the second function ($r = .99$) but not the first ($r = .13$). Table 10 also displays the group centroids. As illustrated in Figure 1, the first function discriminated the foreign-accented speakers from the regionally and standard-accented speakers, and the second function discriminated the standard-accented speakers from the regionally and foreign-accented speakers.

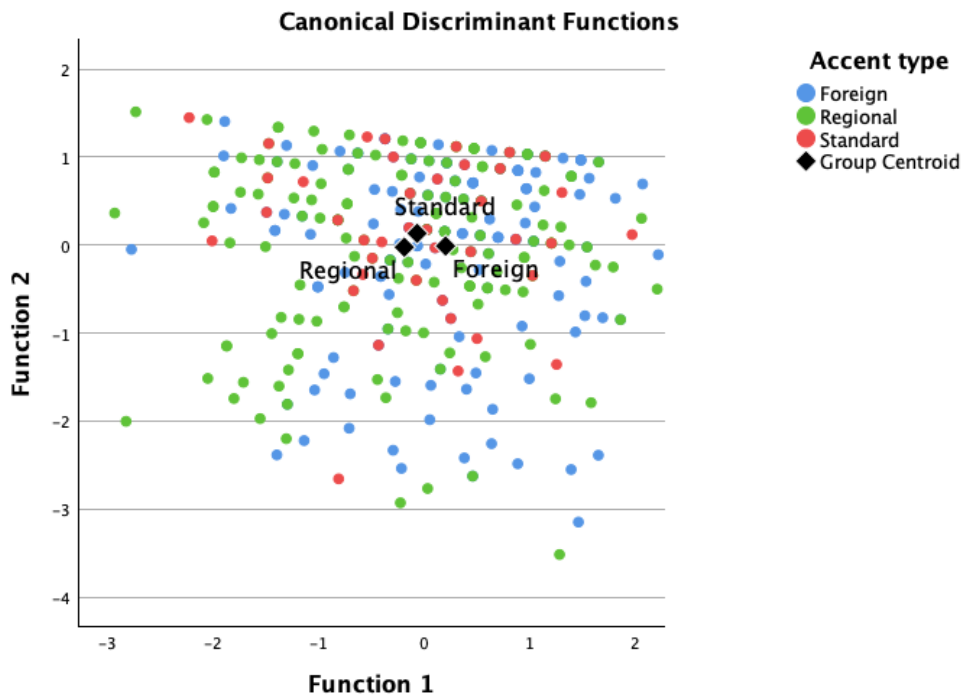
Table 10

Structure matrix of the main effect of accent type and group centroids per function.

	Function	
	1	2
Inferred motive	.93*	.36
Processing fluency	.13	.99*
Group centroids	Function	
	1	2
Foreign	.20	-.01
Regional	-.19	-.02
Standard	-.07	.13

Figure 1

Discriminant function plot of accent types.



Descriptive discriminant analysis as post hoc for the main effect of accent strength revealed two discriminant functions. The first function explained 98.8% of the variance (canonical $R^2 = .03$) and the second function explained 1.2% of the variance (canonical $R^2 = .0004$). Both functions combined significantly differentiated between the accent strengths, Wilks' $\Lambda = .97$, $\chi^2(4) = 11.71$, $p = .02$, but removing the first function indicated that the second function did not significantly differentiate the accent strengths, Wilks' $\Lambda = 1.00$, $\chi^2(1) = 0.14$, $p = .71$, thus the differences in accent strength can be explained by two underlying dimensions in combination. The correlations between outcomes and the discriminant functions (see Table 11) revealed that inferred motive loaded highly onto the first function ($r = .97$) but not onto the second ($r = .23$), and processing fluency loaded highly onto the second function ($r = .97$) but not the first ($r = .26$). The group centroids are also displayed in Table 11. As shown in the discriminant function plot (Figure 2), the first function discriminated the strongly accented speakers from the slightly and standard-accented speakers, and the second function discriminated the standard-accented speakers from the slightly and strongly accented speakers. The means and standard deviations for processing fluency and inferred motive from the MANOVA are presented in Table 12.

The MANOVA and subsequent descriptive discriminant analyses provided no support for the combined effect of accent type and strength expected by Hypothesis 1. Instead, there were main effects of accent type and accent strength. Foreign-accented speakers were expected to receive higher ratings of inferred motive compared to regionally accented speakers. The data supported this part of the hypothesis. The first discriminant function was dominated by inferred motive, which discriminated foreign- from regionally and standard-accented speakers. Foreign-accented speakers scored higher on this function compared to regionally and standard-accented speakers, thus showing that they received higher ratings of inferred motive. H1 furthermore predicted that foreign-accented speakers would be more difficult to comprehend when speaking with a strong accent than the regionally accented

speakers. This was partially supported by the data since processing fluency only loaded highly onto the second function, which discriminated standard from slightly and strongly accented speakers. However, the effect of accent strength was driven by both functions in combination. The first function was dominated by inferred motive, which discriminated strong accents from slight and standard accents. Thus, inferred motive varied more clearly with accent strength, and processing fluency related more to nonstandard vs. standard accents.

Table 11

Structure matrix of the main effect of accent strength and group centroids per function.

	Function	
	1	2
Inferred motive	.97*	.23
Processing fluency	.26	.97*

Group centroids	Function	
	1	2
Slight	.17	.01
Strong	-.20	.001
Standard	.14	-.05

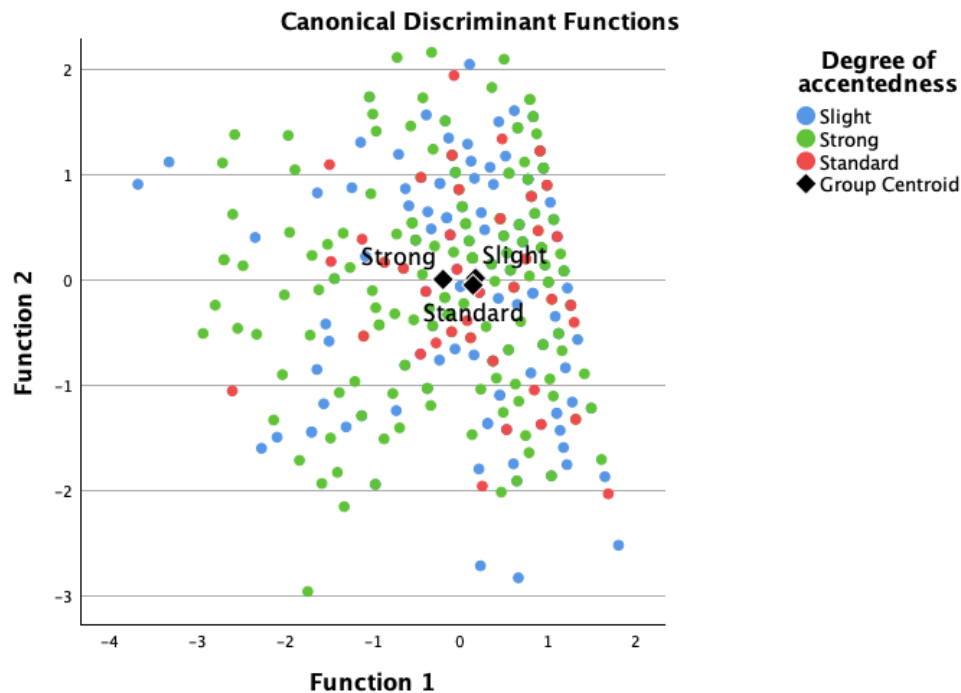
Table 12

The means, standard deviations (between round brackets) and number of observations [between square brackets] for processing fluency and inferred motive (1 = low, 7 = high) in function of accentedness and accent type.

Outcome variable	Accent type	Accentedness		
		Slight <i>M (SD) [n]</i>	Strong <i>M (SD) [n]</i>	Total <i>M (SD) [n]</i>
Processing fluency	Foreign	6.01 (0.95) [78]	5.67 (1.15) [83]	5.83 (1.07) [161]
	Regional	5.97 (0.92) [78]	5.57 (1.09) [79]	5.77 (1.02) [157]
	Standard Dutch			5.95 (0.88) [40]
	Total	5.99 (0.93) [156]	5.62 (1.11) [162]	5.82 (1.03) [358]
Inferred motive	Foreign	5.38 (0.66) [78]	5.36 (0.59) [83]	5.37 (0.61) [161]
	Regional	5.18 (0.69) [78]	5.06 (0.77) [79]	5.12 (0.73) [157]
	Standard Dutch			5.23 (0.60) [40]
	Total	5.28 (0.68) [156]	5.21 (0.70) [162]	5.24 (0.68) [358]

Figure 2

Discriminant function plot of degree of accentedness.



3.2.2 Social categorization

A two-way ANOVA with accent type (foreign vs. regional) and accent strength (slight vs. strong) on social categorization yielded a significant interaction effect ($F(1, 353) = 11.17, p < .001, \eta_p^2 = .03$), a significant main effect of accent type ($F(1, 353) = 14.57, p < .001, \eta_p^2 = .04$), and no significant main effect of accent strength ($F(1, 353) = 2.06, p = .15, \eta_p^2 = .01$). Simple effects analyses were conducted to explore the interaction and included the standard-accented condition as a control group for interpretive comparisons. The simple effects analysis revealed that for foreign accents, the strength of the accent did not influence ratings of social categorization ($F(1, 353) = 1.84, p = .18, \eta_p^2 = .005$) but it did for regional accents ($F(1, 353) = 11.27, p < .001, \eta_p^2 = .03$). Strong regional accents ($M = 2.23, SD = 1.23$) received lower ratings of perceived similarity than slight regional accents ($M = 2.94, SD = 1.29$) and lower ratings than standard accents ($M = 3.20, SD = 1.53$). For strong accents, simple effects analysis revealed a significant difference between accent type; strong regional accents ($M = 2.23, SD = 1.23$) were rated lower than strong foreign accents ($M = 3.29, SD = 1.37$), $F(1, 353) = 26.22, p < .001, \eta_p^2 = .07$, but no difference between accent types was found for slight accents ($F(1, 353) < 1, p = .74, \eta_p^2 < .001$). The means and standard deviations for the ANOVA on social categorization are presented in Table 13. Figure 3 displays the estimated marginal means of social categorization by accent type and accent strength.

