Morphological gaps in diminutive formation: Some observations on Alemannic*

Oliver Schallert

University of Munich,
Institut für Deutsche Philologie
oliver.schallert@lmu.de

January 10, 2023

Abstract

In Alemannic, there is a remarkable morphological gap with verbal diminutives: They lack forms of the 1SG and, accordingly, the imperative. I try to identify the source of this gap, which lies in phonotactical and prosodic wellformedness conditions for morphological words. Among the several potential causes that can lead to defective paradigms (Sims 2015: Ch. 3), this phenomenon thus clearly belongs to the class that is related to the morphology-phonology interface.

1 Introduction

In Vorarlberg Alemannic (VA), two subclasses of weak verbs can be distinguished: Class 1, going back to the OHG *jan*-verbs, shows syncope of schwa in the 2/3SG.PRES and the past participle, whereas the reduced vowel is retained in class 2, pooling the OHG *ēn*- and *ōn*-verbs (Braune & Heidermanns 2018: 404–419 [§§ 355–369]; Jutz 1925: 305–307 [§ 99]). This contrast is demonstrated by (1a) vs. (1b).

(1) a. *zella* ‘count’, *zellsch* (2SG), *zellt* (3SG); *zellt* (PTCP)
b. *folga* ‘follow’, *folgasch* (2SG), *folgat* (3SG); *kfolgat* (PTCP)

Class 2 comprises a subset of verbs with an unusual prosodic structure, most prominently verbal diminutives with umlaut and the suffix *-(e)la* that can end up with a dactylus foot structure (σ́σσ). For the sake of brevity, I refer to these cases as *dactylus verbal diminutives* (DVDs). The distribution of the

* I want to thank Jürg Fleischer, Julia Hertel, Lea Schäfer, and Helmut Weiß for helpful hints and comments on a first draft of the present article.

two allomorphs is as follows: *-la* occurs with monsyllabic heavy stems,[1] see (2c, d), and *-ela* with stems ending in *l* (2a) or bisyllabic stems where word stress falls on a light syllable (2b). We will slightly revise these conditions below. Of these examples, the ones bearing *-ela* exhibit a dactylus (2a, b) and those suffixed with *-la* a trochaic pattern (2c, d). Note that verbal diminutives can be derived both from nominal and verbal bases.

(2) a. *mool+a* (V) 'draw' → *möö̈l-ela* (DIM) 'doodle'
b. *Su.na* (N) 'sun' → *sün-ela* (DIM) 'sunbathe'
c. *bloos+a* (V) 'blow' → *blöös-la* (DIM) 'blow (gently)'
d. *Huus* (N) 'house' → *hüüs-la* (DIM) 'fumble'

Historically, *-ela* derives from the OHG suffix combinations *il-ōn* or *al-ōn* (Weidhaas & Schmid 2015: 3), and typical functions of verbal diminuation are signalling of aktionsart contrasts like (de-)intensivation or iterativity (3). Subsequently, such derivations also gave rise to pejorative meanings, e. g. *lümmeln* 'slouch', *frömmeln* 'to be a bigot' (Dammel 2011: 332–333). Similar to Modern Standard German (MSG), they are only very weakly productive (cf. Weidhaas & Schmid 2015: 4 for a slightly different view).

(3) a. *lachen* 'laugh' – *lächeln* 'smile'
b. *beten* 'pray' – *betteln* 'beg'
c. *zünden* 'ignite' – *zündeln* 'play about with fire'

Inflected word forms with dactylus foot structures, which also occur in some other contexts like e. g. comparatives (4), are an apparent exception to the well-established generalization that the unmarked foot structure in German is bisyllabic and features a trochee. Wiese (2000: 109–110) analyzes these cases as involving and obligatory final schwa-syllable that is extrametrical. In his typology of foot structures, Hayes (1985) distinguishes a hybrid type that allows the dactylus as a marked option beside the trochee; a similar assumption is put forward by Kaltenbacher (1994).

