The effects of non-native accents on hiring recommendation

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Abstract
As globalization is a growing process, organizations are likely to employ a workforce with non-native accents in order to become more international. The present study examined the influence of a non-native accent on the evaluation of fictitious job applicants. In an online experiment, 116 Dutch participants were asked to evaluate speakers with one of three accents (German, Spanish, American English) based on status, solidarity, dynamism and hiring recommendation. The results showed an overall preference for the American English speaker including higher employability for these speakers. No significant differences were found between the German and Spanish accent condition. The study indicates that it is advisable for recruiters to take into account possible discrimination based on non-native accents.

Keywords: hiring recommendation; non-native English; accents; interview
The effects of non-native accents on hiring recommendation

The current globalisation has led to workplaces becoming more global and the need and opportunity for organisations to hire foreign employees who speak a different native language than the local, established workforce. In order to facilitate communication and reduce any potential miscommunication, many organisations have implemented a common corporate language, which in most multinational European companies, in contrast to Asian companies, turned out to be English (Harzing & Pudelko, 2013), using English as a lingua franca (ELF; Seidlhofer, 2005). Implementing English as a corporate language obliges (part of) the workforce to communicate in their second language, causing an increasing number of non-native English speakers with non-native accents. An accent is defined as a characteristic of speech referring to a particular way of pronunciation, which might be associated with a particular graphical region or social group (Lippi-Green, 1997), producing in- and out-group classification (Campbell-Kibler, 2007; Pietraszewski & Schwartz, 2014), i.e., social categorization.

Besides social categorization, non-native accents might also lead to reduced comprehensibility among speakers, since research has shown that, generally, native and non-native listeners evaluate native speakers as easier to understand than speakers with non-native accents (e.g. Major, Fitzmaurice, Bunta, & Balasubramanian, 2002; Smith & Bisazza, 1982), in cases where speaker and listener have a distinct native language. This might be caused by the non-native accent and thus the distinct pronunciation difference between a native and non-native speaker. However, comprehensibility is not solely influenced by pronunciation. Listeners also consider grammar and fluency to be having an effect, as research showed that these factors differ in native and non-native English speech (Varonis & Gass, 1982). Comprehensibility was measured based on the responses given by native English listeners to similar questions posed by native and non-native English speakers.

Furthermore, the evaluation of non-native speakers is also driven by accent strength. Several investigations have shown that stronger non-native accents may be evaluated more negatively than slight non-native accents (e.g. Hendriks, Van Meurs, & de Groot, 2017; Roessel, Schoel, Zimmermann, & Stahlberg, 2017). This has managerial implications regarding evaluations of employees’ work and of applicants during a job application process, since a non-native accent may negatively influence the assessment of candidates. Many studies have investigated the topic of non-native accentedness. However, to the best of my knowledge, none seem to have been
focused on the effect of Spanish-accented English in comparison to German-accented English and native American-English in the setting of a job interview on hiring recommendation of the applicant, as evaluated by native Dutch listeners. The purpose of this study is to test to what extent there are differences in the evaluation of native and non-native English speakers.

Prior studies will be discussed addressing non-native accentedness in distinct settings, followed by theoretical support for the choice of German and Spanish as foreign languages.

**Theoretical foundation**

**Accentedness among distinct contexts**

The first study performed on accentedness, perceived status and comprehensibility was by Lambert, Hodgson, Gardner and Fillenbaum (1960). They used a matched-guise technique to provide evidence that listeners tend to evaluate speakers with a standard accent more positively than speakers with a non-standard accent, i.e., standard accents are preferred over non-standard accents. In comparing a non-native English accent with a native English accent, the former is seen as a non-standard accent and the latter as the standard accent. This would assume that speakers with a non-native accent will be evaluated less positively than speakers with a native accent, i.e., the Spanish-accented English speakers and German-accented English speakers will receive a lower evaluation than the native American English speaker.

Studies have investigated accentedness in distinct settings, such as higher education (e.g. Hendriks, Van Meurs, & Reimer, 2018; Kelch & Santana-Williamson, 2002), the service sector (e.g. Van Vaerenbergh & Holmqvist, 2013), and international workplaces and employment settings (e.g. Deprez-Sims & Morris, 2010, 2013; Russo, Islam, & Koyuncu, 2017).

**Education sector**

Regarding accentedness in educational settings using English as the language of instruction, overall results showed that native English lecturers are preferred over non-native English lecturers. Kelch and Santana-Williamson (2002) examined the relationship between the perceived nativeness of lecturers teaching English and their evaluation by non-native English students. A correlation was found between the perceived nativeness and several favourable teaching skills, like teaching experience, excellence and comprehension. Lecturers that are perceived as more native were evaluated more positively by their students. In line with this, non-native students in higher education evaluated moderately non-native accented lecturers significantly more negatively than
their native and slightly non-native accented colleagues (Hendriks, Van Meurs, & Hogervorst, 2016; Hendriks, Van Meurs, & Reimer, 2018). Hendriks et al. (2016) examined the degree of accentedness of Dutch-accented English speaking lecturers evaluated by Dutch students, whereas Hendriks et al. (2018) included German students and lecturers in their study, making a comparison with Dutch-accented English speaking lecturers and native English lecturers. Overall, both Dutch and German students evaluated the German-accented English speakers as less positive than both the Dutch-accented English speakers and the native English speakers. For the current study, it might be expected that native Dutch listeners evaluate German-accented English speakers as less positive than native American English speakers, assuming the accent strength of the non-native speaker is moderate and that therefore the native American English speaker might receive a higher evaluation.

Service sector

Similar effects of non-native accentedness as in the educational setting were found in the service sector. Research has shown that bilingual consumers prefer to be served in their first language (Holmqvist, 2011). Van Vaerenbergh and Holmqvist (2013) elaborated on this by investigating the behavioural consequences of the used language, which was either the consumers first or second language. The behavioural consequences were measured based on the consumer’s tipping behaviour. Results showed that consumers were more willing to tip for a service while being served in their native language as opposed to their second language.