These results contradicted Hypothesis 2. Foreign-accented speakers did not receive lower evaluations of social categorization compared to regionally and standard-accented speakers but were rated similar to standard-accented speakers. Strongly foreign-accented speakers were perceived as more similar compared to slightly foreign-accented speakers, but this effect was nonsignificant.

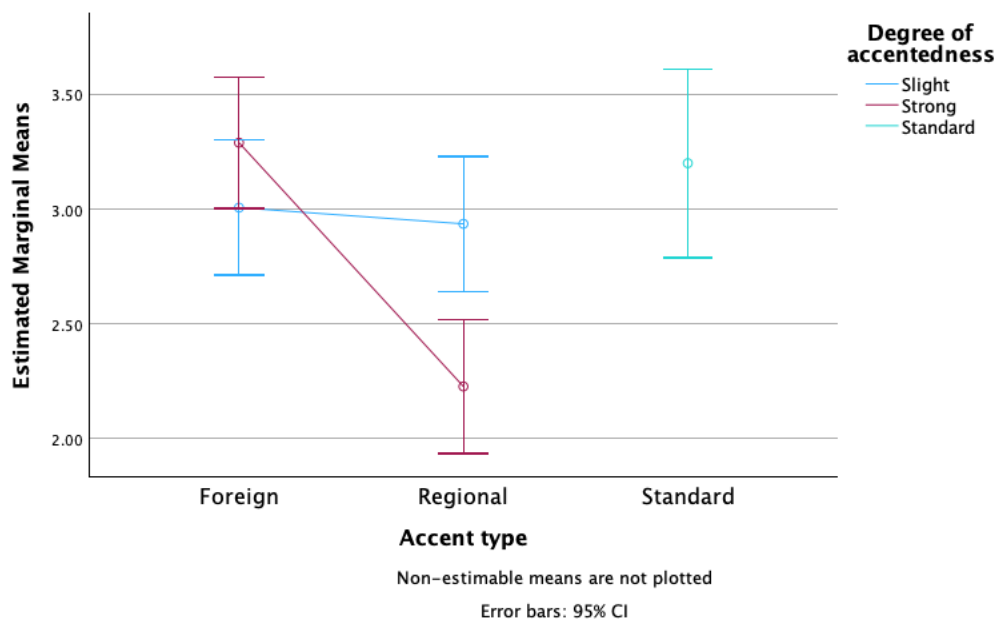
Table 13

The means, standard deviations (between round brackets) and number of observations [between square brackets] for social categorization (1 = low, 7 = high) in function of accentedness and accent type.

Outcome variable	Accent type	Accentedness		
		Slight <i>M</i> (<i>SD</i>) [<i>n</i>]	Strong <i>M</i> (<i>SD</i>) [<i>n</i>]	Total <i>M</i> (<i>SD</i>) [<i>n</i>]
Social categorization				
	Foreign	3.01 (1.27) [78]	3.29 (1.37) [83]	3.15 (1.33) [161]
	Regional	2.94 (1.29) [78]	2.23 (1.23) [79]	2.58 (1.31) [157]
	Standard Dutch			3.20 (1.53) [40]
	Total	2.97 (1.28) [156]	2.77 (1.40) [162]	2.91 (1.37) [358]

Figure 3

Estimated marginal means of social categorization.



3.2.3 Attitudinal evaluations

A two-way MANOVA with degree of accentedness (slight vs. strong) and accent type (foreign vs. regional) on the attitudinal evaluations competence, status, likeability and dynamism found a significant interaction effect of accent strength and accent type (Pillai's $V = 0.04$, $F(4, 350) = 3.75$, $p = .005$, $\eta^2 = 0.04$), a significant main effect of accent type (Pillai's $V = 0.09$, $F(4, 350) = 8.66$, $p < .001$, $\eta^2 = 0.09$), and no significant main effect of accent strength (Pillai's $V = 0.02$, $F(4, 350) = 2.12$, $p = .08$, $\eta^2 = 0.02$). The standard-accented condition served as a control group and was included in the subsequent post hoc analyses for the MANOVA to provide a reference point to examine perceived differences in attitudinal evaluations.

Descriptive discriminant analysis of the interaction effect revealed one discriminant function explaining 100% of the variance (canonical $R^2 = .04$). The structure matrix presented in Table 14 showed contributions of competence ($r = .58$), status ($r = .55$) and dynamism ($r = .65$) to the discriminant function. To retain the multivariate approach, a univariate ANOVA was performed using a composite interaction score, calculated by multiplying the

standardized outcome variables with their respective standardized function coefficients (Smith et al., 2020). This analysis revealed that foreign-accented speakers received slightly higher scores on the composite function than the standard-accented speakers when the accent was strong, but lower scores when the accent was slight. For regionally accented speakers, slightly accented speakers scored higher on the composite function than strongly accented speakers, but both scores were lower than the scores for the standard-accented speaker (see Figure 4). The calculated effect sizes further supported these findings. They revealed that the difference between foreign- and regionally accented speakers was greatest for strong accents (Cohen's $d = 0.69$, 95% CI [0.41, 0.98]) compared to slight accents (Cohen's $d = -0.15$, 95% CI [-0.47, 0.16]). Since the discriminant function was primarily characterized by dynamism, competence and status, the results suggested higher perceptions of a combination of these characteristics for strongly foreign-accented speakers and lower evaluations for strongly regionally accented speakers.

Descriptive discriminant analysis as post hoc for the main effect of accent type revealed two discriminant functions. The first function explained 77.2% of the variance (canonical $R^2 = 0.10$) and the second function explained 22.8% of the variance (canonical $R^2 = 0.03$). Both functions combined significantly differentiated between the accent types, Wilks' $\Lambda = .87$, $\chi^2(8) = 48.11$, $p < .001$, and the second function alone also significantly differentiated between accent types, Wilks' $\Lambda = .97$, $\chi^2(3) = 11.27$, $p = .01$. The correlations between outcomes and the discriminant functions (see Table 15) revealed that competence ($r = .99$) and status ($r = .67$) correlated highly with the first function, and the second function was dominated by likeability ($r = .77$). The group centroids (see Table 15) and the discriminant function plot (see Figure 5) showed that the first function discriminated the regionally accented speakers from the foreign- and standard-accented speakers, and the second function discriminated the foreign-accented speakers from the regionally and standard-accented speakers. Means and standard deviations of the MANOVA on attitudinal evaluations are presented in Table 16.

The discriminant function analyses provided partial support for Hypothesis 3; accent type and accent strength had a combined effect on attitudinal evaluations with strongly foreign-accented speakers evaluated highly on a combination of competence, status, likeability, and dynamism, whereas strongly regionally accented speaker received lower evaluations. The influence of likeability was visible in the main effect of accent type; foreign-accented speakers were rated as more likeable than regionally and standard-accented speakers. This finding contradicted the expectation that foreign- and regionally accented speakers would not differ on solidarity traits. The findings also contradicted the expectation that foreign-accented speakers would receive lower evaluations of status-related traits.

Table 14

Structure matrix showing pooled within-groups correlations between discriminating variables and the standardized canonical discriminant function.

	Function 1
Competence	.58
Status	.55
Likeability	-.04
Dynamism	.65

Figure 4

Accentedness by accent type interaction plot of the composite interaction scores with 95% confidence intervals.

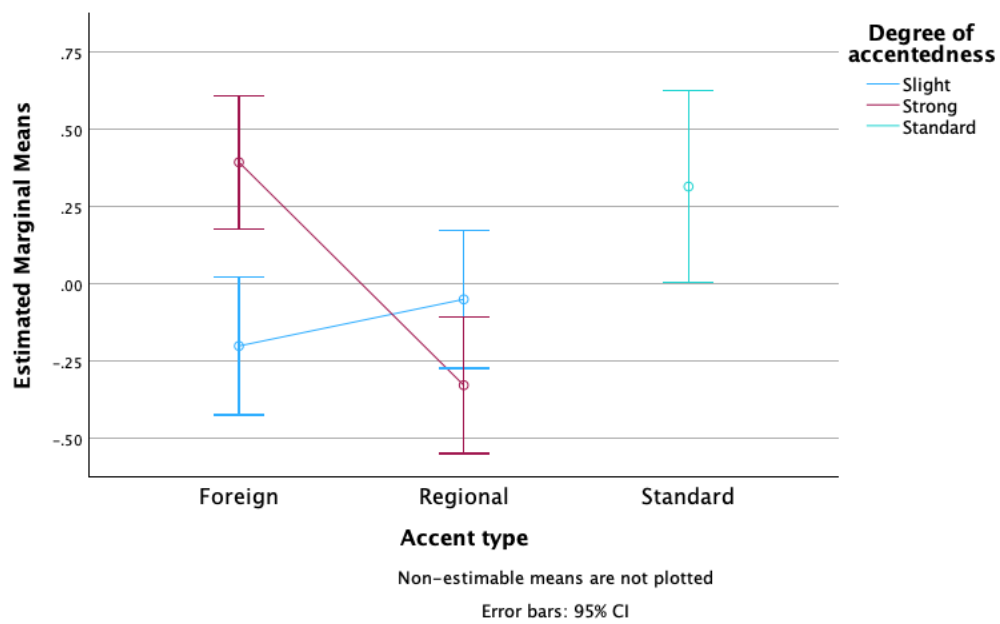


Table 15

Structure matrix of the main effect of accent type and group centroids per function.