(4) a. *dumm* 'stupid' – *düm.me.r+er* (NOM.ST.MASC.SG) 'more stupid'
b. *lang* 'long' – *län.ge.r+e* (NOM.ST.FEM.SG) 'longer'
c. *schön* 'beautiful' – *schöne.r+es* (NOM.ST.NEUT.SG) 'more beautiful'

2 Mind the gap

Turning to DVDs in Alemannic, this unusual prosodic structure leads to a remarkable morphological gap in that a synthetic 1SG.PRES form and, accordingly, the syncretic IMP.SG is missing (5). The other

[1] I follow the standard definitions of syllable weight were light syllables feature short vowels and an empty coda while heavy syllables consist either of a long vowel or diphthong or short vowel plus coda consonant(s) (Hall 2011: 249). Note that many Alemannic dialects allow both ± long vowels and ± geminate consonants within a syllable (Seiler 2009: 239, 241–43 and the references quoted there).

forms of the PRES.IND are unproblematic since the respective flexives *-asch* (2.SG) *-at* (3.SG), *-an* (PL) always ensure the same prosodic structure as the infinitive, viz. a dactylus.[2]

(5) a. *möölala* (INF) 'draw (casually)' → * *möölal* (1SG/IMP.SG)
b. *sünala* (INF) 'sunbath' → * *sünal* (1SG/IMP.SG)

Let us take a short look at nominal diminutives for the sake of comparison. They show a parallel allomorphy between *-le* (< OHG *-līn*) and *-ile* (< OHG *ilīn*), leading to the familiar dactylus pattern in the latter case. In this context, however, syllable weight cannot be the relevant criterion because heavy CVC(C) stems can be combined with either suffix (6c, d). More specifically, long stressed vowels seem to preclude *-ile* (6a, b). Bisyllabic stems show some variation, e. g. with geminate obstruents (7a, b), but stem final *l* always triggers *-ile* (7c).

(6) a. *Muus* [muːs] 'mouse' → *Müüs-le* [ˈmyːs.lə] (DIM); * *Müüs-ile*
b. *Schoof* [ʃɔːf] 'scheep' → *Schööf-le* [ˈʃœːf.lə] (DIM); * *Schööf-ile*
c. *Has* [has] 'rabbit' → *Häs-ile* [ˈhɛ.sɪ.lə] (DIM); * *Häsle*
d. *Schnaps* [ʃnaps] 'liquor' → *Schnäpsl-e* [ˈʃnɛps.lə]; * *Schnäpsile*

(7) a. *Ketta* [ˈkʰet.tɐ] 'chain' → *Kettile* [ˈkʰe.tɪ.lə] 'bracelet' (DIM); * *Kett-le*
b. *Fläscha* [ˈflɛʃ.ʃɐ] 'bottle' → *Fläschle* [ˈflɛʃ.lə] 'bottle' (DIM); * *Fläsch-ile*
c. *Vogel* [ˈfog.l̩] 'bird' → *Vögile* [ˈfø.gɪ.lə] (DIM); * *Vög-le*

A remark on regional variation: According to the 'Vorarlberger Sprachatlas', which documents the grammatical systems of linguistically conservative speakers, the following patterns occur: Nouns with stem-final *l* (e. g. *Öpfel* 'apple') always show the morph *-ile* (the precise phonetic quality of the respective vowels being subject to regional variation), i. e. *-i̯lį*, *-i̯le*, *-e̯le̯*, *-ələ*, etc. (Gabriel 2000: Map 177). The Teuthonista diacritics x̯ and x̧ roughly correspond to x̯ (raised) and x̯ (lowered) or ẍ (centralized) in IPA. Monosyllabic nouns (with different phonotactical structures) always show *-le*, e. g. *Hund* [nd̥] 'dog', *Glaas* [s] 'glass', *Kʰalb* [lb̥] 'calf', once again with subtle variation in vowel quality; this morph also applies to bi- or trisyllabic nouns with *-er*, e. g. *Ooder(a)* 'vein' (Gabriel 2000: Map. 176).

