

IT'S NOT PHONETIC AESTHETICS THAT DRIVES DIALECT PREFERENCE: THE CASE OF SWISS GERMAN

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ABSTRACT

Dialect stereotypes are widespread. Birmingham English is perceived as ugly, Parisian French as cultivated. In Switzerland, Bern and Thurgau Swiss German lie on opposite ends of the attractiveness spectrum. In the present study, we examined how Swiss German, French, and English listeners – the latter two being unfamiliar with the dialects – rated the phonetic aesthetics of these two Swiss German dialects. In a matched-guise design, listeners judged how pleasing stimuli read by a bidialectal speaker were. Results revealed that unfamiliar listeners did not show a preference while familiar listeners strongly preferred Bern Swiss German. The attractiveness of a dialect thus seems to be largely driven by the social attributes of its speakers and less so by its phonetic aesthetics. The realization of /r/ as apical or dorsal, however, strongly influenced preference judgments in familiar listeners.

Keywords: phonetic aesthetics, Swiss German, matched-guise, sociophonetics, dialectology

1. INTRODUCTION

Some dialects evoke positive emotions in hearers, others do not. Research has shown that in Britain, for example, Birmingham and London Cockney are perceived as ugly. South-Welsh dialects, on the other hand, are viewed as charming [22]. This holds true for other languages: Parisian French is perceived as more cultivated than the French spoken in Québec [11]. In German-speaking Switzerland, too, there exist well-defined views of dialect beauty and ugliness. Two dialects, in particular, seem to lie in opposite directions on the attractiveness spectrum: Bern Swiss German (hereafter BE SwG) and Thurgau Swiss German (TG SwG). [5, 12, 18, 24] report that BE SwG is stereotypically perceived as ‘homely’, ‘countryside-ish’, ‘popular’, ‘cozy’, and ‘colorful’. TG SwG, on the other hand, is reported as being ‘bright’, ‘hard’, ‘unpopular’ or even as ‘poisonous’ (German: *giftig*, cf. [5]).

Why do listeners have such categorical views about the beauty and ugliness of dialects? [10, 11] postulate two competing views:

- (i) *Inherent value hypothesis*: some dialects are inherently more attractive than others. Humans are biologically wired with such preferences.
- (ii) *Social connotations hypothesis*: the attractiveness of a dialect depends on the social attributes of its speakers.

Research seems to corroborate the validity of the second hypothesis. Studies testing if people are able to distinguish the attractiveness of dialects and differentiate between standard and non-standard varieties reported that unfamiliar listeners did not show a preference for either and could not make distinctions with regards to proximity to a standard [7, 9, 10, 22]. Unfamiliar listeners have no social connotations associated with the stimuli heard and thus rated the sound of the dialects equally. When the same stimuli were played to speakers familiar with the dialects, however, preferences and distinctions emerged.

In the present study, we tested whether listeners unfamiliar with SwG dialects showed a preference for BE SwG or TG SwG in a matched-guise design. Why should we test this again given the results shown in [7, 9, 10, 22]? Aside from attributes such as ‘cozy’ to describe BE SwG or ‘poisonous’ for TG SwG, native listeners interestingly resort to metalinguistic attributes – which they understand as objective measures – to argue for the attractiveness or unattractiveness of the dialects: BE SwG is judged as being ‘slow’, ‘sluggish’, ‘soft’, ‘round’ as ‘having wobbly contours’ and ‘soft vowels’ [3, 5, 12, 18, 24]. TG SwG, on the other hand, is described as ‘sharp’, ‘fast’, and ‘pointy’ [ibid.]. Such tactile sensory or visual attributes seem to be associated closely with the acoustic signal – where open vowels are perceived as more round and closed vowels as more pointy [6] – and with the aesthetics of the two dialects.

Since native listeners use such meta-linguistic attributes to motivate their preferences, we wanted to examine this argument’s validity: can Swiss listeners’ association of the acoustic signal with the preference towards a dialect be replicated with listeners who are unfamiliar with these SwG dialects?

2. METHODS

2.1. Dialects

The two dialects examined in the present study are BE SwG and TG SwG. Both dialects have been reported to be different from each other prosodically and segmentally. Table 1 shows the vowel inventories of BE SwG (left) and St. Gallen SwG (right), which – like TG SwG – is also an Eastern SwG dialect and features the same vowel inventory as TG SwG.

Table 1: Vowel inventory of BE SwG and St. Gallen SwG (taken from [5]).