Employment sector

Furthermore, non-native accents have also been a central topic in research focusing on work environments. Findings show differences in the evaluation of native and non-native English. Studies investigating the effect of a non-native English accent on hiring recommendation have found similar results as in the other sectors. In a first study, Deprez-Sims and Morris (2010) examined the effect of a French and Columbian non-native English accent in comparison with a Midwestern US accent, the standard accent in this study. Results showed that the applicant with the French accent was evaluated significantly more negatively than the applicant with the Midwestern US accent. However, there was no significant difference in hiring recommendation between the applicant with the Colombian accent and the Midwestern US accent. In a second study, Deprez-Sims and Morris (2013) again examined a French and Midwestern US accent, but now in comparison with a Mexican English accent. In line with earlier findings, a significant difference in hiring recommendation was merely found between a French-low comprehensible accent and a
Midwestern US accent, the French applicant would be hired less often than the applicant with the Midwestern US accent. There were no significant differences between the Midwestern US accent and the Mexican accent, nor between the Mexican and the French accent. The studies by Deprez-Sims and Morris (2010, 2013) highlighted the importance of considering non-visual cues (the non-native accent) as well as visual cues (sex, race, etc.) as a cause of employment discrimination. This indicates that managerial choices in a job application process could be based on the non-native accent rather than on actual competence.

Additional analyses by Deprez-Sims and Morris (2010) showed that the negative evaluations of the French applicant were caused by the similarity-attraction hypothesis, which states that the decision-maker based his choice on the degree of perceived similarity between him and the applicant. In this case, the negative evaluation was caused by perceived dissimilarity between the French applicant and the decision-maker. The similarity-attraction hypothesis, i.e., the Attraction Paradigm, states that people are more attracted to those who share the same attitudes and values (Byrne, 1971), which influences decisions and evaluations made.

Another study focusing on employment settings and accentedness has been performed by Russo, Islam, & Koyuncu (2017), in which they also include the aspect of self-evaluation of the non-native speakers. The results showed that these speakers may feel excluded and devalued at work, which might lead to using an avoidance approach. Furthermore, it is argued that a non-native accent is linked with perceptions of the speaker’s fluency, his performance abilities and the way of supervising him. They conclude that the stigma of having a non-native accent might create a self-fulfilling prophecy of the non-native speaker, which negatively affects work outcome and career-related issues.

Similar research has been done by Śliwa and Johansson (2014). They focused on non-native English speakers in a multilingual organisation, using a socio-linguistic approach. Managerial implications were analysed of choices that were based on the relationship between language, power and inequalities. Generally speaking, native is considered ‘better’ than non-native and therefore standard accents are evaluated more positively than non-standard accents. To evaluate this, they used the dimensions of status, solidarity and dynamism, which will also be used in the current study. Results showed that similarity created solidarity, based on the similarity-attraction hypothesis. Furthermore, non-nativeness negatively affected dynamism, which might lead to negative power perceptions and self-competence evaluations.
Concluding from the above mentioned results, the following hypothesis is formulated:

**Hypothesis:** The German and Spanish-accented English speakers receive a lower evaluation than the American-English speaker on hiring recommendation, status, dynamism and solidarity.

**Accentedness among distinct languages**

**American English**

All types of languages and language backgrounds have been included in studies on accentedness and personal evaluations. Independent of the similarity or dissimilarity in language background, negative evaluations of non-native accentedness have been found (e.g. Hendriks et al., 2016; Hendriks et al., 2017; Major et al., 2002).

Besides studies on several foreign languages, distinct versions of English have been investigated, including the standard British English accent, known as RP and the standard American Accent, known as the Standard American Network. In general, standard accents are preferred over non-standard accents. Besides this, non-native speakers also have a preference for a particular type of standard accent. Ladegaard (1998) found in his study among Danish students, that despite their exposure to possibly more American than British media, they preferred RP over Standard American English. However, on the contrary, more recent research showed that US English exceeded RP as the standard accent (Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2012; Giles & Billings, 2004). Therefore, in the current study the Standard American Network accent is used as the native accent. Another reason for this is that generally spoken, Dutch speakers are more exposed to American English in their daily life, for instance in the media (Kooijman, 2017).

**German**

Hendriks et al. (2018) listed several studies based on the examined native language of both speakers and listeners, including European, Asian and Arabic languages. Focusing on German as a non-native accent, several studies found negative effects caused by a moderate to strong non-native German accent on hiring recommendation (Roessel et al., 2017) and competence (Teufel, 1995). In contrast, Hellekjær (2010) found no significant differences in lecture comprehension for German and Norwegian students for lectures taught in English or their first language. He concluded that in his study non-native listeners did not experience any differences in the comprehension of non-native English and their native language. Teufel (1995) highlighted that speakers with a strong non-
Non-native accents and hiring recommendation

native accent were evaluated less competent, however noticeably, more positive on solidarity. Additionally, Hendriks et al. (2017), found that speakers with distinct degrees of Dutch accentedness in English do not significantly differ on how German, French and Spanish listeners evaluated the speakers’ solidarity, but do when the speakers are evaluated on their competence. A stronger non-native Dutch accent in English, German, French and Spanish was evaluated less competent than a slight or moderate non-native Dutch accent.

Spanish

Additionally, Hendriks et al. (2017), found that speakers with distinct degrees of Dutch accentedness in English do not significantly differ on how German, French and Spanish listeners evaluated the speakers’ solidarity, but do when the speakers are evaluated on their competence. A stronger non-native Dutch accent in English, German, French and Spanish was evaluated less competent than a slight or moderate non-native Dutch accent.