Returning to verbal diminutives, I assume that the gap in the 1SG is caused by a prosodic clash that emerges due to the following conflicting demands:

- Like many High German dialects, Alemannic shows apocope of word-final schwa (König, Elspaß & Möller 2019: 146–147; see also Lindgren 1953 for some historical background). Therefore, the 1SG usually has a zero ending as a correspondence to *-e* in MSG.
- By contrast, the infinitive suffix shows a reduced vowel (either [ə] or [ɐ]) for MSG *-en*. This is due to elision of final *n*, a characteristic of Alemannic.

[2] Many Alemannic dialects show complete person syncretism in the plural (König, Elspaß & Möller 2019: 158).

- Thus, the expected form of the 1sg would involve clipping of *-e*, yielding a trochee. This result, however, is ill-formed because it doesn't fit the prosodic template for this inflectional form, which only allows a heavy and at most one additional light syllable.

This template restriction leads to clear ungrammaticality with DVDs (8); with trochaic ones like (9), the contrast is less clear but an additional syllabic lateral seems be fine in principle.[3]

(8) a. *blööterla* 'dawdle' → * *blöö.terl* [tɐʁl]
b. *möölala* → * *möö.lal* [lɐl]
c. *sünala* → * *sü.nal* [nɐl]

(9) a. *vogla* 'fuck' → *vogl* [g.l̩]
b. *zünsla* 'play about with fire' → *zünsl* [ns.l̩]
c. *bröötla* 'fry (gently)' → ? *bröötl* [t.l̩]

Three native-speakers informally consulted by me circumvent 1sg forms like (8) by using the *tun*-periphrasis, while they more readily accept the ones in (9). This analytic strategy consists of an inflected form of the verb *tun* 'do' and the (prosodically well-formed) infinitive. It is widely attested in German dialects, yet banned from the standard language;[4] among its wide range of syntactic and semantic functions, it has also been hypothesized to be a repair strategy along these lines (see Fischer 2001: 147).

Another angle to look at this state of affairs is the concept of *word design* that is couched in a declarative approach to morphological exponence (Neef 1996): The idea is that there are two classes of wellformedness conditions that constrain the shape of the word as a basic category of linguistic analysis. While phonological constraints apply to all words of a given language, morphological constraints are only effective for a certain subset. A relevant example from MSG, which bears some resemblances to DVDs, would be the shape of the infinitive. In its canonical form, it must end with one reduced syllable featuring a nasal as final element ([+ sonorant + nasal] / ___ #), e. g. *lesen* 'read' [leːzn̩], *sinken* 'sink' [zɪŋ.kn̩], *haben* 'have' [haːbm̩], etc.[5] Also from a crosslinguistic perspective, there is evidence that phonotactic constraints are sensitive to morpheme boundaries (Gouskova 2018).

---

[3] Verbs ending in *-era* like *schtänkera* 'badmouth' seem to cause no problems: clipping of *-e* in the 1sg yields regular trochaic structures, viz. *schtänker* [ˈʃtɛŋkɐ].

[4] In MSG, the *tun*-periphrasis is only licit in VP-topicalization contexts with a single lexical verb, see (i) vs. (ii):

(i) Bügeln tut Simon sehr gerne.
iron does Simon very gladly
'Simon does really like ironing.'

(ii) ?? Simon tut gerne bügeln.

[5] Note that the alternative realization of the infinitival suffix *-en* as [ən] usually can only be found with explicit pronunciation. Of course, I ignore cases where schwa has to be realized, e. g. with phonotactically defective stems like *atm* → *atmen* 'breathe' or those ending with a nasal. In the latter case, total assimilation of the infinitival suffix can be found as an alternative realization, e. g. *rennen* [rɛn(·)] 'run', *kämmen* [kʰɛm(·)] 'comb', *singen* [zɪŋ(·)] 'sing' (see Pröll 2021 on this phenomenon, which seems to also have a morphological directedness).

