

The roles of stereotypes, phonetic knowledge, and phonological knowledge in the evaluation of dialect authenticity

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Abstract

Utterances realized by actors and actresses who were not raised in the Viennese dialect were evaluated with respect to their dialect authenticity by listeners from Vienna and from outside Vienna. Focus was laid on the production of the clear and the dark variant of the lateral. In their ratings, listeners were quite accurate as concerns the phonetics and phonology of lateral application. They were, however, less aware of the stereotypes assigned to the Viennese dialect, i.e., the production of stereotypes was not detected by the listeners.

1. Introduction

As an urban dialect, the Viennese dialect is a social variant, spoken by the lower social classes of Vienna. As such, it is negatively evaluated. From a dialectological point of view, the Viennese dialect belongs to the Middle Bavarian dialect group, but it also has highly salient features which are solely attributed to the Viennese dialect, such as specific timing relations, an allophonic dark articulation of the lateral, or the monophthongization of diphthongs [1]. The present contribution will focus on the lateral.

2. The Lateral in the Viennese Dialect

2.1. Phonetics and Phonology

The phoneme inventory of the Viennese dialect contains one lateral – an alveolar lateral approximant. Preceding a lateral, front vowels are rounded, e.g. [ʃdylə] *stiller* ‘quiet’ (comparative). Word-finally and before consonants, the lateral is vocalized, resulting in a palatal vowel [e] as in, e.g., [ʋœɔɔ] *Wald* ‘forest’. Following a front vowel (which has been previously rounded by /l/), vocalized [e] is absorbed and the remaining vowel is compensatorily lengthened, e.g. [ʃdy:] *still* ‘quiet’ or [gœ:ɔ] *Geld* ‘money’. The remaining positions in which the lateral is produced are the word-initial and the intervocalic positions and after consonants. In some of these remaining positions, the lateral is produced with the tongue tip in contact with the alveolar ridge, the tongue body drawn back and lowered, and the air escaping only on one side of the tongue. The articulation of this lateral is very similar to the description given in [2], p. 543, and is often referred to as “dark l” in the literature.

In languages or language varieties, clear and dark laterals can be phonologically distinct, as in Albanian. The two variants can also occur in complementary distribution, or it can be the case that only one variant (either the clear or the dark one) is used in a given language or language variety. Complementary distribution has been described for, amongst others, English [3, 4, 5, 6], Catalan [7], Czech [8], Italian [9], or the Rhenish dialect [10]. In these languages or varieties, the clear lateral is

found syllable-initially, whereas the dark lateral is found syllable-finally or when the lateral is geminated.

The distribution of the dark lateral in the Viennese dialect is quite different from the ones observed so far, as it is to be found: (i) word-initially; (ii) after alveolar and post-alveolar consonants; (iii) in intervocalic position, when both vowels are back vowels; (iv) in cases where the vocalization of the lateral has been suppressed (e.g. in contexts requiring the use of the Standard language). The clear lateral occurs in all other positions, that is: (i) after labial, palatal, and velar consonants; (ii) in intervocalic positions when one or both vowels are front vowels.

Especially after palatal and velar consonants and in the vicinity of palatal vowels, the clear lateral is palatalized. Usually, velar plosives in [gl]-sequences are palatalized as well. The palatalization of the velar plosive might lead to a deletion of the voiced portion of the lateral, the lateral having merged with the (extended) frication part of the plosive. After labial consonants, the lateral might adopt a retroflex articulation, indicated by a low F3. In addition, the dark lateral is longer than the alveolar lateral, the ratio being approximately 1:1.5 [11]. The positional distribution of the dark lateral in the Viennese dialect (especially the word-initial position) challenges the assumption that the dark lateral is the result of an articulatory reduction. This assumption results from the observation that in languages or language varieties with complementary distribution of the two laterals, the dark lateral occurs in syllable-final position [7]. However, Viennese data corroborates the view that clearness and darkness are gradual properties [3, 7, 12], at least as far as allophonic variation is involved.

Acoustically, clear and dark laterals differ mainly in F2, the value being substantially lower for the latter. Both variants exhibit, in dependence on the length of the side-channel, an anti-formant in the region of ~ 2000 – 4000 Hz which might lead either to the extinction or to a shift of F3. It holds especially for the dark lateral that an extinction of F3 enhances the dark quality of the lateral.

2.2. Sociolinguistic aspects

Among all features characterizing the Viennese dialect, the use of the dark lateral is among the most negatively evaluated of all [11]. Two main factors contribute to heavy saliency with concomitant negative evaluation. First of all, it occurs in a prosodically strong position, namely word-initially. Second, the use of the dark lateral is restricted to the city of Vienna and its immediate vicinity.