Spanish

Furthermore, studies examining Spanish-accented English speakers (Ryan, Carranza, & Moffie, 1977) or Mexican American speakers (Ryan & Carranza, 1975; Brennan & Brennan, 1981) found that Hispanic and Spanish accented English received a more negative evaluation, perceived status rating and stereotyping based on their degree of accentedness. A stronger Spanish accent led to a more negative evaluation. Regarding specific personal evaluations, a Spanish accent is only found to be significantly more negative than a Standard American accent on superiority (Giles, Williams, Mackie, & Rosselli, 1995), i.e., speakers with a Standard American accent are found to have a higher superiority than non-native Spanish speakers. Furthermore, Fuertes and Gelso (2012) found that respondents were more willing to cooperate with a native American English speaking counsellor than a non-native Spanish accented counsellor, which relates to solidarity.

Status, dynamism and solidarity in personal evaluations

Fuertes et al. (2012) stated that besides perceived status and solidarity, the dimension of dynamism also affects the speaker’s evaluation. These three dimensions are subdivided into several aspects. Perceived status is measured based on the speaker’s intelligence, competence, ambition, education, success, confidence and social class. Perceived solidarity is measured based on the speaker’s similarity to the listener, attractiveness, benevolence and trustworthiness and to conclude, the dimension of dynamism is measured based on the speaker’s level of activity, enthusiasm, talkativeness and liveliness (Śliwa and Johansson, 2014). The overview given by Fuertes et al. (2012), based on these three dimensions, showed that Spanish-accented English has been investigated in comparison to American English in the context of counselling, presenting a significant higher evaluation of the latter on solidarity (willingness) (Fuertes & Gelso, 2000) and in the context of education, presenting a significant higher evaluation for the American English speaker on status (superiority) (Giles et al., 1995). However, no research has been done in the
context of employment based on the three dimensions of personal evaluation. Besides this, Fuertes et al. (2012) discuss no studies examining a German non-native accent on the dimensions of status, solidarity and dynamism. However, as stated above, Teufel (1995) found significant differences in solidarity and competence (status) since strong non-native German-accented English speakers are evaluated less competent, but more solidary.

**Current study**

To the best of my knowledge, no investigations seem to have been performed regarding German and Spanish as non-native accents of English in the setting of an employment interview. It is considered useful for a job interviewer to be conscious about the possible discrimination-effect caused by a non-native English accent. Based on results from prior research, it is expected that the applicant with the non-native English accent will receive a lower evaluation than the applicants with the standard native American English accent since research has already shown that American English is evaluated more positively on status and solidarity. The dimension of dynamism will also be included to test for any differences between non-native English and native English. As the Dutch listeners might be exposed more to the German language on a daily basis, a slight preference for the German-accented English over the Spanish-accented English might be expected. This is enforced by the fact that the Netherlands and Germany are neighbouring countries, which might enforce perceived similarities between the Dutch listeners and the German non-native speakers. This could indicate an interference of the similarity-attraction hypothesis. However, familiarity with an accent might also breed contempt (Nejjar, Gerritsen, Van der Haagen, & Korzilius, 2012). This would indicate that the Dutch participants stricter evaluate the German English speakers in comparison to the Spanish-accented English.

Concluding the above, the following research question is posed:

*RQ:* To what extent is there a difference in the evaluations of job applicants speaking German-accented English and Spanish-accented English when compared to a native American English speaker in a job interview setting with regard to status, solidarity, dynamism and hiring recommendation?
Method

Materials

Accent was the independent variable with three levels, German-accented English, Spanish-accented English and American English. Three audio fragments per accent condition were evaluated by eight expert judges in a pre-test on accent strength, speech rate and comprehension (see Appendix I for the full questionnaire). Subsequently, one fragment per accent condition was eliminated to be used in the actual study based on the outcome of several one-way analyses of variance that showed significant differences for speaker condition in accent strength ($F(8,45) = 4.500, p < .001$), pace ($F(8,45) = 3.789, p = .002$), and comprehension ($F(8,45) = 8.385, p < .001$). However, no significant differences were found for pitch ($p = .175$), nativeness of the American English speakers ($p = .358$) and non-nativeness of the German and Spanish speakers ($p = .213$). The non-native English accents were of a moderate degree since prior research has shown that significant differences were merely found if the non-native accents were of a moderate to strong degree. Table 1 shows the average scores on accent strength, speech rate and comprehension for the selected Spanish, German and American English speakers.

To prevent any bias based on additional information regarding gender of the speaker or text, a verbal guise technique was used. All fragments included female speakers and identical text, see Appendix II for the script. The fragments lasted one to two minutes and contained no information regarding name, age and race of the applicant to prevent any bias caused by this additional information.

Furthermore, to prevent any interference of the anchor contraction effect in the evaluation of the applicant, the participants answered the questionnaire in Dutch, i.e., the participants’ native language. The anchor contraction effect is the tendency for participants to answer more intensely when using their second language in comparison to their native language (De Langhe, Puntoni, Fernandes, & Van Osselaer, 2011). Conducting the questionnaire in English would then indicate that the participants might answer the questions more intensely than in Dutch. This then could have caused differences in the evaluation of the applicant. By posing the questions in the participant’s native language, the anchor contraction effect had no influence on the evaluation outcome.
Table 1. Means and standard deviations (between brackets) for accent strength, speech rate and comprehension in function of accent condition of the expert evaluation ($N = 8$) (1 = most negative, 7 = most positive).