3 Some empirical observations

In order to gain more insight into the morphophonological properties of defective verbs in VA, I conducted a small survey via the online platform Socisurvey.[6] Informants were randomly assigned to a production and an acceptability task on verbs with the relevant prosodic properties. Beside DVDs in the narrow sense, also morphologically related verbs with the word structure *-era* (cf. group A), were tested, yielding different word structures in the infinitive (see below). Of particular interest is the phonotactic structure of the stem's final position plus the infinitive morpheme because it has direct phonological consequences for the 1SG. I used my own native competence of VA for designing the stimuli. Additionally, the list of relevant verbs in Weidhaas & Schmid (2015: 36–41) was consulted.

A. Final *-era* /əʁɐ/, e. g. *klättera* 'climb', *ärgera* 'annoy'.

B. Final *-ele* /əlɐ/, e. g. *bädela* 'paddle', *möölela* 'doodle'.

C. Consonant + *-le* /lɐ/ with different subgroups in terms of the stem-final consonant(s). When possible, also vowel length was controlled.

   – Plosives, e. g. *zappla* [p] 'wriggle', *bröötla* [t] 'fry gently'

   – Fricatives, e. g. *schtichla* [ç] 'nettle', *hüüsla* [s] 'fumble'

   – Vibrants, e. g. *ummadökterla* [ʁ] 'doctor around', blööterla [ʁ] 'dawdle'

   – Affricates, e. g. *pützla* [t͡s] 'clean', *schüpfla* [p͡f] 'push gently'

D. Consonant clusters, e, g. *brünzla* [nt͡s] 'piss', *kränkla* [ŋk] 'be sickly'

Due to time limitations, only a rather small group of informants could be recruited: 3 completed the acceptability and 2 the production task, respectively. This drawback is compensated for since a representative amount of phonotactic contexts was considered (37 stimuli in total). The results of the acceptability study are given in Table 1; they are reported in the form yes/no/additional. The lowest acceptability rate emerged with the verbs of the *-ele* group (3/4/5). In two other cases, the no-proportions were equal or slightly larger, namely with vibrants (1/2/3) and consonant clusters (4/4/1). That being said, yes-answers outweighed with an average of twice as many mentions.

Let us now take a look at the production data. By and large, the same picture emerges. Plosives, fricatives (to a somewhat smaller degree), affricates, and consonant clusters seem to allow forms of the 1SG. In some cases, we observe a reduced final vowel or resyllabification, e. g. *kitzle* 'tickle', *zünsel* 'kindle'. The *-ere*, *-ele* and vibrant group show a clear tendency of circumventing synthetic diminutive forms by periphrasis (10) or lexical substitution (11), yet in the first case also forms like *I kleattr* 'I climb' occur.

(10) a. I bin am schtänkera
        I am PROG banter
        'I'm bantering.'

     b. I tua mi sünnala
        I do REFL sunbathe

[6] Accessible via https://www.soscisurvey.de/ [retrieved on 9 January 2022].

Structure	yes	no	Additional variant	Stimuli
-ere	7	3	1	4
-ele	3	4	5	5
Plosive + *-le*	10	5	0	7
Fricative + *-le*	13	4	3	8
Vibrant + *-le*	1	2	3	2
Affricate	3	9	5	7
Consonant cluster	4	4	1	4
Sum	47	27	16	37

Table 1. Results of the acceptability study

'I'm sunbathing'

c. I mach a schlöfle
I make a sleep.DIM
'I take a nap'

(11) a. I plansch 'I'm paddling' (instead of ʔ*bädal*)

b. I kof i 'I'm shopping' (instead of ʔ*lädal*)

Tentatively, we can formulate the hierarchy in (12), which reflects the acceptability of 1SG forms in different phonotactical contexts. It corresponds quite neatly to the scale of consonantal strength[7] proposed by Vennemann (1988). The consonant types further to the left are well-attested as extrasyllabic segments in German (Hall 2011: 253–255 and the references quoted there).

