Livio Gaeta

Remodeling inflectional classes: Strong and weak verbs in Walser German

Abstract: In Titsch, a variety of Walser German spoken in Gressoney, a linguistic island of northern Italy, the Germanic strong / weak verb classes were remodeled in a very peculiar way. While the weak classes have been partially generalized in compliance with a trend which is generally observed throughout the whole Germanic family, the strong verbs have been reorganized according to the morphosyntactic environment in which they are used. When the latter require contextual agreement, the strong form is selected, while the weak form appears when no agreement is required by the context.

Keywords: inflection, language change, corpus linguistics, linguistic islands, endangered languages

1 Introduction

The label 'Walser German' (= WG) identifies a group of dialects belonging to the Highest Alemannic branch of Upper German, originally spoken in the most south-western province of Switzerland, the *Wallis* 'the (Rhone) Valley', whence *Wal*(*li*)*ser*. At the outset of the last Millennium groups of settlers left the Wallis and migrated south- and eastwards in search of better conditions for life. They founded villages on the higher segments of the alpine valleys characterized by a common architectural landscape – hallmarked by the *Städl*, the typical Walser house made of wood and stone – and close contacts with the native homeland (cf. Rizzi 1993). A number of villages were also founded on the south side of the Monte Rosa massif, in which they were in contact with the local Romance-speaking population. In particular, the village of Gressoney – consisting of the two settlements of La Trinité and Saint Jean – lies immediately below the Monte Rosa on the upper side of the valley traversed by the river Lys, immediately followed by the Romance-speaking village of Gaby. After centuries of close contacts with the homeland as well as with the rest of Switzerland and of southern Germany, the Italian unification and the First World War meant for Gressoney sinking into a condition of linguistic island which reached its extreme point during the repressive policy of the Fascist regime. This is an important premise for understanding the present situation, because this segre-

Livio Gaeta, University of Turin, e-mail: livio.gaeta@unito.it

https://doi.org/10.1515/9783111496436-004

gation characterized the last generation who grew up in a thorough German-speaking environment but neatly separated from any contact with the ancestral homeland and lies behind the striking language changes which will be discussed below. After 1945, the status of linguistic minority could not stop its assimilation to the Italian surroundings also because of enhanced migrations and mixed marriages. In contrast to the other German minorities of north-eastern Italy, the population was never educated in the Standard German variety, which is not mutually intelligible with the local variety. This stands in neat contrast with the situation found in the Swiss homeland, where Standard German – or its Swiss version, the so-called *Schweizerdeutsch* or *Schriftdeutsch* – serves as written code. Nowadays, Gressoney as well as the other Walser islands in north-western Italy are losing their linguistic identity with the last speakers of the Walser German variety mostly using the other varieties of their repertoire, namely Piedmontese, Standard Italian and French, although the process of language shift is not yet completed. A number of projects have been funded to rescue this identity, to collect written and oral documents and to make it available for the future generations as well as for the research. Thanks to these projects, the data presented in this and in the following sections could be collected into an archive and carefully analyzed.

2 Strong and weak verbs in Walser German

Lying at the southern edge of the Upper German area, Walser German dialects are traditionally known for their conservative character typical of such marginal areas (cf. Bohnenberger 1913; Russ 1990: 367), and this holds true also for the islands found in Italy (cf. Zürrer 2011; Eufe and Mader 2018). This is for instance reflected in the preservation of distinct weak inflectional classes (= ICs) as they were witnessed in Old High German (= OHG) in neat contrast to all other dialectal varieties found in Germany and Switzerland (see Russ 1990: 383 for a survey). As we will also see in the case of the preservation of adjective agreement, the role of language contact with the surrounding Romance languages should not be forgotten which surely acted as a relevant factor for certain conservative processes like for instance the retention of final unstressed vowels (cf. Moulton 1941: 39; Zürrer 2011: 105). Clearly, such a retention lies at the heart of the distinction of three ICs in the verbal morphology of the WG variety spoken in Gressoney called Titsch which will be investigated in the rest of the paper, see Table 1.[1]

1 I adopt here and in the rest of the paper the grammatical classification normally used in the dictionary edited by the Walser Kulturzentrum (cf. GrW 1998), which results from the speakers' collec-

Table 1: ICs of Titsch verbs.

	Examples (infinitive / past participle)
IC I	*bisse* 'to itch, bite' / *bésset* *fénne* 'to find' / *gfònnet* *abschliesse* 'to close' / *abgschlossen* *schmelze* 'to melt' / *gschmolzen* *lache* 'to laugh' / *glachet*
IC II	*teile* 'to divide' / *teilt* *läbe* 'to live' / *gläbt* *chläbe* 'to stick' / *kläbt*
IC III	*moalò* 'to paint' / *gmoalòt* *rächnò* 'to calculate' / *grächnòt*

As a general feature, notice that as a consequence of the so-called *Präteritumschwund* ('preterite loss') commonly found in southern German varieties (cf. Russ 1990: 377), all that is left of the root-vowel alternations typical of the Germanic Ablaut (= AB) class is only retained in the past participle (see Zürrer 1982: 94 for details). As will be further discussed below, because of the preterite loss the past participle has acquired a central role in Titsch for the expression of past tense by means of the perfect construction.