	Function	
	1	2
Competence	.99*	.01
Status	.67*	-.26
Likeability	.53	.77*
Dynamism	.35	.43*

Group centroids	Function	
	1	2
Foreign	.28	.13
Regional	-.37	-.01
Standard	.34	-.47

Figure 5
Discriminant function plot of accent type.

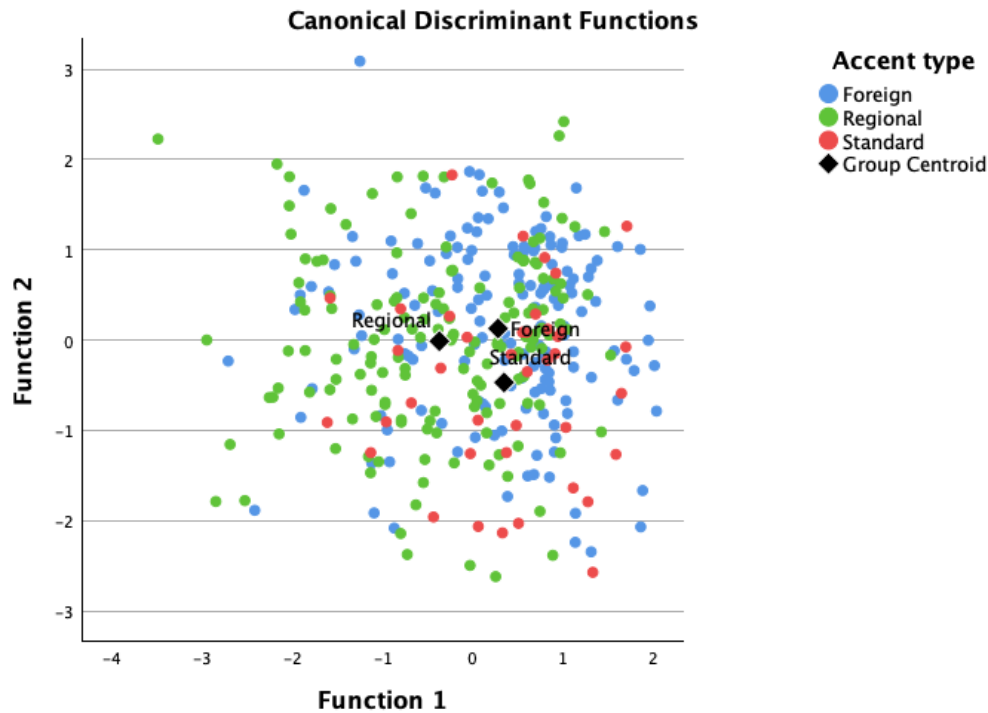


Table 16
The means, standard deviations (between round brackets) and number of observations [between square brackets] for the attitudinal evaluations (1 = low, 7 = high) in function of accentedness and accent type.

Outcome variable	Accent type	Accentedness		
		Slight <i>M (SD) [n]</i>	Strong <i>M (SD) [n]</i>	Total <i>M (SD) [n]</i>
Competence	Foreign	5.31 (0.92) [78]	5.53 (0.92) [83]	5.42 (0.92) [161]
	Regional	4.93 (0.92) [78]	4.68 (1.09) [79]	4.81 (1.01) [157]
	Standard Dutch			5.48 (0.83) [40]
	Total	5.12 (0.93) [156]	5.12 (1.09) [162]	5.16 (1.00) [358]
Status	Foreign	4.37 (1.01) [78]	4.72 (0.92) [83]	4.55 (0.98) [161]
	Regional	4.22 (1.10) [78]	4.09 (0.97) [79]	4.15 (1.03) [157]
	Standard Dutch			4.76 (1.00) [40]
	Total	4.29 (1.06) [156]	4.42 (0.99) [162]	4.40 (1.03) [358]
Likeability	Foreign	4.85 (0.81) [78]	4.92 (0.81) [83]	4.88 (0.81) [161]
	Regional	4.44 (0.91) [78]	4.54 (0.94) [79]	4.49 (0.92) [157]
	Standard Dutch			4.51 (0.88) [40]
	Total	4.64 (0.88) [156]	4.73 (0.89) [162]	4.67 (0.89) [358]
Dynamism	Foreign	3.71 (1.36) [78]	4.43 (1.18) [83]	4.08 (1.32) [161]
	Regional	3.71 (1.32) [78]	3.72 (1.20) [79]	3.71 (1.26) [157]
	Standard Dutch			3.78 (1.29) [40]
	Total	3.71 (1.34) [156]	4.08 (1.24) [162]	3.88 (1.30) [358]

3.2.4 Hirability

A two-way ANOVA with accent type (foreign vs. regional) and accent strength (slight vs. strong) on hirability revealed a significant interaction effect ($F(1, 353) = 3.91, p = .05, \eta_p^2 = .01$), a significant main effect of accent type ($F(1, 353) = 24.80, p < .001, \eta_p^2 = .07$), and no significant main effect of accent strength ($F(1, 353) < 1, p = .05, \eta_p^2 = .001$). Simple effects analyses were conducted to examine the interaction, and the standard-accented condition was included as a control group for interpretive comparisons. The simple effects analysis revealed a significant difference between accent types for hirability ratings when using a slight accent ($F(1, 353) = 4.43, p = .04, \eta_p^2 = .01$), and a significant difference between accent types when using a strong accent ($F(1, 353) = 24.44, p < .001, \eta_p^2 = .07$). Slightly regionally accented speakers ($M = 4.35, SD = 1.21$) were less likely to be hired than slightly foreign-accented speakers ($M = 4.73, SD = 0.98$), and strongly regionally accented speakers ($M = 4.03, SD = 1.06$) were less likely to be hired than strongly foreign-accented speakers ($M = 4.89, SD = 1.09$). Overall, regionally accented speakers were less likely to be hired than standard-accented speakers ($M = 4.88, SD = 1.22$). Simple effects analysis showed no significant difference in hirability ratings between slight and strong accents for foreign-accented speakers ($F(1, 353) < 1, p = .35, \eta_p^2 = .002$), and no significant difference between slight and strong accents for regionally accented speakers ($F(1, 353) = 3.43, p = .07, \eta_p^2 = .01$). Means and standard deviations of the ANOVA on hirability are presented in Table 17, and Figure 6 illustrates the estimated marginal means of hirability on accent strength and accent type.

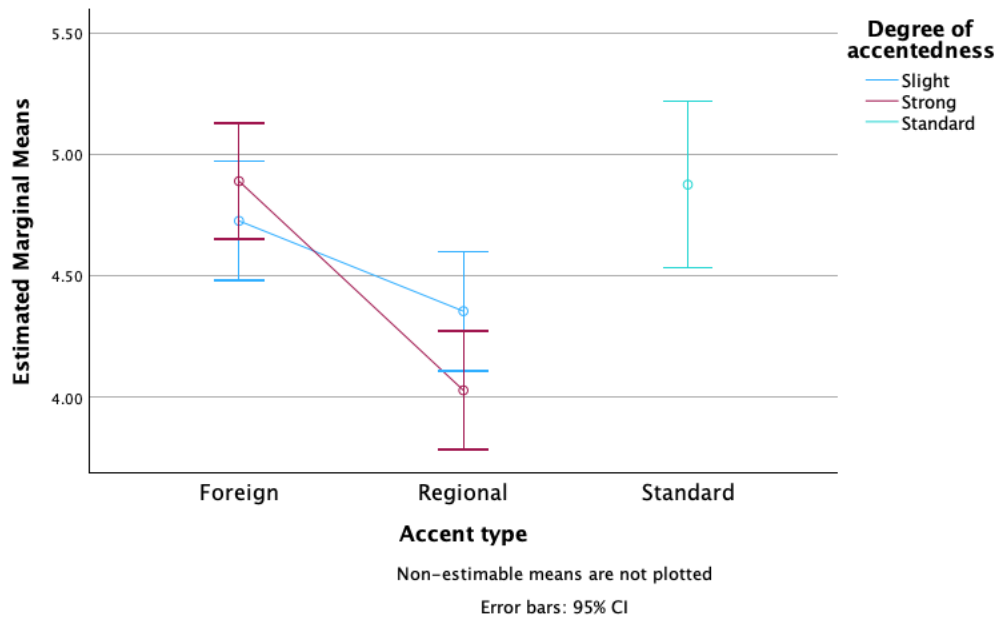
The data did not support Hypothesis 4. Contrary to expectations, regionally accented speakers were less likely to be hired than foreign- and standard-accented speakers. Strongly foreign-accented speakers were more likely to be hired than strongly regionally accented speakers, and slightly regionally accented speakers were more likely to be hired than slightly foreign-accented speakers.

Table 17

The means, standard deviations (between round brackets) and number of observations [between square brackets] for hirability (1 = low, 7 = high) in function of accentedness and accent type.

Outcome variable	Accent type	Accentedness		
		Slight <i>M (SD) [n]</i>	Strong <i>M (SD) [n]</i>	Total <i>M (SD) [n]</i>
Hirability	Foreign	4.73 (0.98) [78]	4.89 (1.09) [83]	4.81 (1.04) [161]
	Regional	4.35 (1.21) [78]	4.03 (1.06) [79]	4.19 (1.15) [157]
	Standard Dutch			4.88 (1.22) [40]
	Total	4.54 (1.12) [156]	4.47 (1.15) [162]	4.55 (1.15) [358]

Figure 6
Estimated marginal means of hirability.