(12) Fricatives > plosives > affricates > *-ere* > consonant clusters > *-ele* > vibrants

The behavior of the *-ele* group, however, points to a prosodic constraint, i. e. the dactylus requirement for verbal diminutives mentioned in Section 1, because word-final liquids are not generally precluded in VA. The same applies to sonorant combinations even though the particular type that arise due to contact of *-le* and ʁ does not seem to be natively attested in VA.[8] Another way of looking at this state of affairs is that forms of the 1SG are more tolerable when they conform to a 'strange' trochee (template [σσ.C]), albeit with additional restrictions. An additional factor that needs to be taken into account is the token frequency of the different verbal diminutives. I leave this issue for future research.

[7] This hierarchy has the following form (with increasing consonantal strength from left to right): low vowels > mid vowels > high vowels > central liquids (*r*-sounds) > lateral liquids (*l*-sounds) > nasals > voiced fricatives > voiceless fricatives > voiced plosives > voiceless plosives (Vennemann 1988: 9).

[8] Note that in some varieties of VA (particularly in the Montafon valley), sonorant clusters were eliminated by anaptyxis and *n*-deletion, e. g. *Hara* (MSG *Horn*) 'horn' or *gera* (MSG *gerne*) 'gladly' (Ruoff & Gabriel 2003: 16; see also Harbert 2007: 73 on coda consonant sequences in Germanic).

4 Verbal diminutives and defectiveness

To wrap up our discussion, the missing 1SG.PRES with DVDs in VA is an instance of a grammatical gap that belongs to the wider realm of morphological defectiveness. In her seminal monograph on this topic, Sims (2015: 26) defines this phenomenon as follows:

Definition 4.1. (A working definition of inflectional defectiveness)

1. IF there exists a set of morphosyntactic and/or morphosemantic feature values F that is well-defined and morphologically encoded for at least one lexeme belonging to part of speech C;
2. AND IF there exists a well-formed syntactic structure S that requires F in combination with some lexeme L belonging to C;
3. BUT any form of L_C that is inserted into S produces an ungrammatical construction;
4. THEN the paradigm cell defined by $\langle L_C, [F] \rangle$ is defective.

Obviously, all the conditions for defectiveness are fullfilled: Firstly, the 1SG.PRES is well-defined and morphologically coded for the vast majority of verbs in Alemannic (as for all varieties of German). Secondly, all declarative clauses require a finite verb form, and finiteness relies on the feature bundle [$_F$ person, number].[9] Thirdly, inserting any form of the relevant lexemes yields ungrammatically. However, this final condition is somewhat hard to asses in the face of the fact that a periphrastic form of the 1SG is indeed well-formed. Sims (2015: 40) addresses the delimitation problem that arises with regard to defectiviness and periphrases and proposes two criteria for segregating them, i. e. (A) fully-conventionalized form, and (B) complementary distribution. Criterion A hinges on the question of how conventionalized this circumlocutory strategy is, i. e. whether there are formal alternatives that achieve the same goal. Criterion B circles around the question whether the *tun*-periphrasis is in complementary distribution with the synthetic present tense.

The answer to A is affirmative: The *tun*-periphrasis is highly routinized in terms of its exponence – it features a properly inflected form of *tun* plus the infinitive. In the context of the DVDs at the center of our attention, it seems to be the only available option for expressing the 1SG, at least with some verbs. As to B, things are more complicated because the semantic status of this analytic strategy is unclear due to its polyfunctionality (see Fischer 2001 as well as Weber 2017: Ch. 2 and Fleischer 2019: 640–641 for a recent overview). In some varieties of Northern Low German, the *tun*-periphrasis is used for periphrastic means of coding tense, without further semantic or pragmatic side-effects (Rohdenburg 2002). This strategy is very dominant with weak verbs that lost the dental suffix due to phonological erosion and show almost complete syncretism between present and past tense paradigm, e. g. *smöök* 'smoke' (1SG.PRES/PST). With strong verbs and some weak verbs with stem allomorphy (due to irregularization), cf. the paradigms in Table 2, the rate of *tun*-forms is significantly lower, the respective proportions of periphrastic forms ranging between 89.4 % for weak, 32 % for strong, and 47.7 % for irregularized verbs (Rohdenburg 2002: 93). In some cases, this irregularization arised by fricativization of stem-final plosives in the presence of the dental suffix, as shown by (13).

