

NON-NATIVE DUTCH: PHONETIC PROPERTIES AND EVALUATIVE JUDGEMENTS

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ABSTRACT

This paper reports on the evaluation of the speech of Dutch first-generation adult immigrants by native Dutch listeners. An attempt is made to explain speaker evaluations on the basis of both suprasegmental deviancy from standard (non-accented) Dutch and ethnic group evaluations.

INTRODUCTION

The results presented here are part of the research project "Native judgements on non-native Dutch". The components in the project and the relations between them are represented in Figure 1. The present exploratory study is concerned with three questions. 1. To what extent do suprasegmental phonetic features in non-native Dutch deviate from native Dutch? (i.e. a partial description of the *input* in Fig. 1). 2. How do native Dutch speakers evaluate the personality characteristics of non-native speakers? (i.e. the *output*). 3. Are these speaker evaluations based on the suprasegmental deviations or on the social judgements and stereotypical views the

native Dutch judges hold about ethnic groups? (i.e. what *triggers* the output).

METHOD

Speech material

Four ethnic groups were selected from the Dutch multi-ethnic society: three non-native groups and one native control group. Each non-native group was represented by two countries of origin. The native group contained both speakers with a regional accent and those speaking the standard variant (see table 1, next page). The speakers selected and interviewed were 18 to 35 years old male. They were attending (or had attended) higher education. They all spoke the language of their country of origin as their mother tongue (for the Moroccans and Surinamese in this study this was Moroccan-Arabic and Sranan).

For each speaker an identical text fragment of 15 sentences was selected from a reading text. Each fragment lasted approximately one minute. The text was about a family having a car problem.

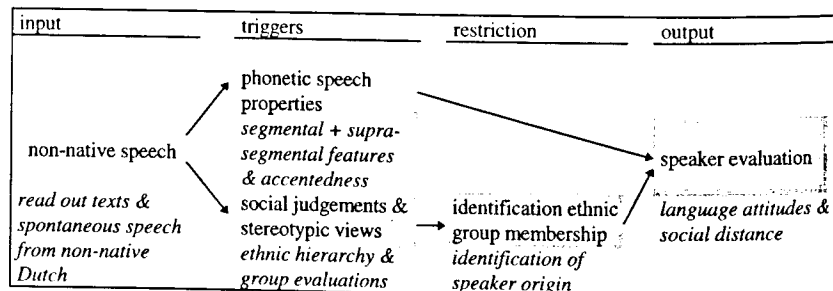


Figure 1. Components in native judgements of non-native speech.

Table 1. Speaker origin and number (N=number of speakers used in the present study).

	ethnic group	origin group (country)	N
non-native	Medi-teranean	-Turkey	2
		-Morocco	2
Dutch	former colonial	-Surinam	2
		-the Antilles	2
	West-European	-England GB	2
		-Germany	2
native Dutch		-Brabant	1
		-Randstad	1
		-Standard	1

The (read out) speech fragments were identical at the morphological, syntactic, and lexical level. Thus, any differences between fragments as well as the evaluation of fragments can be attributed to the phonetic differences between speakers and speaker groups.

Judges and judgements

The speech fragments were presented to three types of judges. These represent the three central components in the Brunswikian lens model, used by Scherer to describe the operation of personality markers in speech: distal cues, percepts and attributions [1]. Firstly, three phonetic experts rated the phonetic features of the speech fragments at the suprasegmental level: the *distal cues*. The method used to describe the suprasegmental features was based on Laver's phonetic description of voice quality [2]. The experts made an auditory description of the settings for *pitch*, *tempo*, *loudness*, *articulation* and *voice* on a total of 25 bipolar scales. Two more scales were added to evaluate *intelligibility* and the strength of *non-native accent*.

Secondly, a group of 15 language students at the University of Tilburg judged the salience of several phonetic features: the *percepts* of the distal cues. Due to space limitations these results will not be

presented here. However, they will be attended to at the poster.

The third group of judges were 67 other language students, who reported the *attributions* of personality characteristics on 13 bipolar semantic differential scales. The scales represent the three dimensions which, according to previous studies, underlie language attitudes: *attractiveness*, *status* and *social distance between speaker and rater* [3]. These judges also rated their social judgements and stereotypical views of non-native groups. The group evaluations were rated on the same differential scales as the speaker evaluations. Attractiveness, status and social distance were judged for the *average member of group x*. No stimulus tape was played. The ethnic groups filled in for 'group x' were those represented in the speaker evaluation: non-native Turks, Moroccans, Surinamese, Antilleans, Germans, and native Dutchmen. The English happened not to be represented here.

RESULTS

Suprasegmental phonetic properties

To attend the first question in this study, suprasegmental deviancy from standard, non-accented Dutch was computed. Mean deviancy scores were computed for intelligibility, non-native accent, pitch, tempo, loudness, articulation, and voice. As was expected, deviancy from standard Dutch was stronger for the non-natives than for the natives. Obvious differences were found for intelligibility, accent, pitch, tempo and articulation. Within the non-native groups suprasegmental settings seem to be personally defined, not depending on the mother-tongue of the speakers. The weak relation between origin and suprasegmental deviancy may be because each country of origin was represented by only two speakers

Speaker evaluation

The speaker evaluations were given by the third group of judges (lay people, n=67).

