

Some aspects on individual speaking style features in Hood German

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Abstract

Multiethnic urban German (Hood German) as spoken by adolescents in Berlin differs in several significant ways from more standard varieties of Berlin German. It is characterized by a variety of morpho-syntactic alternations and phonetic variants uncommon to the regional standard spoken in Berlin. Previous quantitative corpus analyses have shown that overall speakers of the multiethnic youth style German have a strong tendency to centralize /ɔɪ/ compared to speakers rendering the local regional standard.

This paper now summarizes this centralization tendency and investigates auditory salient realizations of variation by individuals which show tendencies towards a hiatus in the diphthong /ɔɪ/, breaking the nucleus and the off glide. Moreover, there are other prosodic and segmental co-occurring features in the speech of some adolescents which are displayed since it is suspected that some of these may be (come) markers of Hood German.

Index Terms: speaker specificity, diphthong, Hood German

1. Introduction

Hood German [1], a youth style multiethnolect as spoken in larger urban areas of Germany is characterized by several morpho-syntactic alternations such as the ‘overuse’ of the discourse particle *so* ‘like’ marking unspecificity ([2]), the use of bare NPs (Hast Du problem? ‘Do you have (a) problem?’), the lack of prepositions (*Ich gehe Schule*. ‘I go (to) school’), the lack of copula verbs (*München weit weg*. ‘Munich (is) far away’) or the lack of congruency (*mein Schwester hat ...* ‘my-NOM sister has...’) ([3]). There are several qualitative accounts of such alternations from a range of different places in Germany, such as Berlin ([4], [5]; [6]; [7]), Böblingen, Munich, Nürnberg, and Urbach near Stuttgart, ([8], cited in [3]), Frankfurt ([9]), Hamburg ([3]; [10]); and Mannheim ([11]).

Just recently, we have conducted quantitative corpus studies on this youth variety. Data was collected through interviews with adolescents from the Berlin districts Wedding, Kreuzberg and Neukölln. All interviews were orthographically transcribed and then added to the ZAS spontaneous speech corpus on Hood German which is based on the Labb-CAT system [12]. Moreover, data was also collected from Berliners speaking the local standard variety of Berlin German. With the help of this corpus the phonetic realization of /ç/ as [ʃ] or [ç] was documented to be a feature of the youth style multiethnic urban variety spoken in Berlin, i.e. Hood German ([13]). This feature was also found to be a stigmatized and highly salient marker of *Hood German* for monoethnic Berliners ([1]). In our perception study ([1]) listeners were asked to categorize identical stimuli (comprising resynthesized fricatives ranging from more /ç/-like tokens to more /ʃ/-like tokens) as either

Fichte /fɪçtə/ (‘spruce’) or *fischte* /fɪʃtə/ (1st person sg. ‘to fish’) depending on the presence of a prime (names of two different neighborhoods of Berlin or no additional information). Results revealed that older listeners categorized more stimuli as *fischte* when they were primed with the name of a multiethnic neighborhood (Kreuzberg) than when primed with the name of a monoethnic neighborhood (Zehlendorf) or no prime at all. Interestingly, younger listeners rated most stimuli as *fischte* in the control condition with no added information. From that, we suggested a potential sound change in progress in terms of the loss of the phoneme contrast between /ç/ and /ʃ/ in Hood German.

Labov’s Martha’s Vineyard study ([14]; [15]) illustrated that the centralization of the diphthongs /aɪ/ as in ‘right’ and ‘light’ and /aʊ/ as in ‘cow’ and ‘loud’ serves as a linguistic marker of social and geographical identity. He describes this alternation as regional in character and as a feature of the speech of the people of Martha’s Vineyard. He found that this linguistic marker spread from the community of fishermen to the general population of the island and was used by the islanders as a social marker to set themselves off from the economically more powerful tourists and visitors coming to the island for summer vacations.