[9] I leave aside the question whether verbal mood and in particular tense are canonical finiteness features (see Nikolaeva 2013: 105–107 for some discussion).

	Present	Preterite
1SG	smöök scheet	smöök schööt
2SG	smööks schütts	smööks schööts
3SG	smöökt schütt	smöök schööt
PL	scheet't [t:]	schööten

Table 2. Paradigm of *smöken* 'smoke' (weak) and *scheeten* 'shoot' (strong) in Northern Low German (compiled from Rohdenburg 2002: 89–90)

(13) He drüch.PST de Döer no binnen (Vierlanden)
he pushed the door to inside
'He pushed the door inwards'

In Alemannic, *tun* + INF can be used for marking subjunctive mood, but it can also feature the habitual or progressive subtypes of imperfective aspect (Jutz 1925: 286 [§ 94]; Schallert 2010: 36). Crucially, these latter uses are not hard-wired into the grammatical system in the sense that they need to be obligatorily expressed, i. e. the simple present (and additional adverbial modifiers) achieves the same goal. Another potential means of circumventing the 1SG in this context would be the *am*-progressive construction, consisting of an inflected form of *sein* 'to be' and an infinitive marked by the particle *am* (see Ramelli 2015 for details). While this construction explicitly expresses an aspectual distinction (imperfectivity) that the simple present leaves open, it is also non-obligatatory.

Sims (2015: Ch. 3) discusses several potential causes that can lead to defective paradigms. Our phenomenon clearly belongs to the class that is related to the morphology-phonology interface. Another example would be the indefinite genitive ending *-s* in Swedish that cannot be suffixed to stems with final sibilants, e. g. *hus* 'house' or *svans* 'tail' (Karlsson 2000: 648). With the definite genitive singular, this problem does not arise because of the intervening definite marker *-et*, viz. *hus-ets* (this and other cases are discussed in Sims 2015: 59–63).

5 Conclusions and outlook

While grammatical gaps in a more broad sense have enjoyed some attention in the literature, their grammatical causality still remains poorly understood (Fanselow & Féry 2002; Reis 2017; Strobel & Weiß 2019, and others). Roughly speaking, one can distinguish *syntactic gaps* that arise via conflicting demands between different grammatical constraints and *paradigmatic gaps* that seem to be confined to the realm of morphology or interactions between phonology and morphology. Examples for the first class would be the infamous verbs that fail to undergo verb movement to C (mostly backformations like *uraufführen* 'premiere' or *notlanden* 'make an emergency landing') or resolution problems with subject-verb agreement with disjunctive coordinations like (14), where differing person features in both

conjuncts don't allow for a suitable agreement form on the finite verb (Reis 2017: 261–267).

(14) Ich oder ihr ??komm-e | ??komm-t zur Party
I or you.2PL come-1SG come-2PL to=the party

Examples for paradigmatic gaps are missing preterite forms of *schinden* 'strain' (Reis 2017: 257–261), as exemplified by (15), or the inanimate interrogative pronoun *was* that has no dative form (16) (see Jäger 2000 for a detailed analysis).

(15) Der Professor ??schund | ??schand | ??schindete seine Studierenden.
the professor strain.PST his students

(16) Wem hat er einen Absatz hinzugefügt? * Dem Kapitel.
what.DAT has he one paragraph added the chapter

Against this background, dialects offer an interesting testing ground for exploring (inflectional) gaps because they show a wide spectrum of phonological rules that are well-known to interact with morphological (ir-)regularities. I would be eager to know if there are other cases like the present one documented for VA, but hardly surprised if they do exist.