Mhd.	Berndeutsch	Prozess	St. Gallerdeutsch
ē	[wæ:r]	← Senkung →	[wɛ:r]
e	[blɛtər]	← Senkung →	[blɛtər]
o	[ɔdər]	← Senkung →	[odər]
i	[ʃlɛm]	← Senkung →	[ʃlim]
u	[nor]	← Senkung →	[nur]
ê	[sɛ:]	— Hebung →	[se:]
ô	[so:]	— Hebung →	[so:]
â	[ʃtrɔ:s]	— Hebung →	[ʃtrɔ:s]
æ	[xæ:s]	— Hebung →	[xɛ:s]
ä	[wælj]	— Hebung →	[wɛlj]

The left column in Table 1 indicates the underlying Middle High German vowel (Mhd.). The column in between the transcriptions of sample words shows the phonological process that has taken place from Mhd. to the current form: BE SwG has primarily lowered its vowels (*Senkung*), TG SwG has mainly raised its vowels (*Hebung*). Further differences between the two dialects are apical [r, ɾ, ɹ] realization in BE SwG versus dorsal (uvular) [R, ʁ] realization in TG SwG (cf. [13, 23]) as well as back [ɑ] realization in BE SwG versus front [a] realization in TG SwG [19]. Moreover, BE SwG shows /l/-vocalization in particular contexts as opposed to fully lateral realizations in TG SwG [14]. Prosodically, BE SwG is reported to have a lower percentage of vocalic intervals (%V) and lower consonantal variability (captured by nPVI_C) than TG SwG [15].

2.2. Speaker

We applied a matched-guise design in which one bidialectal speaker provided the material for the present corpus (see 2.3). The speaker was born in 1976 and grew up in Berneck (canton of TG) with a

BE SwG father and a TG SwG mother. She lived in Berneck from 1976 to 1984. She then moved to Konolfingen (canton of BE) for 1 year where she learnt BE SwG. She thereafter settled to Fraubrunnen (canton of BE) where she has been residing since. In everyday situations, she speaks BE SwG. Only with her relatives from the canton of TG does she speak TG SwG – which happens on a daily basis, however. She feels competent in both dialects.

2.3 Material

50 sentences from the TEVOID corpus [8] were given to the speaker for preparation. Given that SwG does not have a standardized writing system, the speaker was asked to make orthographic transcripts of the material in (a) BE SwG and (b) TG SwG. The material thus consisted of 50 sentences in TG SwG and the same 50 sentences in BE SwG. Sentences were between 10 and 15 syllables long. The speaker was recorded at her home in a quiet room with a portable Marantz PMD 670 solid-state recorder and a Sennheiser condenser microphone (sampling rate 44.1 kHz; quantization rate 16 bit). 50 stimuli were created so that a 440 Hz pure tone separated the TG sentence from the corresponding BE sentence. In 25 stimuli, the TG sentence preceded the BE sentence, in the other 25 stimuli, the BE sentence preceded the TG sentence.

2.4 Informal authenticity test

To test the authenticity of the material, we performed an informal listening test with six Zurich German speakers. They were asked to rate six stimuli (i.e. six BE SwG sentences and their TG counterparts) for authenticity on a 5-point scale.

2.5 Subjects

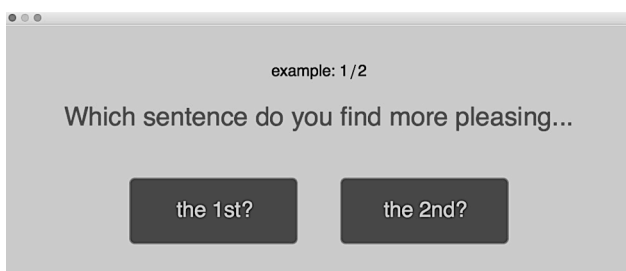
We tested a total of 53 listeners: 17 from the University of Zurich, 18 from the University of Cambridge, and 17 from the Université de Paris Ouest. Zurich German listeners were selected as they are geographically located between the two dialect regions examined – BE SwG to the West and TG SwG to the East. Subjects were university students and aged between 18 and 31. None of the subjects reported significant problems with hearing or sight. Cambridge and Paris subjects all reported having no knowledge of German, either in speaking or comprehension.

2.6 Procedure

Listeners were tested in quiet rooms at the University of Zurich, Cambridge, and Paris Ouest.