In addition to the variable realizations of /ç/ as [ʃ] or [ç], we also noticed auditory striking diphthong realizations in the spontaneous speech of the Hood German speakers in our ZAS Corpus. Standard German has three diphthongs /aɪ/, /aʊ/ and /ɔɪ/ of which two seem to be realized differently in Hood German. Thus, we have now started to investigate the diphthong realizations of Hood German speakers. In a recent study we have analyzed the F2 patterns in the diphthongs /ɔɪ/ and /aɪ/ to detect potential measurable differences in the spectral patterns ([7]).

1.1. Diphthong Characteristics

In our ongoing analysis, so far, we have investigated F2 patterns from 18 female mono- and multiethnic speakers. From self-identification and the use of other Hood German features speakers in our corpus were categorized in Berlin German speakers and Hood German speakers (note that also monoethnic monolingual German speakers can use Hood German). Approximately 2750 tokens of /ɔɪ/ and /aɪ/ realizations extracted from our spontaneous speech data base have been labeled and analyzed. Formant measurements were taken at 5 equi-distant points throughout the diphthong. The onset and offset of each diphthong was marked off in Praat ([16]). A third value was logged in the middle of the vowel and two more points were logged in between the onset and the middle of the diphthong, as well as between the middle and the offset of the glide. Thus, as the green lines in Figure 1 show, measurements were taken at 0% (start), 25% (early), 50% (mid), 75% (late) and 100% (end) throughout the diphthong.

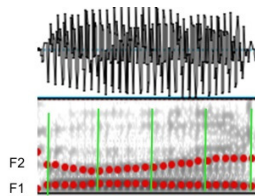


Figure 1: Formant measurement points during the diphthong /ɔɪ/.

Results revealed significantly higher F2 values for the Hood German speakers than for the Berlin German speakers at the positions start, early and mid of the diphthong. No such differences were found for /aɪ/ (cf. Figure 2). The centralization of /ɔɪ/ (in terms of a higher F2 in the nucleus of the diphthong) was independent of the speakers' other strong language (Turkish, Arabic, none) and thus, we suggest that it is a phonetic feature of Hood German which serves to express group membership in the multiethnic youth community. Descriptions of the regional Berlin standard ([17]) do not mention such a difference.



Figure 2: Average formant patterns during the diphthongs of Hood German (green) and Berlin German (red) speakers.

In addition, we have been trying to track some linguistic influences on the centralization of /ɔɪ/ in Hood German. Currently, we are investigating the impact of the preceding and following segmental environment. Preliminary results are in line with the findings obtained by Labov for Martha's Vineyard: obstruents and voicelessness favor centralization ([18]).

For our analysis of the interaction of sentence accent and stress on centralization we were not able to conduct a reliable statistical analysis because only very few words exist that contain the /ɔɪ/ diphthong in a lexically unstressed syllable.

However, in our investigation of the diphthong characteristics of /ɔɪ/, we have been noticing that some speakers of Hood German produce a very different variant of this /ɔɪ/ diphthong. While it sounds centralized to trained ears, there is something else - possibly a hiatus tendency - setting some tokens produced by some speakers off from their other tokens, and from tokens produced by speakers that do not show this variant. A hiatus changes the prosodic structure of the word, adding another syllable nucleus by breaking up a diphthong into its two individual components.

To investigate this more deeply and in a more controlled way, additional recordings were made at a school in Kreuzberg with students, most of them having a multiethnic background and showing features of Hood German. While we also find it desirable to quantify our data and correlate the occurrence of hiatus with social variables, the aim of this first study is not to quantify and parameterize the general spectral

and temporal patterns of the diphthong realization in Hood German, but rather to spot auditory salient variants of these diphthongs (and possibly other sounds contained in the speech material) shown by some individual speakers. Of course, individual differences might be due to speaker specific characteristics independent of the speech style within this community. However, we know that individual speakers can act as leaders in their speech community and the once individual features may spread (especially when these features are found in more than one speaker and in several tokens).

2. Method

A set of 33 adolescents from a school in Kreuzberg (Grade 8 and 9; age 13 through 16; 14 male, 19 female) participated in this experiment. Kreuzberg is one of the multiethnic neighborhoods of Berlin where Hood German is spoken by many adolescents. In contrast to our corpus study we used read speech. In this way, the recorded speech data is more controlled. Furthermore, it is well established that there is a register difference between spontaneous and read speech with the latter being more formal and pronounced ([19]). For this reason, we elicited read items containing the diphthong /ɔɪ/, hoping to get more exaggerated versions of the auditory salient, potentially hiatus alternations.