Since the use of the dark lateral in Vienna is a strong social marker, it tends to be avoided in formal styles and especially by women [1, 11]. The use of the dark lateral has been described as socially marked for the Rhenish dialect [10] and

for urban dialects in Jordanian urban centers [13]. Although the dark lateral does not occur in strong prosodic positions in these dialects, its use is avoided in formal situations and by women. Negative evaluation of the dark lateral has also been reported for Czech [8].

2.3. Stereotyping the Viennese dialect

Strong social markers easily become stereotyped. This means that certain social properties are conveyed by a certain linguistic feature. In the case of the dark lateral, these properties basically are "Viennese", "plebeian", "uneducated", or "aggressive". A good indicator of the way a certain variety is stereotyped is to ask speakers to imitate the variety, since in imitating speakers capture the prominent features of that variety [14, 15]. Not surprisingly, listeners too have a strong agreement of the stereotypical phonetic patterns of a foreign accent. However, they are less able to judge the authenticity of an accent [16] and can be fooled [17].

3. Methods

Within the project Viennese Sociolect and Dialect Synthesis (dialect-ts.ftw.at), nine actors and actresses were asked to read out a preset of sentences in the Viennese dialect. The sentences were presented both in Standard German orthography and in a transcription approximating the Viennese dialect. In the Viennese theatre, actors or actresses are not members of the lower social classes and none of the actors or actresses interviewed here was raised in the Viennese dialect. The speech material of three actors and two actresses proved authentic enough to be submitted to an in-depth analysis. Three of these, namely HP, MC, and AN, were raised in Vienna, BD was raised in Lower Austria, and BJ in Graz, 200 km south of Vienna. For the current investigation, all realizations of the lateral (224 in total) were segmented manually. F1, F2, and F3 were extracted by means of LPC. A 46 ms long gliding Hanning window was applied with an overlap of 95%. Duration was measured as well. Depending on the duration of the lateral, the measurement procedure described rendered 20 to 150 measurements per lateral, i.e., the formant frequency contour of the whole lateral was analysed. This method was chosen in order to obtain a view of formant frequency movement over time. In order to determine whether a lateral was produced with the described mono-lateral articulation pattern, the value of F2 was considered conclusive (F2 < 1200 Hz for the dark lateral). Likewise, in order to determine whether a lateral was articulated with a retroflex tongue position, F3 was conclusive (F3 < 2000 Hz). 57 undergraduate students of the University of Vienna were asked to evaluate a list of 45 sentences (eight sentences allocated to each actor/actress + five diversionary sentences from other speakers) with respect to Viennese dialect authenticity ("authentic", "not authentic", "possibly authentic"). Each sentence included one word with a lateral. Of these students, 21 were raised in Vienna, 14 in the vicinity of Vienna (Lower Austria), and 22 in the remaining provinces of Austria.

4. Results

4.1. Results on production

Except for the speaker BJ, all actors and actresses demonstrated competence in selecting the phonetic context in which

the dark lateral appears (see § 2.1). In Table 1, the percentage of wrong applications of both the dark and the clear lateral are presented.

Speaker	[ɫ] instead of [l]	[l] instead of [ɫ]
AN ♀	5	20
BJ ♂	21	11
CM ♂	4	0
BD ♀	9	0
HP ♂	7	0

Table 1: Percentage of misapplications of the lateral.

The dark lateral tends to be avoided by speakers of the Viennese dialect (§ 2.2), especially by women. This means that a dark lateral would never be realized when a clear lateral is required, whereas it might very probably be the case that the clear variant is chosen instead of the dark variant. Therefore, in the authentic Viennese dialect: (i) women usually do not use the dark lateral, and (ii) misapplications by men point in the direction of the overapplication of the clear variant.

Inspection of Table 1 reveals that actors and actresses tend to behave the other way round: they rather choose a dark lateral when a clear lateral is required and, except for AN and BJ, they never use the clear variant instead of the dark variant. An overgeneralization of the dark lateral is to be observed. This holds true for the two actresses as well, who were not expected to produce the dark laterals frequently. However, only AN produced a clear lateral instead of a dark one in 20% of all her laterals. BD never did.

4.2. Results on perception

4.2.1. Overall results

Overall, none of the actors and actresses passed off as an authentic Viennese dialect speaker. This means that the listeners correctly identified the speakers as non-authentic Viennese dialect speakers. Figure 1 shows the average of all "yes" responses (= authentic Viennese dialect) for all sentences evaluated for each actor/actress. AN, HP, and BJ were scored highest by the Viennese listeners. The high scores for BJ are somewhat perturbing, since he performed worst in production. AN and HP were at least raised in Vienna, though not in the Viennese dialect, but BJ was raised in Graz, with a dialect very different from the one of Vienna.