<table>
<thead>
<tr>
<th>Accent condition</th>
<th>Spanish English</th>
<th>German English</th>
<th>American English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accent strength</td>
<td>4.43 (1.20)</td>
<td>5.45 (1.03)</td>
<td>5.82 (0.92)</td>
</tr>
<tr>
<td>Speech rate</td>
<td>4.24 (1.00)</td>
<td>5.02 (0.84)</td>
<td>4.83 (1.05)</td>
</tr>
<tr>
<td>Comprehension</td>
<td>3.36 (1.17)</td>
<td>5.16 (1.27)</td>
<td>5.57 (1.33)</td>
</tr>
</tbody>
</table>

Participants

A total of 36 male Dutch participants (age: $M = 35.44$, $SD = 13.83$; range 20-59) and 80 female Dutch participants (age: $M = 34.85$, $SD = 15.28$; range 18-71) took part in the experiment. A chi-square analysis showed that there were no significant differences in gender between the three accent conditions ($\chi^2 (2) = 0.13; p = .936$). In addition, a one-way analysis of variance showed no significant differences in age ($F (37,78) = 1.12, p = .335$).

The most frequent obtained level of education was HBO (34.5%; Dutch university of applied sciences), followed by a university degree (25.0%; including both bachelor and master). The participants’ highest level of obtained education ranged from a high school diploma to a master’s degree.

A one-way analysis of variance showed no differences in the participants’ English proficiency based on the LexTALE test ($F (2,113) = 2.08, p = .130$). Participants scored equally average to high ($M = 79.08$, $SD = 12.92$).

With regard to experience in job application settings, participants had more experience as interviewee ($M = 5.16$, $SD = 1.64$) than interviewer ($M = 3.23$, $SD = 2.15$). Moreover, no significant difference was found among the distinct accent conditions ($p > .803$).

Design

The experiment had a one-factorial design with accent (native American English, Spanish accent, German accent) as a between-subjects factor. Each participant evaluated one recording. The participants were randomly assigned to one accent condition.
Instrumentation

The participants filled in an online questionnaire with statements based on Fuertes et al. (2012), Giles and Billings (2004) and Śliwa and Johansson (2014), in which they evaluated speakers on dynamism, solidarity, status, perceived comprehensibility, hiring success and familiarity. Furthermore, voice pleasantness, accent strength and recognition were measured for a manipulation check.

Status was measured with four statements (‘The speaker is …’): intelligence, ambition, confidence and competence (α = 0.85), solidarity was measured with four statements (‘The speaker is …’): trustworthiness, benevolence, similarity and attractiveness (α = 0.73), and to conclude dynamism was likewise measured with four statements (‘The speaker is …’): level of activity, liveliness, talkativeness and enthusiasm (α = 0.94). Furthermore, hiring recommendation was measured with 3 items (‘The speaker sounds competent for the job position.’, ‘I would hire the speaker.’, ‘I would recommend the speaker.’) (α = 0.94). Perceived comprehension was measured with one item ‘I found this person easy to understand’. Moreover, familiarity was measured with 2 items (‘I am very familiar/ known with the speaker’s English accent’) (α = 0.86). All questions used a 7-point Likert scale anchored by ‘completely disagree – completely agree’ and were translated into Dutch. Composite means were calculated for those of α > .70.

The manipulation check included voice pleasantness measured with three statements (‘The speaker had a pleasant …’): speed of speaking, intonation and voice (α = 0.79). Furthermore, accent strength was measured with two statements: ‘The speaker had a strong foreign accent.’ and ‘The speaker sounds like a native English speaker’ (reversed coded) (α = 0.84). All questions used a 7-point Likert scale anchored by ‘completely disagree – completely agree’ and were translated into Dutch. A final question including a drop-down menu was posed to indicate the country of origin of the speaker to measure the recognition of the accent. Composite means were calculated for those of α > .70.

The included background variables were age, gender, profession, experience with job interviews, attitude towards accents, and a check for own non-native accent. Besides this, a test for English proficiency was included provided by LexTALE. The online test is a good predictor for actual English proficiency and the outcomes are generally found to be more accurate than self-proficiency ratings (Lemhöfer & Broersma, 2012). See Appendix III for the complete questionnaire.
**Procedure**

The participants were asked to fill in the online questionnaire after reading the instructions and listening to the audio file. Each participant was randomly assigned to one of the three accent conditions, i.e., German-accented English, Spanish accented English and native American English. The study was held online, using Qualtrics as a mean of conducting the experiment and LexTALE to test for English proficiency. Participants first read a brief instruction on what was expected from them, including a consent form and a word of thanks for their participation. No information was given on the purpose of the study nor about the origin of the speakers. See Appendix II for the complete instructions. The audio recordings were approximately two minutes, followed by the questionnaire which took another seven to ten minutes to complete.

**Statistical treatment**

Descriptive statistics were used to describe age and gender distributions of the three different groups of participants. A chi-square test and ANOVAs were used to ensure homogeneity among the participants of the distinct versions. Chi-square tests were performed to test accent recognition. One-way analyses of variances were used to test for differences in the manipulation check variables, perceived comprehension, status, solidarity, dynamism and hiring recommendation.

**Results**

**Manipulation check**

**Accent strength**

A one-way analysis of variance showed a significant effect of accent condition on accent strength \((F (2,113) = 69.73, p < .001)\). The Spanish English \((M = 5.73, SD = 1.18)\) and German English speakers \((M = 5.78, SD = 1.17)\) had a significantly higher accent strength than the American English speakers (both \(p < .001\), Bonferroni-correction; \(M = 2.87, SD = 1.42\)). The Spanish and German speakers did not differ significantly in their accent strength. Based on the significant difference in accent strength, the manipulation check can be deemed successful. See Table 2 for the means and standard deviations.
Table 2. Means and standard deviations (between brackets) for accent strength in function of accent condition (1 = most negative, 7 = most positive).

<table>
<thead>
<tr>
<th>Accent condition</th>
<th>American English</th>
<th>German English</th>
<th>Spanish English</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>43</td>
<td>36</td>
<td>37</td>
</tr>
<tr>
<td>Accent strength</td>
<td>2.87 (1.42)</td>
<td>5.78 (1.17)</td>
<td>5.73 (1.18)</td>
</tr>
</tbody>
</table>

**Voice pleasantness**

A one-way analysis of variance showed a significant difference in voice pleasantness among the distinct accent conditions ($F(2,113) = 5.37, p = .006$). German English speakers ($M = 4.27, SD = 1.28$) were evaluated less positively with regard to their voice, intonation and speech than the American English speakers ($p = .004$, Bonferroni-correction; $M = 5.21, SD = 1.34$). However, there were no significant differences between the Spanish ($M = 4.72, SD = 1.20$) and American English speakers nor between the Spanish and German speakers.