2.1. Speech material

Speakers were asked to read a list of words in the order given on a piece of paper and then repeat the list with the order of words reversed (from bottom to top). Included within this list were five words containing the diphthong /ɔɪ/. In this way 330 tokens of /ɔɪ/ realizations (33 speakers * 5 words * 2 repetitions) were recorded. The word list contained the following tokens:

1. Deutschland (Germany) /dɔɪtʃlɑnd/
2. Euro (Euro) /ɛʊrɔ/
3. heute (today) /hɔɪtə/
4. Kräuter (herbs) /krɔɪtɐ/
5. Kreuzberg (district of Berlin) /krɔɪtʃbɛ:ʁɪg/

The selection of words was done so that there is high familiarity for the readers in their daily language use. The words were also selected to allow for comparison with renditions of these lemmas in our spontaneous speech corpus. We deliberately elicited word lists rather than carrier phrases which may have seemed like a larger reading task to the students.

2.2. Analyses

First, both authors conducted an auditory analysis independently of each other. This was done to spot salient realizations of individual tokens. Second, representative items of these perceptually salient tokens were then investigated in more detail in spectral and temporal terms to look for quantifiable acoustic features that characterize these tokens.

3. Results

At this point, we are in the process of describing this youth style variety. We are taking inventory of the differences between Hood German (HG) and the regional standard German (RSG) as spoken in Berlin and we will not provide quantitative analyses of the items containing diphthongs that sound

different to trained ears. At a later point we plan to establish which features are due to individual variation and speaking styles and which may have a wider distribution within the speech community. This will be done by quantifying our observations through corpus studies on data drawn from our spontaneous speech database of Hood German and standard regional Berlin German.

Here, we will concentrate on several speakers which were rated as showing diphthong realizations particularly interesting to the authors. In addition, these speakers also revealed other audibly very salient prosodic features such as tensing of the final unstressed schwa vowel in the orthographic sequence <er> but also fronting of coronal stops, final stop deletion or dark /ʌ/ coloring as expressions of their individual speaking styles. It is noteworthy, that not every speaker reveals all features but that speakers use this repertoire of features to draw from.

3.1. Diphthong realizations

3.1.1. Speakers HGm1 and HGm2

The four renditions of the /ɔɪ/ diphthong in the word *heute* 'today' shown in Figure 3 were produced by two 16 year old male Hood German speakers HGm1 (upper panel) and HGm2 (lower panel).

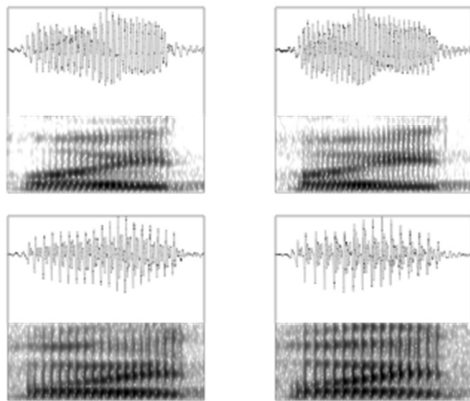


Figure 3: Spectrograms of the diphthong /ɔɪ/ in the word *heute* 'today' by two 16 year old male speakers HGm1 (upper panel) and HGm2 (lower panel).

The boys have very similar multiethnic backgrounds, yet, their /ɔɪ/ diphthong sounds rather different. The speaker whose speech is depicted on the top panel sounds to the authors, as if there are differences in timing compared to the regional standard variety spoken in Berlin.

The bottom panel shows a spectrogram by a speaker where we did not get these auditory impressions and who we believe adheres to the regional standard with regard to this feature.