The experiment lasted between 10 and 15 minutes. In a Praat interface [16], subjects heard each stimulus through high-quality headphones. The order of the stimuli was randomized separately for each subject. Following the presentation of each stimulus, subjects had to decide which sentence they found more pleasing by clicking on the corresponding button on a laptop, using the experiment interface shown in Figure 1.

Figure 1: Experiment interface for English listeners. To give the response, users clicked on either ‘the 1st’ or ‘the 2nd’ button.



All data were analyzed using R [17] and the R packages lme4 [4] and languageR [1, 2].

3. RESULTS

3.1 Authenticity test results

The Zurich German listeners rated the material produced by the bidialectal speaker as authentic. On a scale from 1 (not authentic) to 5 (very authentic), BE SwG reached a mean score of 3.9 (SD=1.05). TG SwG was perceived as being slightly less authentic (M=3.5, SD=1.3). The difference was not significant (t-test).

3.2 Production results

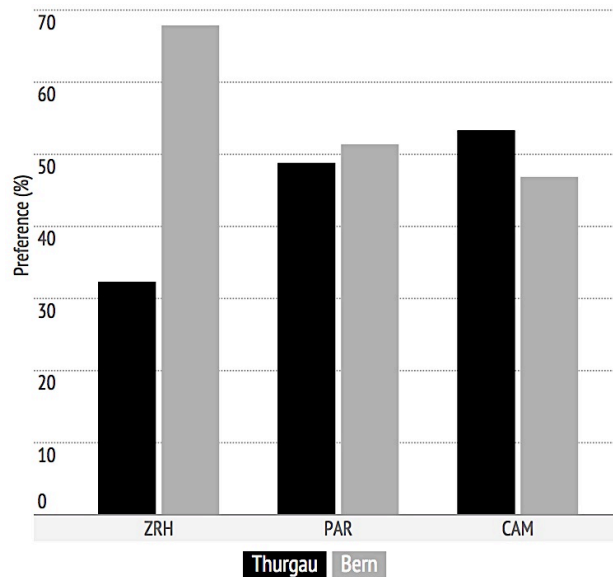
We applied a number of automatic measures to test for between-dialect differences of the speaker (calculated for each sentence): mean f0, standard deviation of f0, duration of sentence, and standard deviation of intensity. Only mean f0 was significantly different between the two dialects. BE SwG sentences exhibited lower f0 means (M=214.3Hz, SD=7.4) than TG SwG (M=219.5Hz, SD=6.3). This difference was significant (LME, $p < .0001^*$, AIC=616).

3.3 Perception results

3.3.1 Overall results

Figure 2 shows the relative proportions of preferences for BE SwG (grey) and TG SwG (black) by listener group.

Figure 2: Overall preference judgments of the perception test.



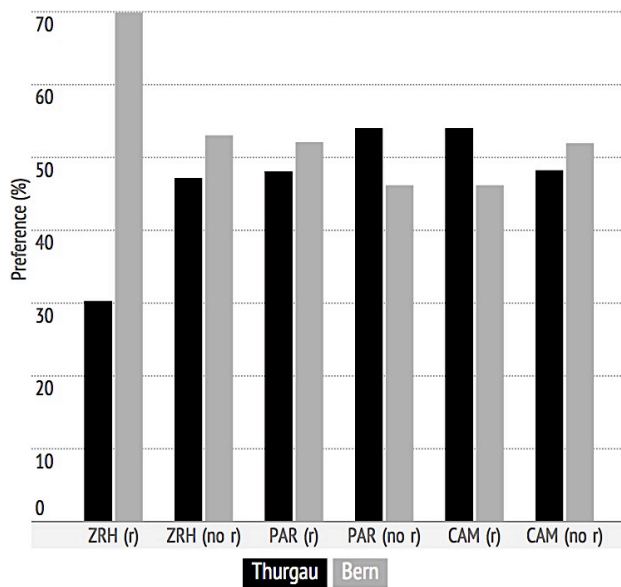
Zurich listeners showed a clear preference for BE SwG (68%); TG SwG was preferred less (32%). A binominal test indicated significant differences between the two groups ($p < .0001^*$). Paris and Cambridge listeners did not exhibit a significant preference for either dialect: Parisians demonstrated a minor preference for BE SwG (51%) as opposed to TG SwG (49%). Cambridge students favored TG SwG (53%) over BE SwG (47%).