IC I hosts verbs belonging to the original strong macro-class (cf. OHG *bīȝan* / *gibiȝan*,[2] *findan* / *fundan*, *sliozan* / *gisloȝan* and *smelzan* / *gismolzan*) while the weak IC II and IC III go back etymologically to the OHG weak classes displaying respectively the thematic vowels (= ThVs) *-ja-* (already merged in OHG into *-e-*, cf. OHG *teilen* / *giteilit*) or *-ē-* (cf. OHG *lebēn* / *gilebēt* and *klebēn* / *giklebēt*) and *-ō-* (cf. OHG *mālōn* / *gimālōt*, *rehhenōn* / *girehhenōt*) and no AB alternation. In addition, IC I also hosts verbs going back to the etymological weak *-ē-* class (cf. OHG *lahhēn* / *gilahhēt*) which select the dental suffix *-et* to form the past participle reflecting the OHG suffix *-ēt* and is neatly distinct from the suffix *-t* selected by IC II which goes back to the OHG suffix *-it*. Note that verbs of the etymological *-ē-* class migrated to

tive enterprise and is established as the reference work in the Gressoney community and adopted also in Gaeta et al. (2024). By the same token, I also adopt the orthographic norms recommended therein in which <é>, <ä> and <ò> roughly correspond respectively to [ɪ], [æ] and [ʊ] while vowel sequences like <ie>, <ée>, etc. correspond to true (falling) diphthongs: [iẹ], [ɪẹ], etc. For a general description of the orthographic norms adopted in the community, see Gaeta et al. (2024). It must be added that the texts of our data-base do not always follow these orthographic norms, also because to a large extent they have been written before their adoption.

2 The OHG sign <ȝ(ȝ)> refers to a voiceless strident fricative [ʂ] normally resulting from a Germanic voiceless dental occlusive due to the so-called Second Consonant Shift (cf. Braune / Reiffenstein 2004: 167).

IC II display the suffix *-t* in the past participle as shown by *gläbt* and *kläbt*.[3] On the other hand, the etymological strong verbs of IC I swing between the older nasal suffix of the strong macro-class as in *abgschlossen* and *gschmolzen*[4] and the suffix *-et* of the etymological *-ē-* class found in *bésset* and *gfònnet*. This variation is fairly widespread: *schribe* 'to write' / *gschrében* or *gschrébet*, *usstéerbe* 'to die out' / *usgstòrben* or *usgstòrbet*, *vergässe* 'to forget' / *vergässen* or *vergässet*, *verliere* 'to lose' / *verlòren* or *verlòret*, etc.

In this connection, it has to be stressed that the tendency towards the extension of the weak suffix *-et* to the etymological strong verbs does not imply the levelling of the AB pattern, which is generally preserved, apart from some marginal examples where the levelled alternative is found as in *verschwénde* 'to disappear' / *verschwòndet* or *verschwéndet*, *wäbe* 'to weave' / *gwòbet* or *gwäbt*, etc. We record at least four AB types within IC I, regardless of the weak or strong suffix selected, see Table 2.[5]

Table 2: AB types in IC I.

AB types	Examples
AB-1: *i / é*	*blibe* 'to remain' / *blébet* or *blében*, *ritte* 'to ride' / *gréttet*
AB-2: *ie / o*	*biete* 'to offer' / *bottet*, *siede* 'to seethe' / *gsotten* or *gsottet*
AB-3: *é / ò*	*bénne* 'to bind' / *bònnet*, *stéerbe* 'to die' / *gstòrbet* or *gstòrben*
AB-4: *ä / o*	*bräche* 'to break' / *brochet* or *brochen*, *träffe* 'to strike' / *troffet*

This dissociation between the AB and the suffix selection whereby the etymologically weak suffix *-et* is largely preserved also in concomitance of AB alternations is

3 Similarly to what is observed in MSG, the past participle is formed by the simultaneous affixation of a prefix *g-* and one of the suffixes *-en*, *-et* or *-t*. Accordingly, we can speak of a circumfix. However, in contrast to the distribution found in MSG, in Titsch the prefix *g-* does not appear before an initial stop (cf. Titsch *bésset* vs. MSG *gebissen*), while it is unvoiced if the verbal stem begins with a vowel (cf. *oalte* 'to age' / *koaltet* vs. MSG *altern* 'to age' / *gealtert*) and unvoiced and merged with an initial posterior fricative (cf. [x]*läbe* 'to stick' / *kläbt* and [h]*efte* 'to stick' / *kaft*). Finally, it is also unvoiced and merged with the initial voiced stop in the three verbs *gä* 'to give' / *kät*, *gé* 'to take' / *két* and *goa* 'to go' / *kanget* (but not elsewhere: *grieze* 'to greet' / *griezt*).

4 Actually, since the nasal in final position is normally dropped (cf. Gaeta 2023), we should assume the forms *abgschlosse*(*n*) and *gschmolze*(*n*). In fact, the nasal shows up only when it is followed by another segment, as in the inflected forms *abgschlossne*, *abgschlossens*, etc. For the sake of simplicity, I will refer to the basic form ending with the nasal.