**Accent recognition**

Recognition of the accent was relatively low, merely 48.3% correctly guessed the country of origin of the speaker in the strict recognition, and 55.2% in the lenient recognition. A distinction was made between a strict and lenient recognition, in which additional countries with the same official language were also counted as valid. For the Spanish accent condition this included countries as Bolivia, Colombia, Argentina, Mexico and Ecuador. For the American English accent condition this included countries as Canada, Australia and the United Kingdom. A Chi-square test showed a significant relation between accent condition and the strict origin recognition ($\chi^2(116) = 6.85, p = .033$). Participants who listened to the German accent gave relatively more correct answers (59.5%) and less incorrect answers (40.5%) with regard to country of origin than participants who listened to the Spanish accent condition. The latter gave relatively fewer correct answers (30.6%) and more incorrect answers (69.4%). Participants who listened to the American English accent did not give significantly more correct or incorrect answers than participants in the German English or Spanish English accent condition. A subsequent Chi-square test on accent condition and lenient recognition of the country of origin showed no significant relation between the two variables ($\chi^2(116) = 3.94, p = .140$). Table 3 presents the counts and percentages of correct and incorrect recognition of the speaker’s country of origin for each accent condition.
Familiarity

Listener’s familiarity with the spoken accent of the speakers was tested using a one-way analysis of variance. The results showed a significant difference ($F(2,113) = 16.05, p < .001$) in familiarity with the accent among the three different accent condition. The participants were significantly less familiar with the non-native accents, German ($M = 4.90, SD = 1.55$) and Spanish ($M = 4.03, SD = 1.26$) than with the American English accent (respectively $p = .021$ and $p < .001$, Bonferroni-correction; $M = 5.74, SD = 1.24$). However, the German accent was significantly more known by the participants than the Spanish accent ($p = .020$, Bonferroni-correction).

Table 3. Count and percentages of incorrectly and correctly guessed country of origin in function of the accent condition

<table>
<thead>
<tr>
<th>Accent Condition</th>
<th>German</th>
<th>Spanish</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin Strict</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect</td>
<td>N</td>
<td>15&lt;sup&gt;a&lt;/sup&gt;</td>
<td>25&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>%</td>
<td>40.5%</td>
<td>69.4%</td>
<td>46.5%</td>
</tr>
<tr>
<td>Correct</td>
<td>N</td>
<td>22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>%</td>
<td>59.5%</td>
<td>30.6%</td>
<td>53.5%</td>
</tr>
<tr>
<td>Origin Lenient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incorrect</td>
<td>N</td>
<td>15&lt;sup&gt;a&lt;/sup&gt;</td>
<td>21&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>%</td>
<td>40.5%</td>
<td>58.3%</td>
<td>37.2%</td>
</tr>
<tr>
<td>Correct</td>
<td>N</td>
<td>22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>15&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>%</td>
<td>59.5%</td>
<td>41.7%</td>
<td>62.8%</td>
</tr>
</tbody>
</table>

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

Note: Average correctly guessed country of origin was 48.3% (strict) and 55.2% (lenient)

Evaluation of the candidate

Perceived comprehension

Levene’s $F$-test showed that the homogeneity of variance assumption of perceived comprehensibility on accent condition was not met ($F(2,113) = 4.52, p = .013$). Therefore, Welch’s $F$-test was used, which showed a significant effect of accent condition on perceived comprehensibility ($Welch’s F (2,70.50) = 8.90, p < .001$). A significant difference was found between the Spanish English speakers ($M = 5.05, SD = 1.37$) and German English speakers ($M = 5.03, SD = 1.73$) in comparison to the American English accent (respectively $p = .001$ and $p = .006$, Games-Howell-correction; $M = 6.12, SD = 1.18$). The results showed that the non-native English
Non-native accents and hiring recommendation

speakers were significantly less understood than the native American English speakers. However, there were no significant differences between the Spanish English and German English accent.

**Status**

A one-way analysis of variance showed a significant effect of accent condition on status \((F(2,113) = 6.18, p = .003)\). American English speakers \((M = 5.71, SD = 0.78)\) were rated higher in status than both the Spanish accent \((p = .033, \text{Bonferroni-correction}; M = 5.11, SD = 1.34)\) and the German accent \((p = .004, \text{Bonferroni-correction}; M = 4.94, SD = 0.91)\). However, there was no significant difference between the Spanish accent and the German accent. These results suggest that non-native Spanish and German speakers are perceived lower in status than the native American English speakers. Table 4 presents the means and standard deviations.

**Solidarity**

A one-way analysis of variance on the effect of accent on solidarity showed no significant effect \((F(2,113) = 1.22, p = .298)\). Table 4 shows the means and standard deviations.

**Dynamism**

A one-way analysis of variance on the effect of accent condition on dynamism showed a significant effect on dynamism \((F(2,113) = 16.14, p < .001)\). The German accent was significantly lower in dynamism \((M = 4.59, SD = 0.94)\) than the American English \((p < .001, \text{Bonferroni-correction}; M = 5.64, SD = 1.06)\) and Spanish accent \((p = .006, \text{Bonferroni-correction}; M = 4.95, SD = 1.34)\). The German English speakers were rated as less dynamic in their speech in comparison to the American English and Spanish English speakers. However, there were no significant differences between the latter two groups of speakers. Table 4 shows the means and standard deviations.