3.3.2 Results by segmental material

We further subdivided the stimuli by salient triggers contained in the stimuli: as pointed out earlier, /l/-vocalization and apical /r/ are clear markers of BE SwG; TG SwG, on the other hand, does not feature /l/-vocalization and has dorsal (uvular) /r/. To test whether these segmental differences affected attractiveness judgments, we pooled all stimuli that contained /l/s (in a phonological position where they are subject to vocalization in BE SwG) and compared the listeners' preference judgments to those for stimuli without /l/s. We did the same with stimuli that featured /r/s and no /r/s.

The vast majority of tests were not significant: preference for BE SwG or TG SwG mostly does not seem to be affected by whether or not a sentence contains vocalized or lateral /l/s or apical or dorsal (uvular) /r/s. Only one test was significant: in sentences that contained /r/s (n=44), Zurich listeners demonstrated a clear preference for BE SwG, which features apical /r/ ($X^2=10.9$, $p < .0001^*$). In sentences without /r/s (n=6), the preference for BE SwG was much smaller, cf. Figure 3.

Figure 3: Preference judgments for sentences with and without /r/s by listener group.



The two left-hand columns show the responses of Zurich listeners judging sentences with /r/ (left two columns) and sentences without /r/ (second column pair from the left). In sentences with /r/, there is a distinct preference for BE SwG (70%) as opposed to TG SwG (30%). Sentences without /r/ show much less of a preference for BE SwG (BE SwG 53%; TG SwG 47%). This difference in the relative proportions of preference judgments is significant. For the Paris and Cambridge listeners, the differences in the realization of apical and dorsal (uvular) /r/s did not affect attractiveness judgments.

4. DISCUSSION

Our results seem to corroborate previous research which showed that if listeners have no social connotations associated with the dialects to be judged, they do not have a preference for either of the dialects (cf. [7, 9, 10, 22]). The question that needs addressing is why BE SwG evokes such preferences in SwG listeners. [9, 10, 11] argue that the attractiveness of a dialect is a ‘time-honored convention’. The Bernese have long regarded their dialect as special and more prestigious than other SwG dialects [20]. Bern has been Switzerland’s capital since 1848, when the federal state of Switzerland was founded. It has been the dominant cultural hearth of western Switzerland and has had ongoing linguistic and social influence on German-speaking Switzerland [21, 14].

The result is noteworthy because SwG listeners use – allegedly objective – meta-linguistic attributes such as ‘slow’, ‘soft’, ‘round’ or ‘fast’ to argue for the attractiveness or unattractiveness of the dialects

being judged [3, 5, 12, 18, 24]. Our results corroborate the idea that these widespread assumptions of inherent aesthetics seem to be flawed. Over time, social conceptions become inextricably linked with the acoustic features of a dialect. This seems to be the reason why in SwG, too, social connotations drive dialect preference.

The second major finding was that differences in /r/ realization triggered strong (dis)preferences towards a dialect. It was particularly for sentences that contained an /r/ where Zurich listeners showed a distinct preference for the Bernese dialect and a strong rejection of Thurgovian dialect. When Zurich listeners judged sentences that contained /l/s – which can be vocalized in BE SwG and is always lateral in TG SwG – the presence or absence of /l/ did not significantly affect preference judgments. In other words, the apical versus dorsal (uvular) /r/ realization seems to strongly affect dialect preference. [11] note that gutturals are apparently disparaged in the languages of the world.

The French and English subjects informed the authors after experimentation that they were able to perceive differences in /r/ quality between the two dialects. Listeners claimed one dialect to have dorsal (uvular) /r/s, which they said sounded unpleasant. This is not reflected in the results, however. Neither the French nor the English listeners had a distinct preference for apical [r]s when we consider the subset of stimuli that contained /r/s. Perhaps, foreign speech went by so quickly that they were not able to indicate their preference for apical or dorsal (uvular) /r/s right away, but nevertheless an acoustic impression of the signal remained.

A further reason as to why the French and English listeners did not prefer either variety may lie in the similarity of the two dialects. Dialects of a language (BE SwG and TG SwG) that sound very different to speakers of that language (SwG) may not necessarily be perceived as being very different from each other by non-native judges.

5. CONCLUSION

This study set out to determine the degree to which preference for a SwG dialect is determined by inherent acoustics or social connotations. The most obvious finding to emerge is that – in line with previous research – the attractiveness of a dialect seems to depend on the social attributes of its speakers. However, the presence of particular sounds also influences listeners’ preference. Further research might explore preference judgments with dialects that are more different from each other in segments and prosody.

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