4. Discussion

The purpose of this study was to examine the differences in perceptions of processing fluency, inferred motive, social categorization, competence, status, likeability, dynamism, and hirability that Dutch listeners had of slightly and strongly accented foreign- and regionally accented speakers. The results showed significant main effects of accent type and degree of accentedness on the combination of processing fluency and inferred motive, significant interaction effects of accentedness and accent type on social categorization, the combination of competence, status, and dynamism, and on hirability, and a significant main effect of accent type on likeability. In general, the findings underscore the importance of adopting a multivariate perspective when examining complex social phenomena such as accent bias, as it captures the nuances with which multiple social constructs interact to influence listeners' judgments.

4.1 Comparison with the literature and explanation of findings

4.1.1 Processing fluency and inferred motive

The results of the MANOVA and subsequent discriminant analyses yield important insights into how accent type and accent strength influence listeners' perceptions regarding processing fluency and inferred motive. The absence of a significant interaction effect between accent type and degree of accentedness suggests that these dimensions operate independently. This finding does not support Hypothesis 1, which predicted a combined effect of accent type and accent strength on processing fluency and inferred motive. Instead, each factor contributed independently to listener evaluations.

The main effect of accent type was primarily driven by differences in inferred motive. The first discriminant function, which accounted for the majority of variance, was dominated by inferred motive and distinguished foreign-accented speakers from regionally and standard-accented speakers. Foreign-accented speakers received higher ratings of inferred motive, supporting the hypothesis that listeners attribute more positive intent to these speakers. Foreign-accented speakers were thus perceived as being more accommodative and showing more effort to communicate clearly than regionally accented speakers and were even perceived as more accommodative than standard-accented speakers. This finding is in line with research stating that foreign-accented speech elicits a more positive inferred motive than regionally accented speech, since communication difficulties are often attributed to inability rather than unwillingness (Fairchild et al., 2020). Foreign-accented speakers are often perceived as willing to communicate clearly, whereas regionally accented speakers may be considered more able of communicating effectively but perceived as less willing to do so, potentially leading to negative inferences about their motive. Conversely, processing fluency loaded most heavily onto the second discriminant function, which explained a small portion of the variance and only contributed to a significant difference between accent types in combination with the first function. This function differentiated standard-accented speakers from both regionally and foreign-accented speakers. Thus, while accent type does influence perceived processing effort, this effect is subtler and more aligned with the contrast between standard and nonstandard accents rather than between foreign and regional accents. The results are in line with findings by Montgomery and Acheme (2022), who concluded that processing fluency and inferred motive together influenced speaker evaluations.

The main effect of accent strength was also explained by two discriminant functions. The first function again was dominated by inferred motive and explained the majority of variance. This function differentiated strongly accented speakers from slightly and standard-accented speakers. Listeners attributed lower ratings of inferred motive to strongly accented speakers, suggesting that a strong accent might reduce perceived intent to communicate clearly. The second function was dominated by processing fluency and differentiated

standard-accented speakers from regionally and foreign-accented speakers. This is in line with the idea that nonstandard accents are more difficult to process, but the finding contrasts with previous research concluding that foreign speech is more difficult to process than regional speech (Deprez-Sims & Morris, 2013; Fuse et al., 2024; Gluszek & Dovidio, 2010; Goslin et al., 2012; Hendriks et al., 2019; Tamati et al., 2021). However, the low variance explained by the second function suggests that processing difficulties may have played a secondary role relative to judgments about inferred motive in distinguishing between accent types, though both contributed to the overall pattern.

Overall, inferred motive was the primary contributor to differences between accent types and accent strengths, with processing fluency playing a secondary role. Inferred motive ratings were highest for foreign-accented speakers, consistent among accent strengths, and lowest for regionally accented speakers with strong accents. Thus, while strong accents diminished inferred motive overall, foreignness may have enhanced perceived intent, possibly due to listeners attributing greater effort or motivation to foreign-accented speakers (Fairchild et al., 2020). Processing fluency was lowest for strong accents, which is in line with previous research (Bestelmeyer, 2024; Dragojevic et al., 2024; Hendriks et al., 2023). Interestingly, however, foreign-accented speakers were not rated lower in processing fluency than regionally accented speakers. This suggests that accent strength may overshadow accent type when it comes to perceived comprehensibility. The current findings thus contribute to studies concluding that processing fluency is not the main explanation for accent bias (Deprez-Sims & Morris, 2010; Spence et al., 2024). The lack of support for the processing fluency principle could be due to the four chosen accents being relatively familiar to the respondents, since processing difficulties have weaker effects on attitudes toward familiar compared to unfamiliar accents (Dragojevic & Giles, 2016). Yet, the familiarity scores were not very high (see section 2.4), so future research could focus on how processing fluency influences attitudes toward familiar and unfamiliar regionally and foreign-accented speakers.

4.1.2 Social categorization

The results of the two-way ANOVA provide nuanced insights regarding the influence of both accent type and accent strength on perceptions of social categorization. The findings indicated that perceptions of in-/out-group are not only shaped by accent type or accent strength but are shaped by the interaction between those factors. Contrary to Hypothesis 2, which predicted that foreign-accented speakers would be rated lowest in social categorization, this was not supported by the data.

A significant interaction effect was found between accent type and strength. Specifically, the results showed that accent strength affected social categorization for regional accents, but not for foreign accents. For regionally accented speakers, having a stronger accent resulted in significantly lower ratings of perceived similarity compared to both slightly regionally accented and standard-accented speakers. In contrast, the strength of the foreign-accented speakers did not significantly change similarity ratings, indicating that social judgements of foreign-accented speakers are relatively fixed and do not change based on accent strength. This finding could not be linked to the speaker recognition findings (see section 3.1.2) as both regionally and foreign-accented speakers were equally likely to be correctly identified regardless of whether their accent was slight or strong. This finding thus contradicted Hypothesis 2 as strong foreign accents did not elicit higher ratings of similarity. One possible explanation is that strongly foreign-accented speakers were perceived as less competitive or less threatening (Birney et al., 2020). Birney et al. (2020) found that a strongly accented nonnative speaker (whose Polish nationality was unknown to listeners) was rated as more similar by native British people than her slightly accented counterpart. They suggested that native speakers may feel more favorably toward a speaker with a strong foreign accent

because it clearly signals out-group membership. Linguistic out-groups are often not perceived as competing for social or cultural resources, reducing perceived threat. This absence of perceived competition could have softened similarity judgments for foreign-accented speakers in the current study. In contrast, regionally accented speakers with strong accents may have been considered less similar because their deviation occurs within the in-group, potentially triggering greater social distance or stigma.

Another interesting result is the perception of regionally accented speakers as belonging to the out-group more prominently than foreign-accented speakers, which contradicted Hypothesis 2 and is not in line with previous research (Bestelmeyer, 2024; Gluszek & Dovidio, 2010; Mauchand & Pell, 2022; Roessel et al., 2019). Foreign-accented speakers with strong accents were rated similarly to standard-accented speakers on social categorization, and significantly higher than regionally accented speakers with strong accents. This result showed that regional variation, particularly when marked by strong accents, may carry more social stigma or signal greater out-group perceptions than foreignness does. The associations of perceived similarity for foreign-accented speakers might be due to Dutch listeners' familiarity with using a second language, especially German or French, which are commonly taught in schools. This experience may have helped participants more easily imagine the challenges of communicating in a nonnative language, facilitating perspective-taking and consequently reducing bias (Hansen et al., 2014), thereby resulting in higher ratings of social categorization for foreign-accented speakers. The fact that regionally and foreign-accented speakers received similar ratings of perceived similarity when using slight accents and the lack of a significant difference between accent strengths for foreign-accented speakers revealed that the negative influence of accent strength is unique to regional accents. This pattern may be driven by social stigma attached to strong regional accents.

While the current results supported the idea that prejudice plays a central role in shaping bias against nonstandard-accented speakers (Spence et al., 2024), much of the existing research has focused on how foreign accents create a sense of alienation for listeners (Lindemann, 2003; Lindemann, 2005; Deprez-Sims & Morris, 2010; Deprez-Sims & Morris, 2013). According to the results of the current study, foreign-accented speakers evoke less dissimilarity than has been previously thought (Deprez-Sims & Morris, 2013; Lindemann, 2005). Research by Levon et al. (2021) has shown that regionally accented speakers receive out-group bias which is supported by the current results. However, the finding that accent strength is more impactful for regionally accented speakers compared to foreign-accented speakers is new and contributes to the stigma surrounding regional accents (Levon et al., 2021; Levon et al., 2022).

The current findings challenge assumptions about the negative social implications associated with foreign accents. While regional accents – especially strong ones – appear to signal greater social distance, foreign-accented speakers were not perceived in the same way and were even viewed as more socially similar than their regionally accented counterparts. This suggests that listeners may view foreignness as less threatening or more neutral than a deviation from standard language norms within their own linguistic community (Birney et al., 2020).

4.1.3 Attitudinal evaluations

The results of the MANOVA and subsequent discriminant analyses on the different attitudinal evaluations offered new insights into the effects of accent type and degree of accentedness on speaker dimensions such as competence, status, likeability, and dynamism. The results provided partial support of Hypothesis 3, which predicted (1) a combined effect of accent type and accent strength, (2) lower evaluations of foreign-accented speakers on status traits, and

(3) no significant differences between regionally and foreign-accented speakers on solidarity traits.