5 Further minor types are attested which display other allomorphies like *loufe* 'to run' / *gloffet*, *schloa* 'to beat' / *gschlaget*, *stoa* 'to stand' / *gstannet*, *troage* 'to carry' / *treit*, etc. Most of them can be assumed to form a class containing highly frequent verbs including auxiliaries and modals, the so-called *kurzformige Verben* ('short-formed verbs', see Angster and Gaeta 2018).

arguably supported by a mirror-image phenomenon which affected the weak verbs of the etymological *-ja-* class, namely so-called *Rückumlaut* (= RU) ('lit. backwards metaphony', cf. Vennemann 1986; Fertig 2020: 209). Because of the deletion of the thematic vowel *-i-* in the preterite of verbs displaying heavy syllables or more than one syllable, the OHG *i*-umlaut gave rise to a root-vowel alternation in the etymological *-ja-* class which runs in the opposite direction compared to the normal effect of the umlaut, from the marked category (the preterite) displaying the back vowel to the unmarked (the infinitive or the present) displaying the front vowel: OHG *h*[ø:]*ren* 'to hear' / *hōrta*, *w*[æ:]*nen* 'to mean' / *wānta*, *stellen* 'to put' / *stalta*, etc. This phenomenon was further expanded in Titsch (cf. Hotzenköcherle 1956; Zürrer 1982: 92) to the extent that we can identify at least four different RU types which go well beyond the original alternations, see Table 3.

Table 3: RU types in IC II.

RU types	Examples
RU-1: *e* / *a*	*decke* 'to set' / *dackt*, *henge* 'to hang' / *kangt*, *verderpe* 'to corrupt' / *verdarpt*
RU-2: *ie* / *ue*	*ergriene* 'to green' / *ergruenet*, *rieme* 'to praise' / *gruemt*, *stiere* 'to lean' / *gstuert*
RU-3: *é* / *ò*	*chnéffe* 'to tie' / *knòpft*, *drécke* 'to print' / *dròckt*, *réschte* 'to roast' / *gròscht*
RU-4: *é* / *oa*	*bréme* 'to soot' / *broamt*, *féerbe* 'to color' / *gfoarbt*, *méche* 'to mow' / *gmoat*

Note that in several cases the form displaying the RU alternates with its levelled-out correspondent as in *erblente* 'to be blended' / *erblant* or *erblent*, *stiere* 'to lean' / *gstuert* or *gstiert*, etc. Thus, the weak IC II converges with the strong IC I in the adoption of a non-concatenative technique in contrast to their original clear-cut distinction (see Dammel (2011: 251) for a further discussion of the parallel between AB and RU verbs).

As a consequence of the extension of the weak dental suffix in IC I, the outcomes of the OHG *-ē-* class like *lache* 'to laugh' / *glachet* merged with the outcomes of the strong class, especially when no root-vowel alternations occurred as in verbs like *ässe* 'to eat' / *kässet*, *falle* 'to fall' / *gfallet* (cf. OHG *ezzan* / *giezzan*, *fallan* / *gifallan*), etc. In few cases, etymological strong verbs where no AB alternations occur migrated to the IC II as in *grabe* 'to dig' / *grabt*, *pflegen* 'to take care' / *pflegt* (cf. OHG *graban* / *gigraban*, *phlegan* / *giphlegan*). On the other hand, the distinction between the suffix of the past participle of IC I and of IC II is blurred when the verb stem ends in a coronal stop. In these cases a schwa vowel is mostly inserted to the effect that the verbs going back to the OHG *-ja-* class turn out to display a suffix *-et*: *erette* 'to save' / *erettet*, *leite* 'to lead' / *gleitet*, *anditte* 'to hint' / *anditтet*, *spreite* 'to spread' / *gspreitet*, *verdòrschte* 'to be parched' / *verdòrschtet* (cf. OHG *retten* / *giretit*, *leiten* /

gileitit, *diuten* / *gidiutit*, *spreiten* / *gispreitit*, *dursten* / *gidurstit*), etc.[6] Furthermore, epenthesis is normally observed when the stem ends with an obstruent followed by a coronal sonorant like *entwéckle* 'to develop' / *entwécklet*, *zeichne* 'to mark' / *gzeichnet*, *ändre* 'to change' / *kändret*, etc. In other few cases, the participle – independently of the etymological class – swings between the form *-et* or *-t* respectively of IC I and IC II, possibly when one and the same verbal stem stands in combination with different prefixes: *blieche* 'to blossom' / *bliechet* or *bliecht*, *sòrge* 'to worry' / *sòrget* vs *versòrge* 'to provide' / *versòrgt*, *verlange* 'to demand' / *verlanget* or *verlangt* vs *erlange* 'to attain' / *erlanget* (cf. OHG *bluoen* / *gibluoit*, *sorgēn* / *gisorgēt*, *langēn* / *gilangēt*), etc.