**Hiring recommendation/employability**

A one-way analysis of variance performed on hiring recommendation of the speakers showed a significant effect of accent on hiring recommendation \((F(2,113) = 3.56, p = .032)\). Speakers in the German accent condition \((M = 4.29, SD = 1.12)\) received a significantly lower hiring recommendation than the American English speakers \((p = .043, \text{Bonferroni-correction}; M = 4.97, SD = 1.20)\). No significant differences were found between the Spanish English \((M = 4.42, SD = 1.34)\) and the American English speakers, nor between the German English and Spanish English speakers. Therefore, it cannot be stated which accent scored significantly different on hiring recommendation. Table 4 shows the means and standard deviations.
Table 4. Means and standard deviations (between brackets) for status, solidarity, dynamism and hiring recommendation in function of the accent condition (1 = most negative, 7 = most positive).

<table>
<thead>
<tr>
<th></th>
<th>German English</th>
<th>Spanish English</th>
<th>American English</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>4.94 (0.91)</td>
<td>5.11 (1.34)</td>
<td>5.71 (0.78)</td>
</tr>
<tr>
<td>Solidarity</td>
<td>4.59 (0.94)</td>
<td>4.71 (1.01)</td>
<td>4.87 (1.00)</td>
</tr>
<tr>
<td>Dynamism</td>
<td>4.01 (1.43)</td>
<td>4.95 (1.34)</td>
<td>5.64 (1.06)</td>
</tr>
<tr>
<td>Hiring recomendation</td>
<td>4.29 (1.12)</td>
<td>4.42 (1.34)</td>
<td>4.97 (1.20)</td>
</tr>
</tbody>
</table>

Differences among speakers

To test for significant differences between the two speakers of each accent condition several one-way analyses of variance were performed for each accent condition. A significant effect of speaker was solely found in the German accent condition on status ($F(1,34) = 6.421, p = .012$) dynamism ($F(1,34) = 8.835, p = .05$), solidarity ($F(1,34) = 4.270, p = .046$), and hiring success ($F(1,34) = 4.317, p = .045$). On all variables speaker 1 was rated significantly lower than speaker 2, see Table 5 for the means and standard deviations. Moreover, no significant effects were found between the speakers in the Spanish (all $F < 1.951, p > .172$) and American English accent condition (all $F < 1.053, p > .311$).

Table 5. Means and standard deviations (between brackets) for status, solidarity, dynamism and hiring recommendation in function of speaker 1 and speaker 2 for every accent condition (1 = most negative, 7 = most positive).

<table>
<thead>
<tr>
<th></th>
<th>German Sp</th>
<th>Spanish Sp</th>
<th>American Sp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>4.43</td>
<td>5.45</td>
<td>5.82</td>
</tr>
<tr>
<td></td>
<td>(1.20)</td>
<td>(1.03)</td>
<td>(0.92)</td>
</tr>
<tr>
<td>Solidarity</td>
<td>4.24</td>
<td>5.02</td>
<td>4.83</td>
</tr>
<tr>
<td></td>
<td>(1.00)</td>
<td>(0.84)</td>
<td>(1.05)</td>
</tr>
<tr>
<td>Dynamism</td>
<td>3.36</td>
<td>5.16</td>
<td>5.57</td>
</tr>
<tr>
<td></td>
<td>(1.17)</td>
<td>(1.27)</td>
<td>(1.33)</td>
</tr>
<tr>
<td>Hiring Recomendation</td>
<td>3.95</td>
<td>4.75</td>
<td>5.15</td>
</tr>
<tr>
<td></td>
<td>(0.93)</td>
<td>(1.16)</td>
<td>(1.32)</td>
</tr>
</tbody>
</table>
Conclusions and Discussion

The overall aim of this study was to examine the effects of non-native accents in English on the evaluation of speakers in a fictitious job interview setting. The first goal was to investigate how different accents (American English, German English, Spanish English) were evaluated by non-native listeners of English, in this case Dutch listeners. Evaluations were made based on personal characteristics like status, dynamism and solidarity. The second goal was to see whether the different accent conditions had an influence on the hiring recommendation of the speakers. The general conclusion drawn from the results is that the non-native English speakers were overall evaluated less positively than native American English speakers.

First of all, the accent strength of the German and Spanish accent was not significantly different, therefore any differences with regard to the evaluation of the speakers could not be caused by differences in accent strength. The accent strength of the American English speakers was evaluated significantly lower than the accent strength of the German and Spanish speakers as is expected since the American English speakers were native speakers and therefore are not expected to have a strong non-native accent or any at all. With regard to the other variables in the manipulation check, significant differences were found in the evaluated pleasantness of the German English speakers in comparison to the American English speakers. The German English speakers’ voice characteristics were evaluated less positive than those of the American English speakers. This might have an influence on the hiring recommendation of the American English speakers. A salient finding in the main experiment addresses the different evaluation of speaker one and speaker two in the German accent condition since during the pre-test these speakers seemed most familiar in comparison to the additional third speaker. Supposedly, experts have a different vision on the evaluation of the speaker as the participants in the main experiment. Differences cannot be caused due to different questions as the same set of questions is asked in both the pre-test and the main experiment. However, the differences might be caused by the limited number of participants in the pre-test in comparison to the main experiment.

Evaluation of the candidate

The non-native English speakers were evaluated less comprehensible than the native American English speakers, whereas there was no difference in perceived comprehension between the German English and Spanish English speakers. This might be related to the findings that the
American English speakers had a lower accent strength. Findings concur with previous studies on the evaluation of native and non-native speakers with regard to comprehension, which found that native speakers are easier to understand than non-native speakers (e.g. Major, Fitzmaurice, Bunta, & Balasubramanian, 2002; Smith & Bisazza, 1982). However, it contradicts the results from Hellekjær (2010), who found no differences in the comprehension of native and non-native speakers.