The significant interaction effect between accent type and accent strength indicated that listeners' attitudinal evaluations were not influenced by accent type or strength in isolation, but rather by how these factors combine. The interaction effect was mainly driven by dynamism, competence, and status, with likeability playing a minimal role. A key finding is that strongly foreign-accented speakers received the highest composite evaluations, even outperforming standard-accented speakers – though this effect was nonsignificant. This suggested that a strong foreign accent can enhance perceptions of competence, status, and dynamism. In contrast, strongly regionally accented speakers received the lowest evaluations across these same traits. The difference between the strongly foreign and regional accents was large, indicating that strong regional accents may be more stigmatized than foreign ones in terms of perceived ability and status. This pattern was not found for slightly accented speech, where differences between the accent types were nonsignificant, suggesting that accent strength increased perceptions of bias, particularly for regionally accented speakers.

The main effect of accent type furthermore revealed differences between regionally and foreign-accented speakers and accounted for the role of likeability. Discriminant function analysis revealed two functions: one differentiating regional from foreign and standard speakers – driven by status and competence – and the other distinguishing foreign from regional and standard speakers – driven by likeability. This suggests that perceptions of status primarily drive distinctions involving regional speakers, while solidarity perceptions distinguish foreign-accented speakers from others. Regional speakers were perceived as lower in status and competence than foreign- and standard-accented speakers, and foreign speakers were perceived as more likeable than regionally and standard-accented speakers.

The significant interaction supported the part of Hypothesis 3 that predicted a combined effect of accent type and strength on attitudinal evaluations. Additionally, the main effect of accent type is in line with previous research concluding that foreign and regional accents differ regarding the status dimension of attitudinal evaluations (Dragojevic et al., 2016; Giles, 1970). However, the current results contradict the hypothesis that strong foreign accents would elicit the least favorable evaluations on status-related traits (status and competence) and contradict research findings that stronger accents result in lower evaluations overall (Deprez-Sims & Morris, 2013; Fuse et al., 2024; Grondelaers et al., 2019; Hendriks et al., 2019; Hendriks et al., 2023; Nejjari et al., 2012; Roessel et al., 2019). The results also contrast with Hypothesis 3 and previous findings that foreign- and regionally accented speakers are perceived similarly on solidarity ratings (dynamism and likeability; Dragojevic et al., 2016; Giles, 1970, Spence et al., 2024).

A possible explanation for the strongly foreign-accented speaker being perceived as more dynamic, more competent, and higher in status could be due to expectancy violation. According to this theory, listeners are more influenced by speakers who violate stereotypes in unexpected ways. If foreign-accented speakers are generally expected to be less competent, a highly competent foreign-accented speaker may be perceived even more positively than a standard-accented speaker (Hansen et al., 2018; Hideg et al., 2022). The scripted interview scenario might have contributed to this perception. However, expectancy violation theory does not explain the low ratings for regionally accented speakers in the current results, indicating additional differences in the social perception between regionally and foreign-accented speakers. Interestingly, this finding contrasts with Lybaert et al. (2022), who found no downgrade for a Colloquial Dutch speaker on status-related traits in Flanders. Moreover, they observed that an ethnic minority person wearing a headscarf was rated more positively on professionalism, but only when speaking Standard Dutch (Lybaert et al., 2022). This positive effect was explained by expectancy violation theory as participants did not expect a

speaker looking like an ethnic minority to speak Standard Dutch (Lybaert et al., 2022). In contrast, the current study conducted in the Netherlands found no positive expectancy violation effect for regionally accented speakers. Regional accents thus appear to carry more negative weight, especially on competence and status dimensions.

While expectancy violation may explain part of the pattern, speech delivery differences may offer another explanation. The high dynamism ratings for the strongly foreign-accented speaker could be explained by the difference in speech characteristics of the French speaker. She spoke livelier, faster, and less monotonous in her strong accent compared to her slight accent (see section 2.1.1.4), which could have influenced the results, even though no differences between the slight and strong accents for the German speaker had been detected on speaker characteristics.

Additionally, regionally and foreign-accented speakers did not receive similar solidarity ratings: foreign-accented speakers received higher solidarity ratings compared to regionally and standard-accented speakers. An explanation for this finding could be that participants were able to empathize with foreign-accented speakers more than with regionally accented speakers. Since many of the participants did not speak with a regional accent (see section 2.4), this could have resulted in negative likeability ratings for regional speakers, as they were not perceived as part of the in-group (Dragojevic, 2018), whereas Dutch people could be more familiar with foreign accents, possibly due to the multilingual environment typical for Dutch higher education.

The French and German accents may be perceived as higher in status than regional accents (Giles, 1970; Lindemann, 2005) which could have resulted in more positive evaluations of the foreign-accented speakers compared to the regionally accented speakers. This finding is in line with previous research on the variability of how foreign accents are perceived. For example, Dragojevic and Goatly-Soan (2022) found that US listeners rated Vietnamese accents lower than French or German ones. The high status of accents like French and German may be due to globalization. As Gunnarsson (2013) notes, the European Union's open labor market and the prevalence of multilingual workplaces may shift how foreign-accented speakers are evaluated (Gluszek & Dovidio, 2010). The present results also support research showing a lack of prestige for regional accents, particularly when the accent is strong (Baratta & Halenko, 2022; Roessel et al., 2019).

The finding that the strongly foreign-accented speaker is perceived similarly to the standard-accented speaker on attitudinal evaluations is striking but not completely new. For instance, Cargile (2000) found that Chinese-accented English was not rated less suitable for high-status jobs in the US, potentially because of the economic and occupational success of Asian Americans. Similarly, Watanabe (2008) found that French-accented English was evaluated higher in confidence by New Zealanders than New Zealand English. In Malaysia, Ahmed et al. (2014) showed that foreign-accented speakers were rated more positively than native-accented speakers, as listeners identified more with them in a multilingual context. Likewise, Hendriks et al. (2021) found similar evaluations of strongly German-accented speakers with standard Dutch speakers on status and likeability, attributing the results to positive effects of stereotyping.

Concluding, the current results highlight the complex nature of accent-based evaluations. While regional accents – especially strong ones – can elicit negative perceptions of dynamism, competence, status, and likeability, strong foreign accents may elicit more positive perceptions on these traits. This finding underscores the importance of distinguishing between different types of accents, instead of assuming uniform effects across nonstandard speech. The findings furthermore illustrate the importance of incorporating the effect of accent strength in attitudinal research.

4.1.4 Hirability

The results of the two-way ANOVA on hirability revealed a significant interaction of accent type and degree of accentedness, as well as a significant main effect of accent type. These findings did not support Hypothesis 4, which predicted that speakers with strong foreign accents would be less hireable than regionally or standard-accented speakers. Instead, the results showed that regionally accented speakers – both with a slight and strong accent – were perceived as less hireable than speakers with foreign accents. This difference was especially pronounced for strongly accented speech, with strongly regionally accented speakers receiving the lowest hirability ratings overall.

The significant interaction effect indicated that hirability ratings were influenced by the combination of accent type and strength. Simple effects analysis clarified that accent type influenced hirability ratings at both levels of accent strength: slightly foreign-accented speakers were rated more hireable than slightly regionally accented speakers, and the same pattern held for strong accents – with a larger effect size for the strong accent condition. Interestingly, accent strength alone had no significant main effect, and no significant differences in hirability were found between slightly and strongly accented speakers within either the foreign or regional accent group. This showed that while listeners differentiated between regional and foreign accents in terms of hirability, they were less sensitive to differences in the degree of accentedness within those types. The consistent pattern across both levels of accentedness may suggest that regionally accented speakers, regardless of strength, were systematically perceived as less hireable than foreign- or standard-accented speakers.

The findings showed that the foreign-accented speaker was rated similarly to the standard-accented speaker in terms of hirability, which contradicted the expectation that nonstandard accents generally receive lower evaluations in employment settings than standard accents (Hosoda et al., 2012; Schulte et al., 2024; Spence et al., 2024). Moreover, the findings contrast with previous research and assumptions that foreign-accented speakers – especially those with strong accents – are typically disadvantaged in employment settings (Deprez-Sims & Morris, 2013; Roessel et al., 2019), also in comparison to regionally accented speakers (Spence et al., 2024). In the current data, strongly foreign-accented speakers were rated as more hireable than their regional counterparts, suggesting that accent type may play a more critical role than accent strength in shaping hiring decisions.

The regionally accented speaker was considered less suitable for the high-status job used in the current experiment, a finding possibly related to the low status of regional accents (Levon et al., 2021; Schulte et al., 2024). This finding is not in line with Dragojevic (2018) and Gruffydd et al. (2025) who proposed that regionally accented speakers may still be considered as part of the broader linguistic community and therefore be less subject to accent based hiring bias. The same consensus was found in a meta-analysis (Spence et al., 2024), concluding that accent bias in a hiring context was more noticeable for foreign than for regional accents.

One possible explanation for the relatively high ratings of the foreign-accented speaker may relate to the perceived prestige of the specific foreign accents used. Certain foreign accents, such as French or German, have been associated with higher status and may be evaluated more positively in professional settings (Giles, 1970; Lindemann, 2005; Gluszek & Dovidio, 2010; Hosoda & Stone-Romero, 2010). For instance, Hendriks et al. (2021) found that strongly German-accented speakers were evaluated similarly to Standard Dutch speakers in terms of status, likeability, and persuasiveness – likely due to the high prestige attributed to German by Dutch listeners. This is consistent with the current findings, in which foreign-accented speakers (including German and French) received relatively favorable evaluations. However, unlike Hendriks et al. (2021), who observed that strong German accents were

evaluated less positively than weak German accents, the current study did not find a significant difference between strongly and slightly foreign-accented speakers in terms of hirability. In contrast to foreign accents, regional accents have been linked to lower perceptions of prestige or competence (Grondelaers et al., 2019; Baratta & Halenko, 2022) which may explain the lower hirability ratings. Another explanation is that listeners related more to the foreign-accented speaker because Dutch listeners are often familiar with speaking in a foreign language themselves, leading them to perceive the speaker as more similar to themselves – which may have resulted in higher hiring recommendations (Deprez-Sims & Morris, 2013).

