

# Phonetic stability across time: Linguistic enclaves in Switzerland\*

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## Abstract

The present paper shows results of a proof-of-concept study on two historically related but geographically separated dialects of Swiss German. Between the 12<sup>th</sup> and 14<sup>th</sup> centuries, speakers of Valais German (southwestern Switzerland) emigrated to the southeastern part of the country, forming so-called *Sprachinseln* (enclaves) of Valais German in a Romansh-speaking area. Using an online survey, we collected responses from 300+ participants from the cantons of Valais and Grisons to examine how the two dialects have developed over time. Results suggest stability on the phonetic level, i. e. the two dialects still sound very similar despite having been geographically separated for 800 years. The morphosyntax and lexicon, however, exhibit substantial change. We discuss historic and sociodemographic factors that may explain these patterns.

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## 1 Introduction

One typically hears words like *Rigg* ‘back’, *triiche* ‘to drink’, and *schii* ‘she’ in the canton of Valais, a southwestern, Alpine region of German-speaking Switzerland. These distinctive pronunciations are also widespread in some Swiss German varieties spoken in the canton of Grisons, a southeastern, trilingual (i. e. German, Romansh and Italian) Alpine district. The reason for this is linguistic colonisation that occurred between the 12<sup>th</sup> and 14<sup>th</sup> centuries. Speakers from the canton of Valais emigrated east and settled parts of Grisons such as Obersaxen (at the periphery of the Romansh-speaking territory) as well as parts of Vorarlberg and northern Italy, forming distinct linguistic enclaves, so-called *Sprachinseln* (see Figure 1).

These Swiss German varieties from Valais and those of the *Sprachinseln* in the canton of Grisons have not gone unnoticed in terms of linguistic investigations (Wipf 1910; Bohnenberger 1913; Brun 1918). The most comprehensive description of these varieties is included in the *Sprachatlas der deutschen Schweiz* (henceforth SDS) (Baumgartner et al. 1962–2003; cf. also Hotzenköcherle 1944/1986, 1984), based on data collected between 1939 and 1958. Since the time of the SDS, the village of Obersaxen has undergone dramatic socio-economic development. As elsewhere, there has been a considerable uptake in mobility resulting in increased contact to speakers of other Swiss German varieties, most importantly to speakers of *Churer-rheintalisch* – a variety which has spread from Grison’s capital city (cf. Eckhardt 2016). Furthermore, within only a few decades, Obersaxen has become a popular winter-sport resort (cf.

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Collenberg 2016), motivating people from other parts of Switzerland (particularly from the city of Zurich and its urban regions) to spend their holidays there, leading to increased dialect contact also to Midland varieties of Swiss German. This, we hypothesise, has led to changes in the dialect of Obersaxen.

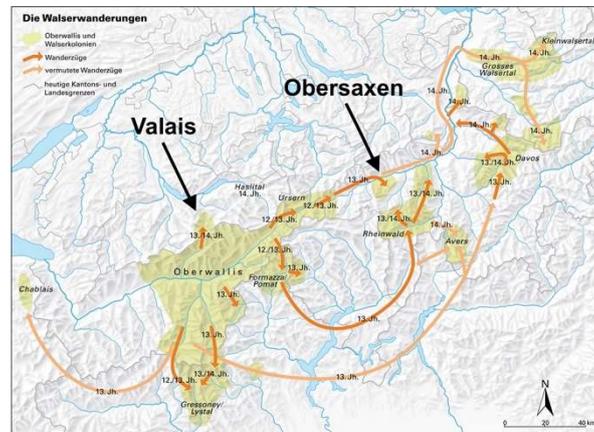


Figure 1: Streams of migration in the 12<sup>th</sup>–14<sup>th</sup> centuries (map taken from Waibel 2013)

The present study aims to examine changes that have taken place in the dialect of eastern Valais regions where the colonisation took its starting point and Obersaxen more than 60 years after the SDS, as well as to study how similar the two varieties still are. To this end, we used an online survey containing phonetic, morphological, syntactic, and lexical variables. Drawing from research on language contact (cf. Thomason/Kaufman 1988; Van Coetsem 1988) whose findings might also be applicable to situations of dialect contact (cf. Glaser 2014), as well as from previous research on convergence phenomena in Swiss German (cf. Christen 1998), we expect the phonetic-phonological level of the dialects to have remained mostly stable (i. e. the dialects' common origins are supposed to still be traceable in some phonetic features). Morphology and syntax are believed to be relatively stable in contact situations too (cf. Van Coetsem 1988), however, given the relatively small typological distance and the intense nature of dialect contact – particularly for Obersaxen – some changes are likely to have emerged (cf. Glaser 2014). Finally, in research on language contact, the lexical level is argued to be the least stable level. So, for lexical features, we expect substantial change to have taken place.