The speaker evaluations were performed to answer the second question in this study. It was found that differences between ratings of speakers' personality characteristics were significant. The results are presented in rankings on the underlying dimensions (attractiveness, status and social distance) in table 2.

Table 2. Rankings of speaker evaluation (most positive = 1, most negative = 15).

	attractive- ness	sta- tus	social distance
Turk-1	14	11	13
Turk-2	13	15	15
Moroccan-1	8	14	10
Moroccan-2	6	13	12
Surinam-1	7	6	8
Surinam-2	1	8	1
Antillean-1	5	10	5
Antillean-2	2	12	6
German-1	15	3	14
German-2	10	7	9
English-1	3	4	3
English-2	11	9	11
Brabant (South)	4	5	2
Randstad (West)	12	2	7
Standard Dutch	9	1	4

Within the native group status and attractiveness are opposites. This finding is in accordance with previous studies on language attitudes [3]. However, this is not found in the rankings of some non-natives; both Turks, for example, are judged negatively on all three dimensions.

It is also striking that the Dutch are *not* consistently rated more attractive and at closer social distance than all non-natives, which was expected on the basis of socio-psychological research [4]. The Surinamese and Antillean speakers are rated equally (or even more) attractive and close to the raters as the in-group: the Brabant natives.

Group evaluation

Differences between ratings on the three dimensions were significant; the results are presented in ranks in table 3.

Table 3. Rankings of group evaluation (most positive = 1, most negative = 6).

	attractive- ness	status	social distance
Turk	3	5	5
Moroccan	5	6	4
Surinam	1	3	3
Antillean	2	4	2
German	6	1	6
Dutch	4	2	1

The rankings show a clustering of evaluations of non-natives belonging to the same ethnic group (i.e. Mediterranean and former colonial). Non-native Dutch groups seem to be evaluated differently according to where they were born and raised. However, as table 3 indicates, the difference in ethnic group membership might be more important than the actual country of origin.

TRIGGERS IN SPEAKER EVALUATION

The third question to be answered in this study was (a) whether the suprasegmental deviations have an effect on the speaker evaluations, and/or (b) whether social judgements of ethnic groups determine the evaluation of a speaker of this group. The answer may be found in the correlation matrix, which is presented in table 4. (N.B. the suprasegmental scores of the English have not been incorporated here because there were no group evaluations on them.) It can be seen that attractiveness in speaker evaluation is closely related to attractiveness in group evaluation. In the evaluation of the speaker's status both the group evaluation of status and some of the suprasegmental features seem to be important (i.e. intelligibility, accent, pitch and tempo). The high correlation with social distance is caused by internal correlation of group evaluations. The evaluation of social distance appears to be related to the social distance towards the groups, and the ratings on intelligibility and strength of accent.

Table 4. Correlation among speaker evaluation, suprasegmental deviancy, and group evaluation (two-tailed significance at *.5% and **.1% level).

	atrac- tiveness	status	soc.dis- tance
intelligibility	.42	.56*	.62*
accent	-.06	-.69**	-.58*
pitch	.19	-.72**	-.22
tempo	.03	-.69**	-.39
loudness	-.41	-.03	-.20
articulation	.07	-.25	-.32
voice quality	.27	-.17	.12
group eval.:			
-attractiveness	.69**	-.18	.51
-status	-.21	.84**	.22
-soc. distance	.29	.61*	.73**

To gain more insight into the correlations, a regression analysis was performed. In the equation for speaker's attractiveness, only group attractiveness was included ($R=.69$). The equation for speaker's status included group status as well as intelligibility and voice ratings, resulting in a high multiple R (.97). (N.B. intelligibility was strongly correlated to accent, pitch and tempo, therefore these latter features are not included in the equation.) The regression equation of speaker's social distance included only social distance towards the group ($R=.73$).

DISCUSSION & CONCLUSION

The suprasegmental analyses of the read out text do not show that differences in suprasegmental deviancy from standard Dutch can be related to differences in mother-tongue of the non-native speakers. It might be that using deviancy from standard Dutch is too broad a measurement. At the poster a more detailed analyses of the exact scores on the suprasegmental scales will be presented also. On the other hand, it may be that most distinctive features between ethnic groups are to be found in the segmental analyses, which will be performed in the near future.

The present study indicates that the ideas judges have about the ethnic groups are most important in determining the ratings on social speaker evaluations. Suprasegmental deviancy does not seem to have a large influence on the speaker evaluations. However, it was found that ratings of speaker's status increase as intelligibility and voice quality get better.

In Figure 1 the restriction on using group attitudes in speaker evaluation is the identification of the speaker's origin. In a previous pilot it was found that the origin of speakers could be fairly well identified for the four ethnic groups (Mediterranean, former colonial, West-Europeans and native Dutchmen), but the actual country of origin was identified significantly less well [5]. It is now assumed that when speaker identification is easy, group attitudes form the basis for social speaker evaluations. The (suprasegmental) phonetic features probably influence speaker evaluation when identification of speaker origin is difficult. Suprasegmentals may also be the cause of differences in speaker evaluations between speakers from the same ethnic group.

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