Overall, these findings demonstrated that accent type and accent strength play a central role in influencing hiring decisions, with the influence of accent type as the more salient factor. Contrary to expectations, foreign-accented speakers were more likely to be hired than regionally accented speakers, across both slight and strong levels of accentedness. These findings suggest that in this hiring context, regional accents may be associated with more negative professional evaluations than foreign accents.

4.2 Theoretical contributions and practical implications

The current study aimed to fill the research gap about possible differences between mechanisms driving foreign accent bias and regional accent bias. The findings showed that foreign- and regionally accented speakers were perceived differently in terms of processing fluency and inferred motive, social categorization, attitudinal evaluations (including status, competence, likeability, and dynamism), and hirability. Another research gap the current study aimed to bridge was that not all studies examine the effects of accent strength on accent bias. The current results have indicated the importance of implementing accent strength in research on accent bias. The findings have shown differences in evaluations of regionally and foreign-accented speakers. Strongly regionally accented speakers are often evaluated lower on the same social dimensions than strongly foreign-accented speakers. This finding indicates different mechanisms behind foreign versus regional accent bias. These findings contradict earlier beliefs that stronger accents always lead to more negative evaluations (Deprez-Sims & Morris, 2013; Hendriks et al., 2023) and emphasize the interaction between accent type and accent strength. Accent type and accent strength cannot be considered independently but must be examined together, aligning with multidimensional frameworks of social perception (Giles et al., 1991).

The current study underscores the importance of perceived effort (inferred motive) in listeners' judgements of accented speakers. Foreign-accented speakers were rated higher on perceptions of inferred motive than regionally accented speakers, supporting theories that consider attribution of communication difficulties to willingness versus ability (Fairchild et al., 2020). This highlights the need to integrate the theory of inferred motive into broader theories of language-based social evaluations. Although inferred motive has been found to be linked to processing fluency (Montgomery & Acheme, 2022), processing fluency played a secondary role to inferred motive in the current study. The lack of support for the processing fluency principle in the current study contributes to the ongoing debate about what mechanism drives accent bias (Foucart et al., 2020; Gluszek & Dovidio, 2010; Mai & Hoffmann, 2014; Roessel et al., 2019; Shah, 2019), lending support for the prejudice perspective (Dragojevic, 2018; Spence et al., 2024). However, the current findings still showed that nonstandard accents – particularly regional accents – are consistently downgraded compared to standard accents (Dragojevic et al., 2016; Dragojevic et al., 2024; Kang & Yaw, 2024; McKenzie & Carrie, 2018; Roessel et al., 2018).

The findings furthermore indicated that Dutch listeners may feel greater affinity with strongly foreign-accented speakers compared to strongly regionally accented speakers. This

contradicts the idea that regional accents naturally elicit in-group bias (Bestelmeyer, 2024; Gluszek & Dovidio, 2010; Mauchand & Pell, 2022; Roessel et al., 2019), suggesting that social categorization based on accent is dynamic and depends on context. This could potentially be influenced by listeners' experience with second language speakers and societal attitudes toward particular (high-status) languages (Hansen et al., 2014). These findings contribute to the insight that we need to re-evaluate the ideas of who belongs to the in- or out-group and consider social and linguistic contexts when categorizing people. Perceptions of in- and out-group are more fluid than previously thought, and this should be taken into account when researching accent bias.

Moreover, the results indicate that dynamism, status, and competence – typically viewed as part of two separate dimensions (Dragojevic et al., 2016) – may correlate under certain conditions. In the current study, foreign-accented speakers were perceived as more dynamic, higher in status and more competent when their accent was strong, indicating associations of strongly foreign-accented speakers with traits like confidence and energy, especially for languages like French and German. Contrarily, strong regional accents lack these connotations, and the regional accent may be seen as a marker of low prestige (Baratta & Halenko, 2022; Roessel et al., 2019). These findings contribute to the importance to study regional accent-based bias, next to foreign accent-based bias, which dominates the field (Hideg et al., 2024).

The results of the hirability evaluations contributed to theoretical models of linguistic bias by highlighting the varying impact of accent type relative to accent strength in hiring contexts (Deprez-Sims & Morris, 2013; Roessel et al., 2019). The observation that foreign-accented speakers – regardless of accent strength – were rated as more hireable than regionally accented speakers, challenges the assumption that nonstandard speech consistently leads to negative employment outcomes (Hosoda et al., 2012; Schulte et al., 2024; Spence et al., 2024). The results suggested that listeners categorize accents not solely based on a deviation from the standard, but also in terms of social prestige or group affiliation (Baratta & Halenko, 2022; Deprez-Sims & Morris, 2013; Dragojevic, 2018; Grondelaers et al., 2019; Gruffydd et al., 2025; Levon et al., 2021; Schulte et al., 2024). This distinction implies that theoretical accounts of accent-based bias must move beyond a binary standard/nonstandard framework and instead focus on how social hierarchies among nonstandard varieties influence evaluative judgements in professional contexts (Bent et al., 2016; Fuse et al., 2024; Goslin et al., 2012; Spence et al., 2024).

By employing discriminant analyses and examining composite dimensions of attitudinal evaluations, the current study provides an integrated understanding of how these dimensions interact. Rather than isolating outcome variables, the multivariate approach adopted to study processing fluency and inferred motive together, and four dimensions of attitudinal evaluations, revealed an encompassing evaluative structure that listeners use to assess accented speakers. Because of these findings, this research supports calls for more complex, multivariate models of accent bias (Hideg et al., 2022; Smith et al., 2020).

Besides theoretical implications, the current findings can be used to develop interventions targeting accent bias. Specifically, the findings indicate that different interventions must be incorporated to decrease foreign versus regional accent bias, with regional accent bias as the most pressing type of accent bias to tackle. Furthermore, the current findings show that interventions should target multiple factors to be the most effective (Dragojevic & Dayton, 2025). Interventions aimed to decrease regional accent bias can, for example, focus on increasing empathy (via perspective-taking) for a strongly regionally accented speaker, which can lead to speakers being seen as in-group rather than out-group (Hansen et al., 2014; Weyant, 2007; Weyant, 2019). Interventions can aim on exposure of strongly accented speakers to reduce bias (see Casañ Pitarch & Candel-Mora, 2022) or should

raise awareness of positive biases for strongly foreign-accented speakers (see Deutschmann & Steinvall, 2020; Roessel et al., 2019). Workplaces are encouraged to implement trainings on accent bias to raise awareness and accept a greater linguistic diversity in the workplace, especially of regional accents. It is imperative to focus on destigmatizing regional accents to reduce linguistic discrimination in the workplace and in other contexts. Strongly regionally accented speakers should be represented in the media landscape to broaden public perceptions of linguistic diversity (Dragojevic et al., 2016), possibly reducing accent-based biases.

4.3 Limitations and recommendations for future research

This study is not without limitations. Despite the aim being to investigate evaluations of foreign- and regionally accented speakers in an ecologically valid hiring context, the experimental nature of the study required the speakers to read a pre-scripted text. This was necessary to avoid differences between speakers regarding vocabulary, grammar, or fluency to add third-variable problems and damage the internal validity. However, this decision lowered the ecological validity as these factors would be present in real-life hiring scenarios. Future studies could manipulate these specific factors to investigate their possible effect on accent-based discrimination (but see Hendriks & Van Meurs, 2022b; Woolridge et al., 2024 for ecologically valid research).

Furthermore, studies on accent bias often use audio recordings of accented speakers (Dragojevic, 2018; Grondelaers et al., 2010; Munro & Derwing, 1995). While it is an adequate way to measure accent biases in verbal job interviews (Deprez-Sims & Morris, 2013; Schulte et al., 2024; Spence et al., 2024), this is not how a job interview usually takes place. An in-person job interview also deals with visual cues which could alter the perceptions of the applicant. Future studies should look into possible differences in bias when the applicant is only heard versus heard and seen. Hansen et al. (2017) have shown that incongruent visual and auditory cues influence perceptions of a job applicant due to re-categorization, emphasizing the importance to study visual information and auditory information, as well as the sequence of this information (Hansen et al., 2018).

The speaker pre-test evaluated whether the speakers were perceived equally on speaker characteristics such as voice quality, speech rate, and confidence across the slightly and strongly accented versions. However, comparisons between speakers revealed differences in liveliness, pleasantness, and monotony, which may have influenced the significant findings on dynamism. Future studies should control for these characteristics across all speakers and accent strengths to ensure comparability. The unexpected finding that strongly foreign-accented speakers were evaluated more positively than slightly foreign-accented speakers on a combination of dynamism, competence, and status should be replicated. It is possible that this result stems from differences in speaker delivery rather than accent strength alone. Therefore, additional research with closely matched speakers is necessary to confirm that the observed effects are due to accent strength rather than other speaker-related factors.