References

Braune, Wilhelm & Frank Heidermanns. 2018. *Althochdeutsche Grammatik*. Vol. 1: Laut- und Formenlehre (Sammlung kurzer Grammatiken germanischen Dialekte – Hauptreihe; 5.1). Berlin, Boston: De Gruyter.

Dammel, Antje. 2011. Wie kommt es zu rumstudierenden Hinterbänklern und anderen Sonderlingen? Pfade zu pejorativen Wortbildungsbedeutungen im Deutschen. *Jahrbuch für germanistische Sprachgeschichte* 2. 326–343.

Fanselow, Gisbert & Caroline Féry. 2002. Ineffability in grammar. In Gisbert Fanselow & Caroline Féry (eds.), *Resolving conflicts in grammar. Optimality theory in syntax, morphology, and phonology* (Linguistische Berichte – Sonderhefte; 11), 265–307. Hamburg: Buske.

Fischer, Annette. 2001. Diachronie und Synchronie von auxiliarem *tun* im Deutschen. In Sheila Watts, Jonathan West & Hans-Joachim Solms (eds.), *Zur Verbmorphologie germanischen Sprachen* (Lingustische Arbeiten; 446), 137–154. Tübingen: Niemeyer.

Fleischer, Jürg. 2019. Vergleichende Aspekte der deutschen Regionalsprachen: Syntax. In Joachim Herrgen, Jürgen Erich Schmidt, Hanna Fischer & Brigitte Ganswindt (eds.), *Sprache und Raum. Ein internationales Handbuch der Sprachvariation*, vol. 4: Deutsch (Handbooks of Linguistics and Communication Science [HSK]; 30), 635–664. Berlin, Boston (MA): De Gruyter Mouton.

Gabriel, Eugen (ed.). 2000. *Vorarlberger Sprachatlas mit Einschluß des Fürstentums Liechtenstein, Westtirols und des Allgäus (VALTS)*. Vol. III: Konsonantismus, Morphologie. Bregenz: Vorarlberger Landesregierung.

Gouskova, Maria. 2018. Morphology and phonotactics. In Rochelle Lieber (ed.), *The Oxford Encyclopedia of Morphology*. Oxford: Oxford University Press.

Hall, Tracy Alan. 2011. *Phonologie: Eine Einführung*. 2nd edn. (De Gruyter Studium). Berlin, New York (NY): De Gruyter.

Harbert, Wayne. 2007. *The germanic languages* ((Cambridge language surveys)). Cambridge: Cambridge University Press.

Hayes, Bruce. 1985. *A metrical theory of word stress rules*. New York (NY): Garland Press.

Jäger, Agnes. 2000. *Unterspezifikation am Beispiel des Pronomens* was*. Zur Grammatik eines* w-*Elements.* University of Jena MA thesis.

Jutz, Leo. 1925. *Die Mundart von Südvorarlberg und Liechtenstein* (Sammlung germanischer Elementar- und Handbücher – Grammatiken; 15). Heidelberg: Winter.

Kaltenbacher, Erika. 1994. Typologische Aspekte des Wortakzents. Zum Zusammenhang von Akzeptposition und Silbengewicht im Arabischen und im Deutschen. *Zeitschrift für Sprachwissenschaft* 13. 20–55.

Karlsson, Fred. 2000. Defectivity. In Geert Booij, Christian Lehmann, Joachim Mugdan, Wolfgang Kesselheim & Stavros Skopeteas (eds.), *Morphology. An international handbook on inflection and word formation*, vol. 1 (Handbooks of Linguistics and Communication Science [HSK]; 17), 647–654. Berlin, New York (NY): De Gruyter Mouton.