## 2 Methodology

### 2.1 Participants

Swiss German speakers (n=305) from Valais and Obersaxen were recruited via Facebook and WhatsApp to participate in the study. Given the crowdsourcing methodology applied, young speakers (aged between 11 and 29) were oversampled. Mean age was 36.8 and median age was 33; 60.5% of participants were female, and 39.1% were male.

### 2.2 Materials

Seven variables (see Table 1) were selected based on comparability and typicality. We could directly compare contemporary distributions of these variables with those recorded in the SDS. We focused on variables that are identical in the two regions and perceived to be most typical

to the southernmost dialects spoken in German-speaking Switzerland, including Valais and Obersaxen.

N°	Variable	Standard German	Examples of variants	Type
1	Unrounding of MHG <i>u, ü</i>	<i>Rücken</i> ‘back’	<i>Rügg, Rigg</i>	phon.
2	Palatalisation of MHG /s/	<i>sie</i> ‘they’	<i>sii, schii</i>	phon.
3	MHG <i>nk</i> ; <i>Staub</i> ’s <i>Law</i>	<i>trinken</i> ‘to drink’	<i>triichu, triihu, triiche, triihe</i>	phon.
4	Prefixation (MHG <i>be-</i> )	<i>ich bekomme</i> ‘I receive’	<i>verchume, b(e)rchume, überchume</i>	morph.
5	Past participle circumfix	<i>wir haben gebastelt</i> ‘we have tinkered’	<i>gibaschtlu, baschtlet</i>	morph.
6	Positioning of AUX + PTCP of ‘to be’ in subordinate clauses	, ... <i>wir ... gewesen sind</i> ‘we have been’	<i>bin gsii, gsii bin</i>	synt.
7	OHG <i>anko</i> , MHG <i>butter, puter</i>	<i>Butter</i> ‘butter’	<i>Aihu, Aichu, Öi(c)hu, Butter, Britschi</i>	lexic.

Table 1: Variables tested (MHG = Middle High German; OHD = Old High German), sorted by variable type

### 2.3 Procedures

We used Google Forms to survey our participants. The responses were elicited via four different tasks: variables 2, 5, and 6 (see Table 1) were included in two Standard German sentences that participants were asked to translate. Variables 1 and 7 were elicited by providing the participants with pictures and written options to choose from (number of variants varied depending on variable). We used a sentence completion task for variable 3. For variable 4, we expected the variant *verchume* to have disappeared; which is why we asked participants directly whether or not it is used in everyday language. For all questions, we provided a blank entry option for other responses. Participants further filled out questions on gender, age, regional origin (postal code), and mobility (i. e. whether they grew up and spent their youth in the town indicated). This crowdsourcing method enables researchers to collect large-scale, geographically stratified corpora without investing substantial time or money (cf. Kolly/Leemann 2015; Leemann et al. 2015; Leemann/Kolly/Britain 2018).

### 2.4 Data analysis

We performed logistic regressions as well as Pearson’s chi-squared tests using R (R Core Team 2018) and used *ggplot2* (Wickham et al. 2018) for visualisation. The distributions featured in Christen/Glaser/Friedli (2015) and the SDS (Baumgartner et al. 1962–2003) served as benchmarks for historical distributions.

### 3 Results

#### 3.1 Phonetics

Figure 2 shows the unrounding of [y] to [i] in *Rücken*. The map reveals parallels between Valais and Obersaxen: in both regions, participants indicated the unrounded variant (blue), leading to homogenous results for the entire canton of Valais (98.7% unrounded, 1.3% rounded) and Obersaxen (100% unrounded).

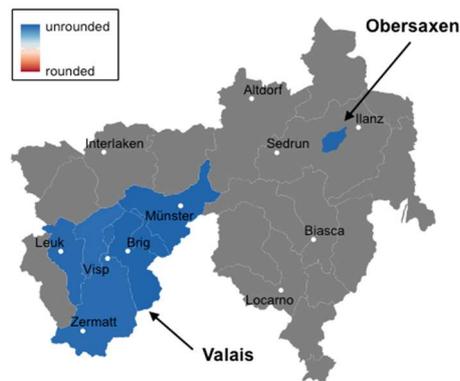


Figure 2: Unrounding of [y]

We obtained similar results for palatalisation of [s] to [ʃ] (Valais: 96.3% palatalised, 3.7% non-palatalised; Obersaxen: 100% palatalised) in *sie* as well as for the application of Staub's Law – that is, the deletion of nasals before homorganic fricatives or affricates, resulting in the lengthening or diphthongisation of the preceding stem vowel (cf. Werlen 1977), e. g. ['triŋkxə] (Staub's Law not applied) vs. ['tri:xə] (Staub's Law applied): In Valais, 98.7% apply this, and in Obersaxen 100% do (see Figure 3).