Since this is the first study to directly compare evaluations of foreign- versus regionally accented speech with each other, replication studies are necessary to support the current findings. These future studies could also add objective comprehensibility as a variable. The current study measured subjective comprehensibility to account for processing fluency, but this is vulnerable to prejudice and can lead to exaggerated ratings of a candidate's comprehensibility (Gluszek & Dovidio, 2010). As processing fluency was not a primary influence of speaker evaluations in the current study, it might be interesting to see whether participants objectively understood the candidates to see whether the effect of degree of accentedness would hold for processing fluency. Further research could also implement other (social) contexts as accent-based discrimination is not only a problem in employment settings (Baratta & Halenko, 2022; Foucart et al., 2020; Fuertes et al., 2012; Hendriks et al., 2019;

Hendriks & Van Meurs, 2022a; Levon et al., 2021; Levon et al., 2022; Mai & Hoffmann, 2014; O'Brien et al., 2024; Schulte et al., 2024). Furthermore, as the current results showed relatively positive evaluations on status for the high-status German- and French-accented speakers, it is important to replicate the current study with foreign-accented speakers of low-status languages such as Chinese (Giles, 1970) or Turkish and Moroccan (Broeder & Extra, 1995; Dekker et al., 2021) compared to regionally accented speakers (see Grondelaers & Van Gent, 2019 for a comparison of Moroccan and Limburgish speech).

Accent research would also benefit from adopting implicit measures such as an auditory Implicit Association Test (IAT; Greenwald et al., 1998). Most studies – including the current study – use self-report questionnaires which measure explicit attitudes, yet implicit measures might give different results. McKenzie & Carrie (2018) have used an auditory IAT and have shown an implicit bias toward Southern English speech by Northern English speakers whereas the explicit measure showed a bias toward Northern English speech, indicating that negative associations toward forms of English spoken in the north of England are deeply embedded. Dekker et al. (2021) found that explicit attitudes are more negative toward Moroccan accents compared to standard Dutch or Frisian, whereas implicit attitudes only show a significant difference between Moroccan Dutch and Standard Dutch while the preference for Standard Dutch compared to Frisian disappeared (Dekker et al., 2021). Implicit measures have shown a general bias toward foreign accents (Roessel et al., 2018), but perspective taking can even reduce implicit biases toward foreign-accented speakers (Weyant, 2019). These studies show the importance of studying accent bias with implicit measures as well as with explicit measures. Different processes are needed to be able to change implicit attitudes (Gawronski & Bodenhausen, 2006), which is why future research should focus on implicit accent biases to improve our ability to change negative attitudes toward nonstandard accent speakers.

Another limitation was that although the assumption of normality was not fully met for some variables, analyses proceeded due to the robustness of the applied statistical tests, particularly given the sample size. Nevertheless, non-normality can affect the reliability of p-values and the generalizability of the findings. Therefore, these results should be interpreted with caution, and replication studies are necessary to confirm the found patterns.

Finally, the current findings emphasize the importance of considering a multivariate approach to capture the complex interplay of multiple perceptions that contribute to social evaluations of accented speech. As this was a novel attempt to disentangle differences in evaluations between foreign- and regionally accented speakers, future research should study these differences and use a multivariate approach to grasp the complex multivariate nature of all aspects playing a role in speaker perceptions.

5. Conclusion

This research examined how Dutch listeners evaluate regionally and foreign-accented Dutch speakers in a hiring context, taking into account accent type and strength. A multivariate approach was used to explore their evaluations across several social dimensions: processing fluency and inferred motive, social categorization, attitudinal evaluations (competence, status, likeability, and dynamism), and hirability. Based on the results, it can be concluded that slightly and strongly regionally and foreign-accented speakers elicit different patterns of evaluations across these dimensions.

Contrary to the literature, foreign-accented speakers were rated more positively in terms of perceived intent, likeability, dynamism, competence, status, and hirability compared to regionally accented speakers – especially when accents were strong. Thus, regionally accented speakers did not elicit in-group perceptions (Bestelmeyer, 2024; Gluszek & Dovidio, 2010; Mauchand & Pell, 2022; Roessel et al., 2019) and instead appeared to signal greater social distance and lower professional suitability, suggesting that deviations from standard norms within the same linguistic community may be judged more harshly than foreignness. Furthermore, while standard speech was easiest to process, processing fluency did not fully explain social evaluations. Instead, processing fluency distinguished standard from nonstandard accents, while perceived intent played a more central role in differentiating between regional and foreign accents, as well as between slight and strong accents.

Since little research has focused on differences in evaluations between regionally and foreign-accented speech (Bent et al., 2016; Fuse et al., 2024; Goslin et al., 2012; Spence et al., 2024), or considered accent strength, the current study aimed to fill that gap. The strongly regionally accented speakers were often evaluated lower on the same social dimensions than strongly foreign-accented speakers, which indicates different mechanisms are at play for foreign versus regional accent bias. These findings emphasize the interaction between accent type and accent strength and underscore the importance of a multivariate approach to disentangle evaluation differences between nonstandard-accented speakers. Understanding the differences between evaluations of regionally and foreign-accented speech can inform interventions to reduce accent-based bias, which is pressing as accent bias is often overlooked compared to racial and gender discrimination (Hansen et al., 2014; Spence et al., 2024). The current results particularly emphasize the need to reduce discrimination against regionally accented speakers and encourage inclusion in professional and social settings (Paluck et al., 2021; Roessel et al., 2020).

More research is necessary to fully comprehend the different mechanisms underlying foreign and regional accent bias (Foucart, 2020; Gluszek & Dovidio, 2010; Mai & Hoffmann, 2014; Roessel et al., 2019; Shah, 2019), especially since these mechanisms do not operate independently of one another (Dragojevic, 2018; Hideg et al., 2022). The current findings highlight the pressing need to address persistent bias against regionally accented speakers, who were consistently evaluated less favorably than both foreign-accented and standard-accented individuals. This suggests that in professional contexts, regional accents may carry a unique stigma, underscoring the importance of shifting research and policy attention toward this overlooked form of linguistic bias. Unexpectedly, foreign-accented speakers were rated similarly to standard speakers across perceived similarity, hirability, and a combination of competence, status, dynamism, and likeability, contradicting prior assumptions that foreignness uniformly leads to negative evaluations. Future research should investigate why certain foreign accents may escape stigmatization, and under what conditions they might even be perceived as advantageous in professional contexts. This study underscores the complexity of accent-based bias and calls for a broader, more nuanced understanding of how social evaluations are shaped by linguistic variation.

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Appendix 1: Interview script

Ik zal eerst iets over m'n achtergrond vertellen. Ik heb een bachelordiploma in Computer Science. Ik beschouw mezelf als een ambitieuze en gedreven werknemer. Ik neem graag risico's en ga uitdagingen niet uit de weg. Hoewel ik goed in teamverband kan werken, werk ik het liefst zelfstandig. Ik kan ook goed multi-tasken. Ik ben competitief en ben ervan overtuigd dat dit essentieel is om succesvol te zijn. Ik geef toe dat ik dingen soms tot het laatste moment uitstel, maar onder druk presteer ik nou eenmaal beter. Ik ben op zoek naar een baan die uitdagend is en veel groeimogelijkheden biedt. Hopelijk kan ik u ervan overtuigen dat ik een aanwinst zal zijn voor uw bedrijf.

Appendix 2: Speaker pre-test Qualtrics questionnaire

Note: The bold headings (e.g., "Introduction", "Consent", etc.) are included here for clarity but were not in the Qualtrics questionnaire that was distributed to the participants.

Introduction

Beste deelnemer,

Hartelijk dank voor je deelname aan dit onderzoek, uitgevoerd door een student van de Radboud Universiteit. Lees de volgende instructies zorgvuldig door, want ze geven informatie over wat er van je verwacht wordt. Als er iets onduidelijk is of als je vragen hebt, neem dan contact op met Emma Bastiaansen (emma.bastiaansen@ru.nl).

In deze pre-test wordt je gevraagd om naar drie verschillende geluidsfragmenten van een sollicitatiegesprek te luisteren en deze te beoordelen. Het is belangrijk dat het volume van je computer of smartphone werkt en dat je in een rustige ruimte zit. Na elk audiofragment krijg je een aantal vragen. Er zijn geen goede of foute antwoorden. Het invullen van deze vragenlijst duurt ongeveer 5 tot 10 minuten.

Je deelname aan dit onderzoek is vrijwillig en je kunt je op elk moment terugtrekken. Je antwoorden blijven vertrouwelijk, worden anoniem verwerkt en worden alleen gebruikt voor dit onderzoek.

De onderzoeksgegevens die ik tijdens dit onderzoek verzamel, zullen door wetenschappers worden gebruikt als onderdeel van datasets, artikelen en presentaties. De geanonimiseerde onderzoeksgegevens zijn toegankelijk voor andere wetenschappers voor een periode van ten minste 10 jaar. Wanneer gegevens worden gedeeld met andere onderzoekers, kunnen deze niet tot jou herleid worden. Alle onderzoeks- en persoonsgegevens worden veilig opgeslagen volgens de richtlijnen van de Radboud Universiteit.

Consent

Door hieronder op de knop 'Ik ga akkoord met deelname aan dit onderzoek' te klikken geef je aan dat:

- Je bovenstaande informatie hebt gelezen
- Je vrijwillig instemt met deelname
- Je ten minste 18 jaar oud bent

Als je op basis van deze informatie niet kunt of wilt deelnemen aan dit onderzoek, wijs deelname dan af door op de knop 'Ik ga niet akkoord met deelname aan dit onderzoek' te klikken.

- Ik ga akkoord met deelname aan dit onderzoek
- Ik ga niet akkoord met deelname aan dit onderzoek

→ Three of all 27 recordings (recordings from one of the five accent types evenly distributed) were presented to the participant, followed by the Linguistic background questions, Nationality question, and the Evaluation questions after each recording.

Stimulus material

Luister naar het audiofragment en beantwoord de volgende vragen:



Linguistic background questions

In hoeverre ben je het (on)eens met de volgende stellingen?

Deze spreker klinkt als een moedertaalspreker van het Nederlands.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker heeft een regionaal accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker heeft een buitenlands accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Nationality

Waar denk je dat de spreker vandaan komt?