Moreover, the non-native Spanish and German speakers were evaluated less positively in comparison to the native American English speakers with regard to their status and dynamism, which is in line with prior research (Giles et al., 1995; Teufel, 1995). Regarding the construct of solidarity, no significant differences were found in the evaluation of the different speakers. These findings on solidarity are in line with the findings by Hendriks et al. (2017). However, they counter the findings that a strong non-native accent led to a higher solidarity evaluation (Teufel, 1995) and that American English speakers tend to receive a higher evaluation on solidarity (Fuertes & Gelso, 2000). Furthermore, in general no differences were found in the evaluation of the German English and the Spanish English speakers regarding status, solidarity and dynamism.

Regarding the evaluation of hiring recommendation, a significant difference was found. The German English speakers received a significant lower hiring recommendation than the American English speakers. Therefore, it might be stated that the non-native speakers scored lower on employability than the native speakers, which is in line with the general findings that non-native English speakers are evaluated lower on hiring recommendation than native American English speakers (Deprez-Sims & Morris, 2010; 2013; Śliwa & Johansson 2014). Furthermore, no significant differences were found between both groups of non-native speakers. These findings contradict the possible preference for German non-native English speakers, caused by a perceived similarity between the Dutch listeners and the German speakers.

Remarkable are the mean scores for the German accent condition, which are all lower than those of the Spanish accent and American English condition, albeit not significantly. It might be discussed that the Dutch participants were stricter towards the German speakers, as they were more familiar with their accent than with the Spanish English accent. In this case, familiarity bred contempt, leading to stricter assessments of the German English speakers than of the Spanish English speakers. Nonetheless, the native American speakers received the highest evaluation on all dimensions, even though not all significant.
Overall, the findings in the current study are in line with the general image that a standard accent is preferred over a non-standard accent, first described by Lambert et al. (1960). In relation to this study, the standard American English accent is preferred over the non-standard accent, i.e., non-native English accents. In conclusion, the hypothesis that the German English and Spanish English speakers would receive a lower evaluation than the American English speakers is overall confirmed.

Limitations, implications and suggestions for further research

Resulting from the analyses on speaker differences it appeared that the two speakers in the German accent condition received significantly different evaluations with regard to status, solidarity, dynamism and hiring recommendation. Nevertheless, it has been decided to merge the speakers into one condition. As stated before, it is likely that the experts evaluated the speakers based on a different point of view than the participants in the main experiment even though the same set of questions was used in the manipulation check.

Furthermore, recognition of the foreign accent was relatively low, which might have influenced the hiring recommendation of the speakers since the participants were not correct on the country-of-origin of the speakers. The strict recognition showed a significant difference between the accent conditions and recognition, in contrast to the lenient recognition. Therefore, further analyses used the latter. A noteworthy finding is the frequent mentioning of the Netherlands as country of origin in both the native and non-native accent conditions. This might be caused by a self-centred bias of the native Dutch participants and might result from low familiarity with the accents.

An additional limitation addresses the significant differences in the voice pleasantness that were found between the German English and American English speakers. The German speakers were evaluated less positively with regard to their voice characteristics than the American English speakers. This might have positively influenced the hiring recommendation of the American English speakers in comparison to the German speakers. The lower hiring recommendation of the latter group of speakers might be caused due to the negative evaluation of the voice characteristics instead of the actual accent spoken with. As the manipulation check revealed significant differences, this might have reduced the validity of the experiment.
Moreover, it appeared that the participants had little experience with regard to job application processes which might have led to a reduced ecological validity. Suggestions for future research should include investigating evaluations made by professional recruiters who have experience with job interviews.

An additional limitation of the study was that the speakers were reading out a pre-written script which differed from the natural setting of a job interview in which usually spontaneous discourse is found. However, to ensure that differences in the evaluation were not caused by differences in the content of the recordings, the pre-written script was necessary.

The current study examined the evaluation by non-native English listeners of non-native English accents in comparison to American English accents. This makes the study different from prior work, which was mostly situated in an American context with native American participants. These investigations in the American setting have likewise included Spanish. However, the Spanish language has a certain negative socioeconomic status in the United States of America, which might lead to biased results. The Spanish language does not have such a negative stereotypical status in the Netherlands.

In addition, German and Spanish are European languages which might have influenced the hiring recommendation based on familiarity with the accent. Future research should investigate whether two completely non-related languages, for example a European and Asian language, show a different pattern in the evaluation of the speakers and whether these evaluations differ between native and non-native listeners. A different might be expected due to a lower familiarity with an Asian language.

Practical implications of the results of this study address the wished-for awareness of recruiters and managers in an international context. Consciousness of the possible discrimination effect of a non-native accent is essential to make fair choices in job application processes, based on actual competence instead of audio-visual cues.
References


Non-native accents and hiring recommendation


Appendices

Appendix I – Pre-test questionnaire

We are currently examining the effects of a foreign accent in English on hiring success. For this purpose, we will present audio files with several different accent conditions to our participants. You will be part of our pre-test for these audio files.

Every audio fragment is accompanied by the following set of questions:

1.1 Recognition of accent:
Where is the speaker from? Choose from list

1.2 Accent Strength:
This person had a strong foreign accent while speaking English.
Completely disagree  1  2  3  4  5  6  7  Completely agree

This person sounds like a native speaker of English.
Completely disagree  1  2  3  4  5  6  7  Completely agree

1.3 Voice characteristics:
The speaker’s pitch is
Low  1  2  3  4  5  6  7  High

The speaker is speaking
Slow  1  2  3  4  5  6  7  Fast

The speaker is speaking understandable.
Completely disagree  1  2  3  4  5  6  7  Completely agree
Appendix II – Instructions for the participant and audio script

Dear participant,
Thank you for your willingness to participate in this study carried out by Vera Bielefeld, Céline Thomas, Iris Faassen, Nieke de Nijs, Camila Quezada Obando and Carolijn Visscher, students International Business Communication at the Radboud University in Nijmegen.
The procedure involves filling out an online questionnaire. The questions concern a short audio fragment of a job interview. Moreover, you will fill out a short English proficiency test of which the results will be shown at the end of the questionnaire. Filling out the questionnaire will take approximately 12 minutes.