In sum, apart from IC III which is well carved out and only contains weak verbs that show no root-vowel alternations, the etymological distinction between the strong and the weak macro-class is blurred for several reasons: the OHG *-ē-* class is split across IC I and IC II, and the strong verbs take over the *-et* suffix which replaces the etymological *-en* in a number of cases. As a consequence, the etymological strong verbs where no root-vowel alternation of the four AB types seen in Tab. 2 above occurs like *lade* 'to load' / *gladet* or *gladen* (cf. OHG *ladan* / *giladan*) cannot be distinguished from etymological weak verbs like *nachte* 'to get dark' / *gnachtet* (cf. OHG *nachtēn* / *ginachtēt*) except for the nasal suffix *-en* which appears as an alternative to *-et*. Thus, the occurrence of the (strong) nasal suffix as a possible alternative provides a criterion for IC assignment to the extent that this latter alternative is justified in etymological terms. Accordingly, I will assume as a null hypothesis that the presence of the nasal suffix *-en* reflects its origin rather than being an innovation, and I will assign to IC I all verbs displaying the nasal suffix, independently of the absence of any AB alternation as in *broate* 'to roast' / *broatet* or *broaten* and *scheide* 'to choose' / *gscheidet* or *gscheiden*, etc. (cf. OHG *brātan* / *gibrātan*, *skeidan* / *giskeidan*) or of the occurrence of a suffix *-t* instead of the expected *-et* in the past participle as for instance in *läse* 'to read' / *gläst* or *gläsen* (cf. OHG *lesan* / *gilesan*). In the same vein, the few etymological weak verbs which display the nasal suffix as a possible alternative in the past participle as for instance *bégleite* 'to accompany' / *bégleitet* or *bégleiten* and *stére* 'to stir' / *gstért* or *gstòrt* or *gstòren* (cf. OHG *gileiten* / *gileitit*, *stiuren* / *gistiurit*), etc. will be included into IC I. On the other hand, since verbs whose stem ends with an obstruent-sonorant cluster such as *ändre* 'to

6 In few cases like *schétte* 'to shake' / *gschétt*, and *hefte* 'to stick' / *kaft*, etc. (cf. OHG *scutten* / *giscutit*, *heften* / *giheftit*) no epenthesis is found and the suffix *-t* is fused with the stem. Moreover, it has to be added that a few verbs of the etymological *-ō-* class which migrated to IC II also belong here as their stem ends with a coronal stop: *bélde* 'to form' / *béldet*, *anmélde* 'to announce' / *angméldet* (cf. OHG *bilidōn* / *gibilidōt*, *meldōn* / *gimeldōt*).

change' / *kändret* never display the nasal suffix as a possible alternative, they will be assigned to IC II.

Since the AB alternations characterizing the strong verbs are paralleled by the root-vowel alternations resulting from the RU of the weak verbs, we are not surprised to observe cases like *schrie* 'to scream' which used to be an etymological strong verb belonging to the AB-1 class like *blibe* and shifted to the RU-2 class as shown by its past participle *gschruet*. In addition, in at least one case we happen to find exactly the same root-vowel alternation as shown by the AB-3 and the RU-3 class, where only the suffix allows us to distinguish the strong *bénne* 'to bind' / *bònnet* from the weak *drécke* 'to print' / *dròckt*. In practice, in Titsch we are left with four additional micro-classes found within ICs I and II which are characterized by different root-vowel alternations accompanying the different participial suffixes, as summarized in Table 4.

Table 4: The first two verbal ICs in Titsch.

IC I	examples	IC II	examples
IC Ia	*vergässe* / *vergässen* or *-et*	IC IIa	*chläbe* / *kläbt*
IC Ib-AB-1	*blibe* / *blében* or *-et*	IC IIb-RU-1	*decke* / *dackt*
IC Ic-AB-2	*siede* / *gsotten* or *-et*	IC IIc-RU-2	*rieme* / *gruemt*
IC Id-AB-3	*bénne* / *bònnen* or *-et*	IC IId-RU-3	*drécke* / *dròckt*
IC Ie-AB-4	*bräche* / *brochen* or *-et*	IC IIe-RU-4	*bréme* / *broamt*

Moreover, as observed above, IC I displayed the occurrence of the strong and the weak participial suffixes, respectively *-en* or *-et*. In this regard, Table 4 emphasizes the dissociation between the root-vowel alternation and the type of suffix selected, insofar as the former is found both in IC I and in IC II and in some cases points to a convergence between them.[7] Finally, no micro-classes occur within IC III, where only sparse allomorphies are found like RU-1 in *stéckò* 'to dismember' / *gstackt*.

7 It must be added that – similarly to what we have seen above for *lade* 'to load' / *gladet* – when the verbal stem ends with a coronal stop a complete neutralization between the IC Id and the IC IIc takes place due to schwa insertion, as in the case of the etymological strong verb *verschwénde* 'to disappear' / *verschwòndet* vs. the etymological weak verb *grénde* 'to found' / *gròndet*.