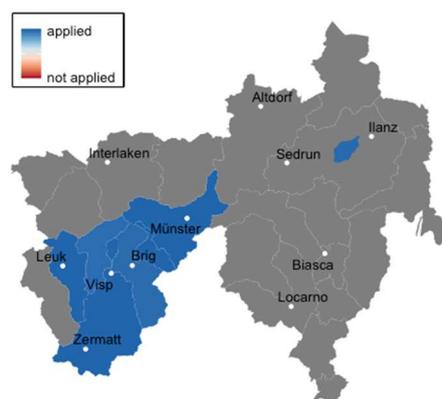


Figure 3: Application of Staub's Law

#### 3.2 Morphology

The two morphological variables demonstrate great variation between the two regions. Prefixation using *ver-* is known and common in most of Valais. In Obersaxen, a majority of informants are still familiar with the *ver-* variant (69.44%), but it is less common than in the canton of Valais. A chi-square-test of independence revealed a significant effect [ $\chi^2(2) = 86.167$ ,  $p < 0.001$ ]. A logistic regression (glm) further revealed that younger people in Obersaxen are

less likely to be familiar with the variant *ver-* than older people [Est. = 0.05790,  $z = 2.751$ ,  $p < 0.01$ ]. The past participle circumfix, as in *gebastelt*, shows inter- as well as intra-regional variation. The prefix *ge-* is widely found in the western part of Valais but much less so in the easternmost part; it is completely absent in Obersaxen (see Figure. 4). The relative distributions between Obersaxen and the Valais were significantly different (chi-squared test of independence with simulated p-value) [ $\chi^2 = 165.05$ ,  $p < 0.001$ ].

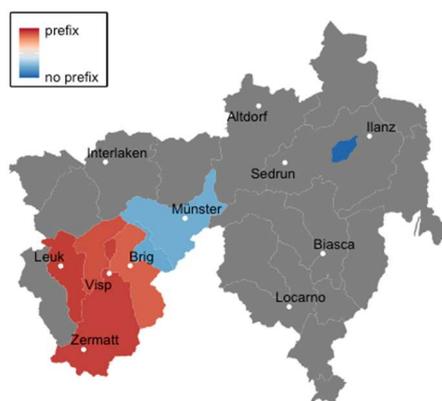


Figure 4: Past participle circumfix as in *gebastelt*

### 3.3 Syntax

The findings from the analyses of the positioning of the past participle in ‘to be’ in subordinate clauses are not as clear-cut. *bin gsii* (AUX – PTCP) is the dominant variant in Valais (favoured by 81.7% of participants), but there are still numerous participants who indicated *gsii bin* (PTCP – AUX) (18.3%). The high degree of variation is not conditioned by either age or sex. We obtained a significant effect when comparing Valais with Obersaxen [ $\chi^2(1) = 119.33$ ,  $p < 0.001$ ], where the sequence PTCP – AUX (*gsii bi*) is clearly favoured (96.9%).

### 3.4 Lexicon

The greatest difference between Obersaxen and the canton of Valais was found in the lexical variable examined. Nearly all participants from Obersaxen indicated the variant *Britschi*, which is unknown to the people from Valais; in Valais speakers mainly indicated the variants *Butter* or *Aichen*. When looking at age in Valais, younger participants tend to disfavour *Aichen* and opt for *Butter* instead (glm, [Est. = 0.06905,  $z = 5.735$ ,  $p < 0.001$ ]) (see Figure 5).

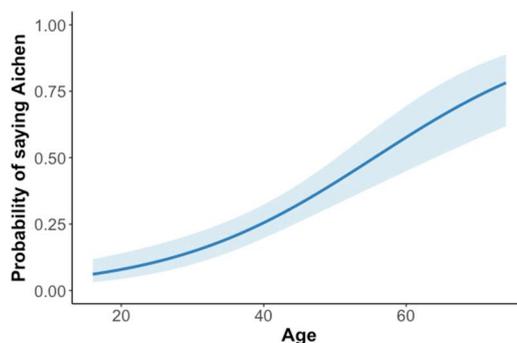


Figure 5: Use of *Aichen* for Standard German *Butter* across age for the Valais speakers