Confidentiality of the research data
The data we collect during this study will be used by scientists for articles and presentations. Of course, the data will be made fully anonymous and safely stored following the guidelines of the Radboud University. Anonymized data is accessible to the scientific community for a period of at least 10 years.

Voluntariness
You participate voluntarily in this research. Therefore, you can withdraw your participation at any time during the research. All the data we have collected from you will be deleted permanently.

Compensation
As a thank you for participating, you have a chance to win a bol.com gift card worth 30 euros.

More information
Should you want more information on this research study, now or in the future, please contact Carolijn Visscher (e-mail: c.visscher@student.ru.nl)

CONSENT
By proceeding to the next page, you indicate that:
- You have read the above information
- You voluntarily agree to participate
- You are at least 18 years of age
- Agree with the terms and conditions.

Kind regards,
Céline, Vera, Camila, Nieke, Iris and Carolijn.

While completing the questionnaire you cannot return to the audio fragment. Therefore, try to listen carefully. Click on play to start the fragment.

Audio script:

Well, as you probably have seen, I finished school five years ago and immediately started university. I followed a programme in Communication Science in which I graduated with a master’s degree and afterwards I did an internship in that area within a larger organisation. And, well, now I’m on the lookout for a job for me to gather more experiences and to further develop myself. I already learned a lot during my study, especially about marketing, corporate communication, and intercultural communication, all that sort of things.

A little about myself … I enjoy working with other people a lot. You might say I’m a team player but I can do perfectly fine on my own as well, that’s not a problem. My internship has taught me about responsibilities and I was actually surprised how ambitious I can get. That doesn’t mean I don’t care about my colleagues, though. I tend to get along quite well with everyone I come across.

If I had to describe myself in three words, I’d probably say enthusiastic, trustworthy and open-minded. I think I know pretty well where my limits are so I can use that and also push myself a little further. And whenever I meet a dead end, I try other ways to come up with a solution. I call that my creative side. I think that’s important … to think around the corner.

So, I think I would be a perfect fit for the position of junior marketing assistant in your organisation. I did a little research and so far, I like what I read about you, your values, goals, what you do in general … I think we would get along perfectly … I liked that a lot.
Appendix III – Questionnaire

1. Evaluation of the candidate:

1.1. Status

Intelligence

*The speaker is intelligent.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

Ambition

*The speaker is ambitious.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

Confidence

*The speaker is confident.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

Competence

*The speaker is competent.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

1.2. Solidarity

Trustworthiness

*The speaker is trustworthy.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

Benevolence

*The speaker is benevolent.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>

Similarity

*The speaker is similar to me.*

<table>
<thead>
<tr>
<th>Completely disagree</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Completely agree</th>
</tr>
</thead>
</table>
Non-native accents and hiring recommendation

**Attractiveness**

*The speaker is attractive.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

1.3. Dynamism

**Level of activity**

*The speaker is active.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

**Liveliness**

*The speaker is lively.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

**Talkativeness**

*The speaker is talkative.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

**Enthusiasm**

*The speaker is enthusiastic.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

1.4. Hiring success

*The speaker sounds competent for the job application.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

*I would hire the speaker for the job position.*

Completely disagree  1  2  3  4  5  6  7  Completely agree

*I would recommend the speaker for the job position.*

Completely disagree  1  2  3  4  5  6  7  Completely agree
1.5. Perceived Comprehension:
I found this person easy to understand.
Completely disagree 1 2 3 4 5 6 7 Completely agree

1.6. Familiarity
I am very familiar with the speaker’s English accent.
(Hendriks & Van Meurs, 2018)
Completely disagree 1 2 3 4 5 6 7 Completely agree

I am known with the speaker’s English accent.
Completely disagree 1 2 3 4 5 6 7 Completely agree

2. Manipulation check

2.1 Voice characteristics:
The person's speed of speaking was pleasant.
Completely disagree 1 2 3 4 5 6 7 Completely agree

The speaker had a pleasant intonation.
Completely disagree 1 2 3 4 5 6 7 Completely agree

The speaker had a pleasant voice.
Completely disagree 1 2 3 4 5 6 7 Completely agree

2.2 Accent Strength:
This person had a strong foreign accent while speaking English.
Completely disagree 1 2 3 4 5 6 7 Completely agree

This person sounds like a native speaker of English.
Completely disagree 1 2 3 4 5 6 7 Completely agree
2.3 Recognition of accent:
Where is the speaker from? Choose from list

3. Background variables:
3.1 Demographics
Age:
Gender:
Profession:
Highest obtained level of education:

3.2 Experience job interviewing
I have experience as an interviewer in job interviews.
Completely disagree 1 2 3 4 5 6 7 Completely agree

I have experience as an interviewee in job interviews.
Completely disagree 1 2 3 4 5 6 7 Completely agree

3.3 English proficiency
I sound like a native speaker of English when I speak English.
Completely disagree 1 2 3 4 5 6 7 Completely agree

When I speak English, my accent is more American English than British English?
Completely disagree 1 2 3 4 5 6 7 Completely agree

English proficiency as displayed through the LexTALE test: ……..

3.4 Attitude towards accents
I think it is important for speakers to sound like a native speaker of English when speaking English.
Completely disagree 1 2 3 4 5 6 7 Completely agree
I like non-native English accents in general.
Completely disagree  1  2  3  4  5  6  7  Completely agree

I prefer American English over British English.
Completely disagree  1  2  3  4  5  6  7  Completely agree

Thank you for participating in this study. If you are interested in winning the bol.com gift card of € 30,-, please enter your email address below. If not, proceed to the next page for the results of your English language proficiency test.