3 Modeling variation in the Titsch verbal classes: A quantitative view

In the previous section, we have seen that a certain degree of variation is found with regard to the inflectional properties of the verbs in Titsch. Thanks to the research projects mentioned above, I will try to model this variation by making use of the CLiMAlp archive which allows us to provide a quantitative evaluation of the verbal system of Titsch (cf. Gaeta et al. 2022). The CLiMAlp archive, which is freely accessible online at the website www.climalp.org, consists of two parts. First, a dictionary resulting from the community's collective engagement (cf. GrW 1998) has been stored and filed, and is now consultable in Titsch, Italian and German. This dictionary can be credited as a true thesaurus which is normally used as a reference work by the speakers in their everyday conversations (see also Gaeta et al. 2024). Second, the dictionary is interfaced (and thereby enriched) with a corpus which collects written texts produced in the local variety in the last century relating to disparate subjects, from church bulletins to cookbooks and further ethnological material. Being interfaced with the dictionary, the corpus is fully annotated and manually checked. Similar archives are already partially available for the other Walser German varieties spoken in Italy as well. The possibility of relying on a corpus besides a dictionary is particularly important in the light of the strong processes of decay which characterize Walser varieties in Italy and especially Titsch, with only a few dozen speakers left who are really able to master it at a mother-tongue level alongside Italian, Piedmontese and partially French, which constitute the dominant varieties of their repertoire (cf. Zürrer 1999, 2009; Dal Negro 2004 for discussion). For this reason, in what follows I will mainly rely on the data extracted from the corpus and I will assign the verbs to their respective ICs solely on the basis of what is witnessed in the corpus, independently of what is recorded in the dictionary. This is also consistent with the fact that inflected forms of the past participles – which, as we will see, are of crucial importance for our investigation – can only be found in the corpus. By maximizing the usage-based perspective in this way, I also aim at reducing the possible effects of normalization and/or analogization typically found with lexicographic collections, which have particularly dramatic consequences in the case of a language undergoing a strong process of decay like Titsch.

At present, for Titsch the archive roughly features 12,315 lexical entries and 93,052 corpus tokens. The data relating to the verbs provided by the archive are reported in Table 5.[8]

8 Since the CLiMAlp archive is constantly being revised and corrected, the data presented here can slightly vary with respect to those found in the platform. However, this variation is not likely to alter the results presented in the rest of the paper.

Table 5: Verbs in CLiMAlp.

Verbs not attested in the corpus	1,799	61.0%
Verbs without attested participle	401	13.6%
Verbs displaying weak participles	674	22.9%
Verbs displaying strong participles	28	1.0%
Verbs displaying strong and weak past participles	45	1.5%
Total verbs	2,947	100.0%

As one may note, one quarter of the lexical entries of the dictionary consists of verbs, and about forty percent are also attested in the corpus, although only one quarter of the verbs has a corpus attestation for the past participle, which is the relevant object of investigation here. On the other hand, the verbs whose participle is attested constitute two-thirds of all verbal lexemes occurring in the corpus, which – in spite of its limited size – is large enough to warrant a significant empirical contribution to model the variation observed above and to justify the usage-based perspective adopted here. In this light, nine out of ten verbs whose past participle is attested in the corpus select the weak suffix, independently of the occurrence of any root-vowel alternation, as shown in Table 6.

Table 6: Verbs displaying past participles in CLiMAlp.

Verbs displaying weak past participles	674 / 90.2%
Verbs displaying strong past participles	28 / 3.7%
Verbs displaying strong and weak past participles	45 / 6.0%
Total	747 / 100.0%

This clearly shows the tendency towards the extension of the weak participles to the detriment of the strong participles, which is commonly found throughout all Germanic languages. On the other hand, there is a small but significant number of verbs which only display the strong form and a slightly larger number of verbs displaying double forms. Thus, the weak suffix is clearly dominant, but the strong suffix remains robust insofar as it is found with about one tenth of the verbs.

Note that the process of extension of the weak suffix does not imply the shift to IC II, the etymological weak class. In fact, if we investigate the verbs whose past participles is found in the corpus in dependence of their IC, the following figures obtain, see Table 7.

Table 7: Verbal ICs in CLiMAlp.

IC I	241 / 32.3%
IC II	332 / 44.4%
IC III	174 / 23.3%
Total	747 / 100.0%

Table 7 shows that IC II is larger than the other two, but also that IC I is fairly robust and includes one third of all verbs whose past participle occurs in the corpus. Furthermore, even if in both IC I and IC II the pattern without root-vowel alternation is dominant, the other micro-classes are well-attested as shown by Table 8.[9]

Table 8: Allomorphies in the first two verbal ICs in CLiMAlp.

IC I		**IC II**	
IC Ia (AB-Ø)	94 / 39.2%	IC IIa-(RU-Ø)	274 / 82.3%
IC Ib (AB-1: *i/é*)	27 / 11.3%	IC IIb (RU-1: *e/a*)	27 / 8.1%
IC Ic (AB-2: *ie/o*)	30 / 12.5%	IC IIc (RU-2: *ie/ue*)	8 / 2.4%
IC Id (AB-3: *é/ò*)	31 / 12.9%	IC IId (RU-3: *é/ò*)	8 / 2.4%
IC Ie (AB-4: *ä/o*)	17 / 7.1%	IC IIe (RU-4: *é/oa*)	2 / 0.6%
IC Ir (residue)	42 / 17.5%	IC IIr (residue)	13 / 3.9%
Total	241 / 100.0%		332 / 100.0%

Especially in IC I all different AB types are fairly well attested, while the RU alternations of IC II are far less frequent and micro-class IIa without alternation is the clearly dominant type. It must be added that the skewness of this finding is partially due to the choice of including into IC II all verbs ending with a coronal stop or sonorant where no strong participles are found, although theoretically they might also be assigned to IC I. In this latter IC we observe quite a significant amount of the residual micro-class Ir in which a root-vowel alternation – possibly accompanied by other allomorphies – of a different type is found. This is due to the group of *kurzformige Verben* hinted at in footnote 5 above, which mostly go back to etymological strong verbs or to other highly frequent verbs coming from other classes and display the suffix *-et* as for instance *foa* 'to catch' / *gfanget*, *schloa* 'to hit' / *gschlaget*, etc. or further idiosyncratic allomorphies as in *troage* 'to carry' / *treit*, *tue* 'to do' / *toat*, *goa* 'to go' / *kanget*, etc.