There seem to be two spectrally observable differences between these productions of /ɔɪ/ for these two speakers: 1. Speaker HGm1 (top panel) produces a much greater discontinuity between the nucleus and the offglide compared to HGm2. There is spectral evidence for this in the waveform and in the spectrogram accompanied by an amplitude change visible in the waveform. Moreover, for HGm2, the F2 rises more steadily and gradual whereas for the first speaker, the F2 re-

mains somewhat low for about one third of the diphthong and then rises.

Secondly, speaker HGm1 reaches the maximum F2 earlier within the diphthong than speaker HGm2. For most tokens of these speakers that we have in our data, these qualitative observations seem to hold.

3.1.2. Speakers HGf1 and HGf2

The diphthongs in Figure 4 were also excised from the word *heute* as produced by two 14 year old female Hood German speakers (HGf). Both renditions produced by speaker HGf1 (upper panel) resemble each other acoustically and leave the auditory impression of almost two syllables being produced rather than a monosyllabic diphthong. This is very similar to HGm1 (upper panel Fig. 3) who also showed hiatic tendencies. Just as the diphthongs by speaker HGm1, the renditions on the top left of Fig. 4 also reveal some discontinuities. In addition, both tokens by HGf1 reach a high F2 at an early stage throughout the diphthong.

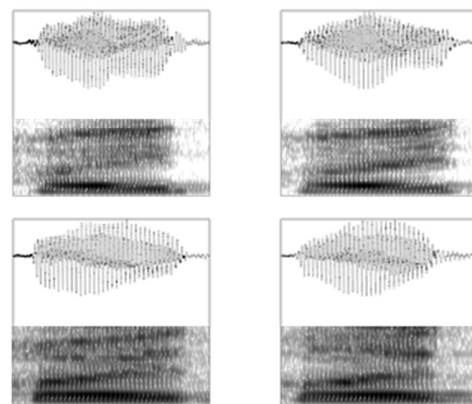


Figure 4: Spectrograms of the diphthong /ɔɪ/ in the word *heute* 'today' by two 14 year old female speakers HGf1 (upper panel) and HGf2 (lower panel).

Note that for HGf1, the energy distribution in the diphthong is different compared to that of the boys (Fig. 3). There is more energy in the initial nucleus part compared to the offglide. It is also evident through the initially raised F2 that the diphthong is strongly centralized compared to the regional standard variety ([7], [18]). Here, too, the discontinuity in the amplitude of the waveform can be observed; however, F2 seems to rise more continuously in the right panel compared to the left.

The spectrograms on the bottom of Fig. 4 show renditions of the diphthong /ɔɪ/ by HGf2 who seems to have a more equal distribution of energy throughout the diphthong. While her first iteration sounds rather hiatic, the second one sounds like regional standard German. A possible explanation is that the F2 maximum is reached somewhat earlier in the diphthong in rendition on the left which then leads to a noticeable difference in the realization of the diphthongs, best described as semi-hiatic.

3.2. Other features

There are several other features in the speech of these adolescents that are worth exploring further to establish an inven-

tory of differences between regional standard German and Hood German.

3.2.1. Tensing of final <-er>

While some features are rather segmental in nature, pertaining to the quality of the segment, one prosodic difference that we found to be rather salient was the tensing and change of quality and duration of the word final unstressed syllable as orthographically represented by <-er> in words such as *Kräuter* (herbs) /kr̥ɔɪtɐ/ [kr̥ɔɪtə]. The displays in Fig. 6 show examples of this observation by the two 14 year old female Hood German speakers HGf1 and HGf2.

HGf1 on the left emphasizes the final syllable which is untypical for regional standard German. The exact nature of this emphasis is neither well described nor well understood yet. However, perceptually, it is rather salient. It resembles what is expressed in US-American English as ‘gansta’ for *ganster* and may as well originate from musical rap culture or possibly from Turkish language influence. HGf2 on the right uses the regional standard pronunciation.

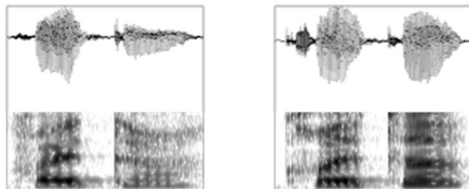


Figure 5: Spectrograms of the word *Kräuter* (herbs) by the female speakers HGf1 (left) and HGf2 (right).