Figure 1 also reveals that the judgments of Viennese listeners differ considerably from the judgments of listeners raised outside Vienna, be it Lower Austria (geographically surrounding Vienna) or the remaining parts of Austria. Except for BD, who was raised in Lower Austria and scored high by Lower Austrian listeners, the Viennese listeners assigned the highest scores to all speakers. This does not mean, however, that speakers outside Vienna performed better in their assignment of dialect authenticity. It rather means that Viennese listeners were more homogeneous in their judgments and more confident with respect to authentic Viennese dialect features.

It has to be considered that the scores shown in Figure 1 is an illustration of the overall evaluation per speaker. Therefore, in order to arrive at an expressive interpretation of the knowledge of the listeners, the individual productions of each sample have to be analyzed and compared with the judgments.

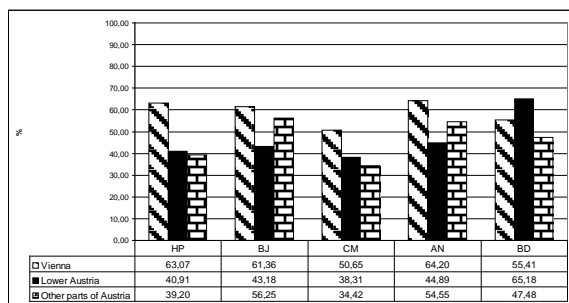


Figure 1: Mean values (in %) of "yes" responses for all sentences of the corpus, split by speakers' identity and listeners' geographical provenance.

4.2.2. Discussion of selected samples

In order to make a precise statement about whether Viennese listeners perform better in assigning authenticity, it is necessary to analyze each sentence separately, since the overall results are composed of good, bad, and moderate performances of the actors and actresses.

The highest score an actor received by the Viennese listeners was 95% positive responses for the utterance *Das ist löblich* 'this is praiseworthy' uttered by BJ. Lower Austrian listeners and listeners from the remaining Austrian provinces scored this utterance highest as well, with 79% positive responses. *Löblich* 'praiseworthy' requires a dark lateral word-initially and a clear one after the bilabial plosive. Both laterals are produced correctly by BJ, therefore, the high score assigned by the listeners is justified.

For the utterance *Dabei bleib ich* 'I stick to it', BJ received only 41% positive responses by Viennese listeners. Listeners from Lower Austria and listeners from the remaining provinces scored this utterance very low as well, with only 48% positive responses. In this case, BJ incorrectly realized a dark lateral after the bilabial plosive. Additionally, he realized a diphthong instead of a monophthong in *bleib* 'stick', resulting in [ˈblæ:b] instead of [ˈblæ:ɪ]. It is a general drawback of evaluation tests which rely on naturally occurring speech samples that features cannot be controlled. Therefore, it cannot be ruled out that listeners additionally evaluated the failure to realize the monophthong. However, it has to be considered that the dark lateral is consistently at the top of the negatively evaluated features.

In Figure 2, left and right cursor positions mark the lateral. Right and left upper panel are related to the right cursor position in the spectrogram window. For exact labeling, the right cursor should have included one further period, but this was avoided for demonstrative reasons in order to let the anti-formant visible in the region of ~ 2800 Hz in the amplitude spectrum window, affecting the bandwidth of F3. Average F2 of the lateral is 1220 Hz, average F3 is 1700 Hz. These values point to a dark, retroflex articulation of the lateral. Since the lateral occurs in a strong prosodic position, the wrong application in conjunction with the diphthongal realization of the following diphthong is sanctioned by all listeners.

HP received 86% positive responses for the utterance *Abschließend noch das* 'finally this' by the Viennese listeners, 74% by listeners from Lower Austria and the remaining provinces. As in the high-scored utterance discussed above, HP correctly applied the dark lateral and all the other dialectal

features, therefore, the high score assigned by the listeners is justified.

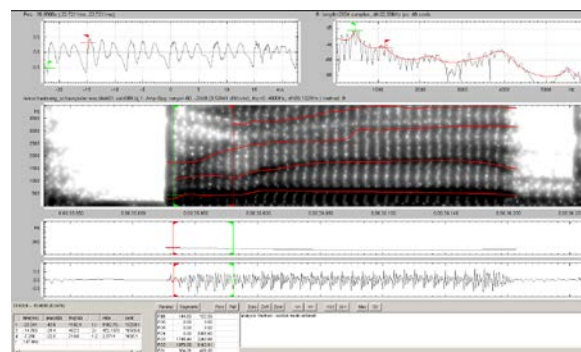


Figure 2: Realization of the item *bleib* 'stick', actor BJ. Right upper panel: amplitude spectrum window. Left upper panel: waveform zoom window. Intermediate panel: spectrogram window. Bottom panels: f0 and waveform window.