9 In IC II, there are around twenty verbs displaying forms which may present a root-vowel alternation or not. In order to maximize variation, they have been assigned to their respective alternation classes.

Focusing solely on IC I, in Table 9 the distribution of the strong suffix *-en* and of the weak suffix *-et* across its micro-classes is reported.

Table 9: Strong and weak inflection in the IC I in CLiMAlp.

IC I	Strong suffix	Double suffix	Weak suffix	Total
IC Ia (AB-Ø)	7 / 7.4%	19 / 20.2%	68 / 72.3%	94 / 100.0%
IC Ib (AB-1: *i/é*)	8 / 29.6%	4 / 14.8%	15 / 55.6%	27 / 100.0%
IC Ic (AB-2: *ie/o*)	8 / 12.5%	5 / 16.7%	17 / 56.7%	30 / 100.0%
IC Id (AB-3: *é/ò*)	4 / 12.9%	6 / 19.4%	21 / 67.7%	31 / 100.0%
IC Ie (AB-4: *ä/o*)	1 / 7.1%	3 / 17.6%	13 / 76.5%	17 / 100.0%
IC Ir (residue)	– / –	8 / 19.0%	34 / 81.0%	42 / 100.0%

As can be gathered from the Table 9, verbs displaying weak inflection are scattered across all the micro-classes, although micro-class Ia, where no root-vowel alternation occurs, is robustly attested. These figures clearly support the idea that a neat dissociation between the root-vowel alternation and the suffix selection of the strong or weak suffix has to be assumed. Accordingly, the selection of the strong / weak suffix and the occurrence of AB alternations must be considered two independent issues which have to be investigated separately. The latter issue relating to the AB alternations will be completely ignored in the rest of the analysis.

4 The role of agreement in the Titsch past participles

Apparently, the distribution of the strong and the weak suffix across the verbs of IC I seems to be a classic example of (morpho-)lexically determined ICs showing a reduction of lexical complexity through the generalization of the most recent pattern. As commonly found in the Germanic languages, the strong pattern is apparently ceding to the more recent weak model at different speeds in dependence of the specific micro-class. Thus, in Table 9 the micro-classes Ib and Ic seem to be slightly more resistant to the shift in favor of the weak class than the micro-classes Id and Ie where the process appears more advanced.

However, a different explanation can be suggested for the variation observed in Table 9. This is because in Titsch – as well as in other southern German varieties, cf. Fleischer (2007) – participles and adjectives show agreement in predicative position in addition to its presence in attributive position in sharp contrast to MSG and

the rest of the West-Germanic varieties where agreement in predicative position was lost fairly early in history (cf. Gaeta 2018 for discussion).

Accordingly, in Titsch adjective agreement is observed in the copulative constructions containing the verbs *si* 'to be' (1a), *chéeme* 'to come' (1b) and *blibe* 'to remain' (1c), and the same holds for agreement on past participles in the BE-perfect construction (1d–e).[10]

(1) a. *d'hannetò moss nid déck-é ò nid*
DEF=mush[F] must NEG thick-F.SG or not
dénn-é si
thin-F.SG be.INF
'The mush has to be neither thick nor thin'.

b. *well de were der ange*
because then were DEF.M.SG butter[M]
rék-e kiem-et
rancid-M.SG come-PST.PTCP
'because the butter would then have become rancid'.

c. *ésch z'ganz hus woarem-s*
is DEF.N.SG=whole house[N] warm-N.SG
bléb-et
remain-PST.PTCP
'The whole house has remained warm'.

d. *Hilde òn Cristina sinn dr-obèr gsatz-t-é*
Hilde and Cristina be.3PL there-on seat-PST.PTCP-F.PL
'Hilde and Cristina are seated thereon'.

e. *de Jònker-Ronker ésch rächt*
DEF.M.SG Jònker-Ronker is right
antschloaf-n-e gsid
fall.asleep-PST.PTCP-M.SG been
'the Jònker-Ronker had immediately fallen asleep'.

It has to be noted that the past participle of the copulative verbs (see respectively *kiemet* and *blébet* in (1b–c)) as well as of the auxiliaries (see *gsid* in (1e)) do not display agreement. Moreover, while the BE-perfect is found with unaccusative

10 Titsch examples are extracted from the corpus and given in the orthographic form found in the original text archived in the CLiMAlp archive. For brevity, no exact reference of the examples in the archive is provided, but they can easily be found accessing the free dictionary at www.climalp.org/index.php/dizionari/.

verbs, unergative verbs normally display HAVE-perfect where agreement – as expected – is not found, see (2).

(2) a. *wenn all-e hein hert gschloaf-et*
when all-PL have.3PL hard sleep-PST.PTCP
'When all were sleeping hard'.
b. *aber héibèr véll glach-et*
but have.1PL much sleep-PST.PTCP
'But we slept hard'.

However, uninflected forms are commonly found also with the BE-perfect when weak past participles occur, see (3).[11]

(3) a. *Laura òn Augusta sinn vòn ussna kchéem-et*
Laura and Augusta be.3PL of outside come-PST.PTCP
als jòng-é techtr-e
as young-F.PL daughter[F]-PL
'Laura and Augusta have come from abroad as young daughters'.