König, Werner, Stefan Elspaß & Robert Möller. 2019. *dtv-Atlas Sprache*. 19th edn. Munich: dtv.

Lindgren, Kaj B. 1953. *Die Apokope des mhd.* -e *in seinen verschiedenen Funktionen* (Suomalaisen Tiedeakatemian toimituksia. Sarja B = Series B; 78.2). Helsinki: Annales Academiæ Scientiarum Fennicæ.

Neef, Martin. 1996. *Wortdesign. Eine deklarative Analyse der deutschen Verbflexion* (Studien zur deutschen Grammatik; 52). Tübingen: Stauffenburg.

Nikolaeva, Irina. 2013. Unpacking finiteness. In Dunstan Brown, Marina Chumakina & Greville Corbett (eds.), *Canonical morphology and syntax*, 99–122. Oxford: Oxford University Press.

Pröll, Simon. 2021. Non-reducible morphological differences between written and spoken Standard German. Unpublished manuscript, University of Freiburg.

Ramelli, Christian. 2015. Grammatikalisierung im verbalen Bereich am Beispiel der Rheinischen Verlaufsform. In Alexandra Lenz & Franz Patocka (eds.), *Syntaktische Variation – areallinguistische Perspektiven* (Wiener Arbeiter zur Linguistik; 2), 47–66. Göttingen: V&R unipress.

Reis, Marga. 2017. Grammatische Variation und realistische Grammatik. In Marek Konopka & Angelika Wöllstein (eds.), *Grammatische Variation: Empirische Zugänge und theoretische Modellierung* (Jahrbuch des Instituts für Deutsche Sprache [IDS]; 2016), 255–282. Berlin, Boston: De Gruyter.

Rohdenburg, Günter. 2002. Die Umschreibung finiter Verbformen mit *doon* ‘tun’ und die Frikativierung stammauslautender Plosive in nordniederdeutschen Mundarten. *North-Western European Language Evolution* [NOWELE] 40. 85–104.

Ruoff, Arno & Eugen Gabriel (eds.). 2003. *Die Mundarten des Montafons* (Schriften der Vorarlberger Landesbibliothek; 3/7 [including a CD with audio-recordings]). Graz: W. Neugebauer.

Schallert, Oliver. 2010. Syntax des Vorarlberger Alemannischen: Ergebnisse eines Forschungsprojekts. *Montfort* 62(1). 35–67.

Seiler, Guido. 2009. Sound change or analogy? Monosyllabic lengthening in German and some of its consequences. *Journal of Comparative Germanic Linguistics* 12. 229–272.

Sims, Andrea D. 2015. *Inflectional defectiveness* (Cambridge Studies in Linguistics; 148). Cambridge: Cambridge University Press.

Strobel, Thomas & Helmut Weiß. 2019. Von sprachlichen und nicht-sprachlichen Lücken. In Gerrit Kentner, Frank Kügler, Beata Moskal & Stavros Skopeteas (eds.), *Tweets 'n Greets for Caroline Féry on occasion of her farewell from Goethe-University Frankfurt*, 111–117. Universität Frankfurt. https://www.linguistik-in-frankfurt.de/blog/wp-content/uploads/2019/09/Tweet-n-greets_CarolineFery.pdf.

Vennemann, Theo. 1988. *Preference laws for syllable structure and the explanation of sound change. with special reference to German, Germanic, Italian, and Latin*. Berlin, New York (NY): Mouton de Gruyter.

Weber, Thilo. 2017. *Die TUN-Periphrase im Niederdeutschen. Funktionale und formale Aspekte* (Studien zur deutschen Grammatik; 94). Tübingen: Stauffenburg.

Weidhaas, Thomas & Hans-Jörg Schmid. 2015. Diminutive verbs in german: semantic analysis and theoretical implications. *Morphology* 25. 183–227.

Wiese, Richard. 2000. *The phonology of German*. 2nd edn. (The Phonology of the World's Languages). Oxford: Oxford University Press.