For the utterance *Aber keine Scheinheiligkeit* 'but no hypocrisy', HP received only 41% positive responses from the Viennese speakers and 42% from listeners from Lower Austria and from the remaining provinces. In the word *Scheinheiligkeit* 'hypocrisy', HP incorrectly articulated a dark lateral between two front vowels, moreover, he suppressed labialization of the vowel [æ:] preceding the lateral (see Figure 3).

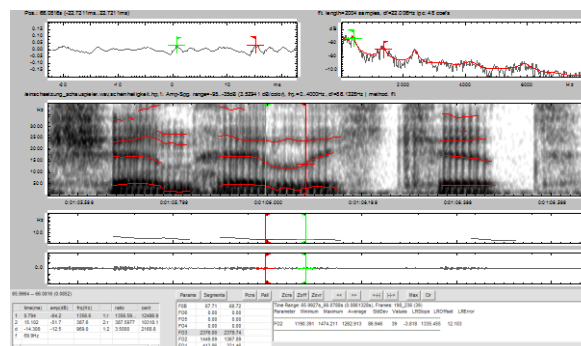


Figure 3: Spectrogram of the item *Scheinheiligkeit* 'hypocrisy', actor HP. For legend see caption of Figure 2.

Again, left and right cursor positions mark the lateral. Right and left upper panel are related to the right cursor position in the spectrogram window. F2 is low, with a mean value of 1260 Hz. No pronounced zero is observable in the vicinity of F3, and therefore, the bandwidth of F3 is not affected.

In conclusion, due to lack of space, only four speech samples have been discussed: two of them were produced in an 'authentic' way while the other two contained a wrong application of the dark lateral. The other speech samples of the corpus were assigned in a similar way; therefore, listeners were quite accurate in their assignments. From the samples discussed, it cannot be concluded that listeners from outside Vienna performed worse. But more data are needed to answer this question in a satisfactory way.

5. Conclusions

The task of the actors and actresses was to produce a list of utterances in the Viennese dialect. None of the actors or actresses were brought up speaking the Viennese dialect,

although three of them, AN, HP, and MC were raised in Vienna. None of the speakers consistently succeeded to produce the Viennese dialect. Every actor or actress sometimes misapplied the dark variant of the lateral, i.e., realized it in the wrong phonetic contexts. Misapplications as the ones observed occur in style-shifting [18]. In addition, it is also well known that features of high saliency are subject to hyperdialectism [19], i.e., they are overgeneralized and put into contexts where they are not observed in authentic speech behaviour. It can therefore be concluded that the actors and actresses (re)produced a stereotyped variety of the Viennese dialect.

As far as evaluation is concerned, none of the actors or actresses were accepted as an authentic Viennese speaker. Nevertheless, given the high scores obtained by BJ, the actor who has been raised in Graz, the question whether listeners can be fooled is justified. The question has to be answered both in the affirmative and in the negative. If listeners are confronted with single, short utterances, they can be fooled if the speaker succeeds in realizing this short utterance in an authentic way. Taking together all the utterances an actor or an actress had to utter, listeners cannot be fooled any more. They correctly ruled out the utterances which contained false applications, especially if applied in strong prosodic positions, and passed through those which were realized in a correct manner. Since none of the actors or actresses succeeded in continuously producing an authentic Viennese dialect, listeners, if presented with a reasonable amount of speech data, will arrive at the correct conclusion, namely that, overall, the speaker is not an authentic Viennese dialect speaker. This means that listeners are aware of erratic behavior, i.e., hyperdialectism. They are, however, less aware of the stereotypes accompanying the dialect. It has been stated in § 2.2 that women avoid the use of the dark lateral, i.e., it hardly ever occurs in the data of women who have been raised in the Viennese dialect. Nevertheless, both actresses articulate and sometimes overgeneralize the dark lateral. Our listeners never sanctioned when a woman articulated the dark lateral in the phonetic contexts described in § 2.1. This means that the realization of the dark lateral is also expected and attributed to women. Moreover, this means that the dialect is understood as a homogeneous entity. General belief is that the Viennese dialect is spoken by Viennese men of the lower social classes. This stereotypical concept of the Viennese dialect might lead listeners to a wrong conclusion if they had to evaluate a Viennese dialect speaking woman who does not articulate the dark lateral. It can therefore be concluded that listeners have substantial knowledge of the phonetics and the phonology of the Viennese dialect, but they are less aware of the stereotypes associated with this dialect.

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