11 Moreover, unergative verbs swing between the HAVE- and the BE-perfect as shown by the example (i).

(i) *de Jònker-Ronker esch òf de réck gschloaf-et*
DEF.M.SG Jònker-Ronker[M] is on DEF back[M] sleep-PST.PTCP
'The Jònker-Ronker has slept on his back'.

On the other hand, unaccusative verbs can also display the selection of the HAVE-perfect, as in (ii).

(ii) *heintsche de meischter òn d'préftò am*
have.3PL DEF owner.PL and DEF=back.staff[F] at.DEF
tésch gsetz-t
table[M] seat-PST.PTCP
'The owners and the back staff have seated at the table'.

Notice that this variation cannot be related to the influence of the contact varieties (Piedmontese and Italian), where respectively the HAVE- and the BE-perfect are used. Further problems are caused by the unaccusative usage of transitive verbs like *bräche* 'to break' as in the following sentence in which the BE-perfect is used in the absence of any agreement, see (iii).

(iii) *Débel tieber schribe ésch d'chelte broch-et*
while do.1PL write.INF is DEF=cold[F] break-PST.PTCP
'While we are writing, the cold has given in'.

At any rate, more research is required here which goes far beyond the limits of this contribution.

b. *Noa deer gwess-o zit ésch d'sònnò*
after DEF.F.SG.DAT certain-F.SG time[F] is DEF=sun[F]
emòm erschén-et
again shine-PST.PTCP
'After a certain time the sun has (lit. is) shined again'.

Much more consistent in the written sources is the expression of agreement in the several passive constructions found in Titsch which select different auxiliaries, namely the BE-passive (4a), the COME-passive (4b) and the GO-passive (4c) as well as the small clauses involving past participles (4d) (see Gaeta 2018, 2020; Gaeta et al. in press for the discussion of the passive construction in Titsch).

(4) a. *Os der Schreft chammo erchenne*
from DEF.F.SG.DAT writing[F] can.one recognize.INF
wette d'Beldong von de Greschoneyer-Walser
how DEF=education[F] of DEF.M.SG Greschoneyer-Walser
. . . entwecklo-t-e gsid escht
develop-PST.PTPC-F.SG been is
'From writing one can recognize how the culture of the Greschoneyer-Walser has been developed'.

b. *was hie setter en par joar*
what here since INDEF.N.SG pair year.PL
chén-t publizier-z
come-S publish-PST.PTCP.N.SG
'what is being published here for a couple of years'

c. *De toufnoamn-a sin of franzesésch*
DEF.M.PL forename[M]-PL be.3PL on French
abkändre-t-e kanget
change-PST.PTCP-M.PL gone
'The forenames have been changed into French'.

d. *Fenn-é où ufgschréb-en-z of enz*
find-1SG also write.down-PST.PTCP-N.SG on our
notizbuech dass wier hättéber sollò
notebook that we have.SUBJ.PST.1PL should.INF
noasieché
investigate.INF
'I also find written down on our notebook that we should investigate'.

Note that in the small clause construction (4d) the past participle displays agreement with the object clause which selects neuter and singular as default values. Finally,

past participles also agree with their nominal heads, both in the attributive prenominal position (5a) and in the appositive postnominal position (5b).

(5) a. *en dé vergang-n-é zitte*
in DEF.F.SG pass-PST.PTCP-F.SG time[F]
'in the past time'

b. *mé dem eigen-e noame*
with DEF.M.SG.DAT own-M.SG name[M]
dr-ònder gschréb-n-e
there-under write-PST.PTCP-M.SG
'with one's own name written thereunder'

To account for the widespread occurrence of adjective agreement, a continuity explanation has traditionally been suggested which assumes a direct preservation of the OHG situation where agreement is normally found. Alternatively, the effects of a more or less recent contact with Romance varieties have been emphasized where agreement shows up throughout all contexts seen above (see Fleischer 2007 for a detailed discussion and further references). However, while the effects of the constant contact with Italian and with the other Romance varieties – in particular Piedmontese – are undeniable, especially with regard to the preservation of the unstressed final vowels mentioned above, the actual state-of-affairs cannot be said to go immediately back to the contact varieties. Apart from specific Titsch constructions which are unknown in the contact varieties such as the GO-passive restricted to the past tense (see (4c) above), it has to be stressed that the restriction on the agreement of the past participle of auxiliaries is peculiar of Titsch, while both Italian and the other Romance varieties display full agreement throughout the whole verbal complex: Italian *la ragazza è stata accompagnata dal fratello* 'the girl has been accompanied by her brother'.[12] Thus, the contact with Romance has surely played a crucial role in supporting the preservation of agreement, but its peculiar properties in Titsch cannot be explained away as a calque based on Romance varieties.

Given the wide range of contexts in which Titsch past participles display agreement, here is where the CLiMAlp archive really becomes fruitful insofar as it allows us to extract the data showing participle agreement found in the corpus. They are reported in Table 10 distributed across the three ICs:

12 French – at least in its written variety – provides a partial exception because in verbal complexes containing the auxiliary BE the latter remains uninflected while the participle of the full verb must display agreement: *la fille à été* / **étée accompagnée* / **accompagné par son frère* 'the girl has been accompanied by her brother'.