Evaluation questions

In hoeverre ben je het (on)eens met de volgende stellingen?

Deze spreker klinkt natuurlijk.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker heeft een aangename stem.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker klinkt monotoon.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker klinkt levendig.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker spreekt snel.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker spreekt aarzelend.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker klinkt zelfverzekerd.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker heeft een krachtige stem.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Demographics

Gender

Hoe identificeer je je?

- Man
- Vrouw
- Non-binair/derde gender
- Anders
- Zeg ik liever niet

Age

Wat is je leeftijd?

Education

Wat is je huidige of hoogst behaalde opleiding?

- Middelbare school
- MBO
- HBO
- WO
- Anders:

Accent

Spreek je met een accent?

- Ja, namelijk

- Nee

Familiarity

In hoeverre ben je het (on)eens met de volgende stellingen?

Ik spreek regelmatig mensen met een zuid-Nederlands (Limburgs) accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een oost-Nederlands (Twents) accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een Duits accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een Frans accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Location upbringing residence

In welke provincie ben je opgegroeid?

Location current residence

In welke provincie woon je nu?

Remarks

Heb je nog opmerkingen over deze vragenlijst en/of over de fragmenten die je hebt beluisterd?

End-of-survey message

Hartelijk bedankt voor de moeite die u heeft genomen om deze enquête in te vullen. Uw reactie is opgeslagen.

Appendix 3: Main experiment Qualtrics questionnaire

Note: The bold headings (e.g., "Introduction", "Consent", etc.) are included here for clarity but were not in the Qualtrics questionnaire that was distributed to the participants.

Introduction

Beste deelnemer,

Hartelijk dank voor je deelname aan dit onderzoek, uitgevoerd door een student van de Radboud Universiteit. Lees de volgende instructies zorgvuldig door, want ze geven informatie over wat er van je verwacht wordt. Als er iets onduidelijk is of als je vragen hebt, neem dan contact op met Emma Bastiaansen (emma.bastiaansen@ru.nl).

In dit onderzoek wordt je gevraagd om een geluidsfragment van een sollicitatiegesprek te beoordelen. Het is belangrijk dat het volume van je computer of smartphone werkt en dat je in een rustige ruimte zit. Na het audiofragment krijg je een aantal vragen. Er zijn geen goede of foute antwoorden. Het invullen van deze vragenlijst duurt ongeveer 8 tot 10 minuten.

Je deelname aan dit onderzoek is vrijwillig en je kunt je op elk moment terugtrekken. Je antwoorden blijven vertrouwelijk, worden anoniem verwerkt en worden alleen gebruikt voor dit onderzoek.

De onderzoeksgegevens die ik tijdens dit onderzoek verzamel, zullen door wetenschappers worden gebruikt als onderdeel van datasets, artikelen en presentaties. De geanonimiseerde onderzoeksgegevens zijn toegankelijk voor andere wetenschappers voor een periode van ten minste 10 jaar. Wanneer gegevens worden gedeeld met andere onderzoekers, kunnen deze niet tot jou herleid worden. Alle onderzoeks- en persoonsgegevens worden veilig opgeslagen volgens de richtlijnen van de Radboud Universiteit.

Consent

Door hieronder op de knop 'Ik ga akkoord met deelname aan dit onderzoek' te klikken geef je aan dat:

- Je bovenstaande informatie hebt gelezen
- Je vrijwillig instemt met deelname
- Je ten minste 18 jaar oud bent

Als je op basis van deze informatie niet kunt of wilt deelnemen aan dit onderzoek, wijs deelname dan af door op de knop 'Ik ga niet akkoord met deelname aan dit onderzoek' te klikken.

- Ik ga akkoord met deelname aan dit onderzoek
- Ik ga niet akkoord met deelname aan dit onderzoek

→ In a randomized order, one of the nine recording (German slight accent, German strong accent, French slight accent, French strong accent, Limburgish slight accent, Limburgish strong accent, Twents slight accent, Twents strong accent, Standard Dutch) was presented to the participant.

Screener validation

Wat is je leeftijd?

In welk land ben je geboren?
<drop-down menu with all countries>

In welk land woon je momenteel?
<drop-down menu with all countries>

Wat is je nationaliteit?
<drop-down menu with all nationalities>

Stimulus material

Hieronder vind je een audiofragment van iemand die solliciteert voor een baan als software engineer. Luister goed en beantwoord de volgende vragen.



Main variables

Hirability

In hoeverre ben je het (on)eens met de volgende stellingen?

Ik zou deze sollicitant aanbevelen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik zou tevreden zijn als deze sollicitant wordt aangenomen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik heb een positieve indruk van deze sollicitant.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze sollicitant zou een aanwinst zijn voor de organisatie.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De kans is groot dat deze sollicitant wordt aangenomen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Inferred motive

In hoeverre ben je het (on)eens met de volgende stellingen?

De sollicitant wil vriendelijk overkomen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil benaderbaar overkomen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Het maakt de sollicitant niet uit of de luisteraar haar aardig vindt.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil dat haar communicatie duidelijk is.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil dat haar spreekstijl effectief is.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil dat wat ze zegt begrijpelijk is.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil behulpzaam zijn.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant wil kwetsen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant heeft slechte bedoelingen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant stemt haar communicatie af op de luisteraar.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Speaker evaluation

Competence

In hoeverre ben je het (on)eens met de volgende stellingen?

De sollicitant klinkt...

Betrouwbaar

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Intelligent

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Hardwerkend

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Hoogopgeleid

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Competent

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Status

De sollicitant klinkt...

Invloedrijk

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Geloofwaardig

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Zelfverzekerd

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Gezaghebbend

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Likeability

De sollicitant klinkt...

Vriendelijk

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Sympathiek

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Humoristisch

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Tactvol						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Welwillend						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Warm						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Respectvol						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Beleefd						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Dynamism

De sollicitant klinkt...

Levendig						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Energiek						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Vrolijk						
1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Actief

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Processing fluency

In hoeverre ben je het (on)eens met de volgende stellingen?

De sollicitant spreekt duidelijk.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant is nauwelijks verstaanbaar.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sollicitant is moeilijk te begrijpen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik begrijp niet waar de sollicitant het over heeft.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik begrijp niet wat de sollicitant bedoelt.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Social distance

In hoeverre ben je het (on)eens met de volgende stellingen?

De sollicitant lijkt op mij.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik voel me verbonden met de sollicitant.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Manipulation checks

In hoeverre ben je het (on)eens met de volgende stellingen?

Deze sollicitant spreekt met een Standaardnederlands accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze sollicitant spreekt met een regionaal accent. → *only shown to participants who listened to a regional accented speaker*

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze sollicitant spreekt met een buitenlands accent. → *only shown to participants who listened to a foreign accented speaker*

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Nationality

Waar denk je dat de spreker vandaan komt? Denk hierbij aan een land of een specifieke regio in Nederland.

Accent beliefs

In hoeverre ben je het (on)eens met de volgende stellingen?

Deze spreker klinkt alsof ze haar accent kan aanpassen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Deze spreker klinkt alsof ze accentloos kan spreken.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Background variables

In hoeverre ben je het (on)eens met de volgende stellingen?

Het accent dat iemand heeft, zegt veel over de spreker.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sterkte van het accent van een spreker is een teken van hun persoonlijkheid.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Het is mogelijk om te voorspellen hoe iemand zal handelen op basis van hun accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

De sterkte van iemands accent heeft niets te maken met wat voor persoon ze zijn.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Iemands accent is een belangrijk persoonskenmerk.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Je kunt veel leren over iemand op basis van hun accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Je kunt geen conclusies trekken over iemands intelligentie op basis van de sterkte van hun accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Mensen zijn in staat om van hun accent af te komen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Iedereen heeft een accent, en dat kunnen ze niet veranderen, zelfs als ze het proberen.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Een accent is aangeleerd, dus je kunt het aanpassen als dat nodig is.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Demographics

Gender

Hoe identificeer je je?

- Man
- Vrouw
- Non-binair/derde gender
- Anders
- Zeg ik liever niet

Age

Wat is je leeftijd?

Education

Wat is je huidige of hoogst behaalde opleiding?

- Middelbare school
- MBO
- HBO
- WO
- Anders:

Accent

Spreek je met een accent?

- Ja, namelijk

- Nee

Familiarity

In hoeverre ben je het (on)eens met de volgende stellingen?

Ik spreek regelmatig mensen met een Zuid-Nederlands (Limburgs) accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een Oost-Nederlands (Twents) accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een Duits accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Ik spreek regelmatig mensen met een Frans accent.

1	2	3	4	5	6	7
Helemaal mee oneens	Oneens	Een beetje mee oneens	Neutraal	Een beetje mee eens	Eens	Helemaal mee eens

Location upbringing residence

In welke provincie ben je opgegroeid?
<drop-down menu with all Dutch provinces>

Location current residence

In welke provincie woon je nu?
<drop-down menu with all Dutch provinces>

Work experience

Vul onderstaande vraag in
Hoeveel werkervaring heb je?
< slider >

0	1	2	3	4	5	6	7
Geen				Gemiddeld			Veel

Experience job hiring

Heb je ervaring met het afnemen van sollicitatiegesprekken?

- Ja, ik heb ervaring met het afnemen van sollicitatiegesprekken.
- Nee, ik heb geen ervaring met het afnemen van sollicitatiegesprekken.

Remarks

Heb je nog opmerkingen over deze vragenlijst en/of over de fragmenten die je hebt beluisterd?

End-of-survey message

Hartelijk bedankt voor de moeite die u heeft genomen om deze enquête in te vullen. Uw reactie is opgeslagen.