#### 4 Discussion and Conclusion

On the phonetic level, we found relatively little change in both regions: unrounding of [y] in *Rücken*, palatalisation of [s] in *sie*, and the application of Staub's Law in *trinken* have remained stable over time. As far as phonetics are concerned, then, it appears that the linguistic situation today is similar to the one found in the early 20<sup>th</sup> century. For Obersaxen, this is relatively surprising, given the increased contact in recent decades with Midland Swiss German varieties, which do not feature these phonological processes. However, this finding is in line with our initial hypothesis: as predicted by research in language contact, the phonetic-phonological level is most resistant to contact-induced change. The morphosyntactic variables studied appear to be more prone to change. Prefixation with *ver-* (in *ver-chume*) was reported as a dominant variant for Obersaxen in the historical atlas. Today, supralocal variants like *über-chume* or *ber-chume*, found in many other Swiss German dialects, have become more dominant, gradually replacing *ver-*, with younger people leading that change. The exact opposite has happened in the canton of Valais. The historical data suggest that the *ver-* prefix was localised in and around some urban areas. Substantial change, probably led by the urban population, appears to have occurred, causing *ver-* to become the dominant variant for the entire canton. However, it needs to be noted that the change might already have been ongoing in the middle of the 20<sup>th</sup> century, since the historic data from the SDS of course only contains information for one generation of speakers (i. e. usually two selected local speakers), precluding the possibility of an apparent time analysis. Equally interesting is the sequence of AUX and PTCP. In Obersaxen, the order of the verb cluster has been reversed and hence assimilated to the sequence common for the eastern dialects of Switzerland (cf. Seiler 2014). In the canton of Valais, the order has been retained but it does not seem to be as dominant as indicated in the SDS data anymore. Finally, the presence or absence of the prefix *ge-* in *gebastelt*, i. e. the variable past participle circumfix, has remained stable for Obersaxen and the western part of Valais. In eastern Valais, some variation seems to be emerging. Finally, as expected, the greatest difference between Obersaxen and the canton of Valais was found for the lexical variable. While speakers from Obersaxen almost exclusively use the variant *Britschi*, speakers from Valais use either *Aichen*, the historical variant, or *Butter*. Results suggest that the latter variant is currently becoming more and more frequent, especially among young speakers of the Valais variety – a phenomenon reported for other dialects of Swiss German as well (cf. Christen/Glaser/Friedli 2015). The increasing dominance of *Butter* might be explained by it being the Standard German variant; in supermarkets all over German-speaking Switzerland, for example, butter is typically labelled *Butter*. Furthermore, *Butter* certainly contributes to mutual intelligibility between different dialects (cf. Christen 1998).

Two possible factors may contribute to the patterns of change reported, i. e. phonetic stability with morphosyntactic and lexical instability. Firstly, the frequency of occurrence of phonetic variables in the stream of speech is higher than individual morphosyntactical and lexical ones (cf. Cheshire/Kerswill/Williams 2005). This might require a substantial amount of effort on the part of the speaker to accommodate fully to the phonetics of surrounding dialects. Consequently, phonetic variables may have remained more stable over time. Secondly, phonetic features may have come to serve as distinct markers of local identity, potentially contributing to resisting change (cf. Christen 1998). Waibel (2013) previously observed that language plays a

crucial role in identity construction in Grison *Sprachinseln*. These very localised varieties have served as a unifying factor for minority dialect speakers in the 20<sup>th</sup> century. Perhaps morpho-syntax and lexis are perceived as less salient markers of identity than phonetics by the speakers in question.

Finally, we want to discuss some methodological pitfalls and end with a brief outlook. The data provided in the SDS is based on direct elicitation (i. e. face-to-face-inquiries) of two or three so-called NORMs (**n**on-mobile-**o**lder, **r**ural, **m**ales) or NORFs (**n**on-mobile-**o**lder, **r**ural, **f**emales) – preferably people working in agriculture – for each locality (cf. Schaller/Schiesser 2017). This means that (a) the speaker set from the historical atlas is highly specific (note that by 1950, agriculture had already lost much of its former importance, with only about 16% of the working population being employed in the first sector (cf. Degen 2010)) and (b) because of the few speakers per locality, we are unable to study intralocal variation in depth in retrospect. The comparative results from this study need to be interpreted against this backdrop.

Given the limited number of variables examined in this study, more empirical studies including not only additional variables but also additional linguistic and/or pragmatic contexts (e. g. lexical constraints on Staub’s Law, for example) are needed. Only by looking at the variables in context (i. e. speech-in-interaction), will it be possible to assess in more detail any phonological and/or lexical constraints on the variants. Furthermore, by placing linguistic changes like the ones observed in this study into a broader theoretical framework of language contact (e. g. Thomason/Kaufman 1988; Van Coetsem 1988), our understanding of whether the mechanisms at work in language contact situations are similar to those in intense dialect contact situations, such as the one reported here, will be enhanced.

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