Also notable here is that HGf2 on the right has a much stronger onset of the /kr̥/ sequence which we also perceive as rather typical for Hood German and which we observed with other speakers, too. The perceived quality of the uvular/velar German /r̥/ strongly resembles that of a velar fricative /x/.

3.2.2. Dental release of /t/

The frontal release of word medial /t/ in *heute* ‘today’, we also observe to be perceptually very salient. This may be spectrally evidenced, too, by a higher mean burst frequency ([20]) that is indicative of a more frontal release.

Figure 6 shows two renditions of the final syllable /tə/ of *heute* by the 14 year old female speaker HGf1. The one on the left is realized more alveolar while the one on the right is produced more dental.

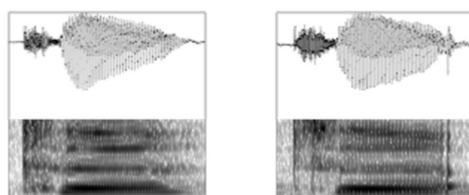


Figure 6: Spectrograms of the final syllable /tə/ in the word *heute* ‘today’ by the 14 year old female speaker of Hood German HGf1.

This is not only audible but also reflected in the different energy distribution of the /t/ burst. Notable also is the glottal stop at the end of the final unstressed schwa in the second panel. This, however, seems to be an idiosyncrasy of the

speaker more so than a general pattern observable across different speakers.

3.2.3. Coloring of /l/

The regional standard variety of German spoken in Berlin does not usually have a dark /l/ quality. However, several adolescent speakers realize the /l/ as [ɫ] in our word lists, in the onset of a syllable before a back vowel. The auditory dark lateral is produced with a more retracted tongue position and therefore spectrally reflected by a lowered F2 value and a higher F1 formant configuration.

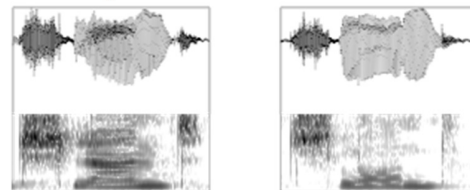


Figure 7: Spectrograms of the sequence /ɪʃland/ excised from the word *Deutschland* (country) by the female speakers RSGf1 (left) and HGf2 (right).

The velarization of /l/ is visible in the right spectrogram, compared to that seen in the left display of Fig. 7 with a light /l/ which has a relatively high F2 and low F1 ([21]). The spectrogram on the left is based on the speech of a regional standard speaker (RSGf1) who does not have this /l/ coloring. While this feature may originate from speakers with a Turkish cultural and ethnic heritage born in Germany, it is also being used by monolingual monoethnic Hood German speakers.

4. Discussion

In Hood German, we noticed prosodic and segmental deviations from the regional standard of Berlin German. They include the timing patterns of the diphthong /ɔɪ/ and the tensing and lengthening of phonologically unstressed final orthographic <-er> which in German goes along with changes in duration. We also observed the dental release of /t/ and the realization of a dark /l/ in Hood German in syllable onset position before low back vowels. While none of our speakers displayed all features, some speakers show several idiosyncrasies at the same time. Thus, it seems that adolescent speakers of Hood German chose from an inventory of markers and features to create their own individual speaking style within this urban variety of German.

If however, these are reliable features of Hood German or markers of individual speaking styles remains to be seen as we are now at a stage taking inventory of the phonetic/phonological alternations evident in this youth style multi-ethnolect. We will take our results from the reading task (word lists as a more formal register) and compare it to iterations found in our spontaneous speech data base.

Nevertheless, the differences in realizations of the diphthong ranging from a hiatus like /ɔ.ɪ/ to the diphthong /ɔɪ/ (which is canonical in the regional standard) are variable within speakers and also across speakers. At this point, we are still investigating the acoustic properties that can best account for this observation and which may as well be individual expressions of speaking style.

We suspect that this is a new feature of Hood German as spoken in Berlin which will eventually spread through the community as already now, it is one of the most prevalent markers of the as of yet under described phonetic/phonological features.

5. Acknowledgements

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