Table 10: Inflectional behavior of past participles in CLiMAlp scattered across the ICs.

	IC I	IC II	IC III
Verbs with uninflected weak participles	158 65.6%	228 68.7%	116 66.7%
Verbs with inflected weak participles	10 4.1%	104 31.3%	58 33.3%
Verbs with inflected strong participles	28 11.6%	–	–
Verbs with inflected strong and uninflected weak participles	38 15.8%	–	–
Verbs with inflected strong and weak participles	7 2.9%	–	–
Total	241 100.0%	332 100.0%	174 100.0%

While Table 10 confirms that the presence of strong participles only affects IC I verbs, it also shows that for each IC two-thirds of the verbs display past participles with a weak suffix which is uninflected. The remaining third largely consists of verbs displaying inflected weak participles in IC II and IC III, while in IC I we find verbs in which the presence of strong inflection is dominant, possibly accompanied by uninflected weak inflection: they make up a total of more than one quarter of IC I verbs. Finally, it must be stressed that no verbs displaying uninflected strong past participles are found in the corpus. Thus, while in all ICs the same proportion of verbs displaying uninflected weak participles is observed, in IC I the group of verbs displaying inflected weak past participles is clearly outranked by those displaying inflected strong participles. On the basis of these findings, we can concentrate on IC I where the strong / weak alternation is found.

5 A new feature for the strong / weak alternation

Let us now consider in detail the distribution of the strong and weak suffixes found in IC I verbs with respect to the relevant morphosyntactic environment. In the following two tables the data presented for IC I in Table 10 above are recast (respectively in types and tokens) introducing the morphosyntactic environments in which past participles are found, that is, the HAVE-perfect (H-Pe), the BE-perfect (B-Pe), the BE-passive (B-Pa), the COME-passive (C-Pa), the GO-passive (G-Pa), the attributive position (At), the appositive position (Ap) and the small clause construction (SC):

Table 11: Past participles of the IC I scattered across their morphosyntactic environment (types).

	H-Pe	B-Pe	C-Pa	SC	G-Pa	Ap	B-Pa	At	Total
a. [+ w, – i]$_{PP}$	142	68	1	–	2	2	2	–	217
	99.3%	85.0%	33.3%	–	9.5%	7.4%	6.7%	–	63.5%
b. [+ w, + i]$_{PP}$	1	–	1	–	2	7	–	18.8%	17
	0.7%	–	33.3%	–	9.5%	25.9%	–	6	5.0%
c. [(+ s, + i) &	–	–	–	–	2	–	–	–	2
(+ w, + i)]$_{PP}$	–	–	–	–	9.5%	–	–	–	0.6%
d. [(+ s, + i) &	–	4	–	–	1	–	2	–	7
(+ w, – i)]$_{PP}$	–	5.0%	–	–	4.8%	–	6.7%	–	2.0%
e. [+ s, + i]$_{PP}$	–	8	1	6	14	18	26	26	99
	–	10.0%	33.3%	100.0%	66.7%	66.7%	86.7%	81.3%	28.9%
Total (distribution	143	80	3	6	21	27	30	32	342
regarding the	41.8%	23.4%	0.9%	1.8%	6.1%	7.9%	8.8%	9.4%	100.0%
environments)									

Table 12: Past participles of the IC I scattered across their morphosyntactic environment (tokens).

	H-Pe	B-Pe	C-Pa	SC	Ap	B-Pa	G-Pa	At	Total
a. [+ w, – i]$_{PP}$	719	564	1	–	2	5	2	–	1293
	99.9%	92.9%	20.0%	–	5.6%	10.2%	3.5%	–	83.6%
b. [+ w, + i]$_{PP}$	1	–	2	–	9	–	5	6	23
	0.1%	–	40.0%	–	25.0%	–	8.8%	9.1%	1.5%
c. [(+ s, + i) &	–	–	–	–	–	–	6	–	6
(+ w, + i)]$_{PP}$	–	–	–	–	–	–	10.5%	–	0.4%
d. [(+ s, + i) &	–	19	–	–	–	9	3	–	31
(+ w, – i)]$_{PP}$	–	3.1%	–	–	–	18.4%	5.3%	–	2.0%
e. [+ s, + i]$_{PP}$	–	24	2	7	25	35	41	60	194
	–	4.0%	40.0%	100.0%	69.4%	78.4%	71.9%	90.9%	12.5%
Total (distribution	720	607	5	7	36	49	57	66	1547
regarding the	46.5%	39.2%	0.3%	0.5%	2.3%	3.2%	3.7%	4.3%	100%
environments)									

Past participles can display the weak (+ w) or the strong (+ s) suffix and can be inflected (+ i) or not (– i) in dependence of the morphosyntactic environment. Recall that the only case where inflection is not expected to occur is in the HAVE-perfect, where in fact only one isolated case is found which does not disturb the general picture (see the type (b) under H-Pe). The data displayed in Tables 11 and 12 are clearly polarized towards the two opposite morphosyntactic environments: on the

one pole, the uninflected HAVE-perfect (type (a)), where verbs select the weak suffix, and on the other all other cases where inflected participles are required, where the strong suffix is selected (type (e)).

Figure 1 and 2 chart the data of Table 11 and 12, and – in spite of the distribution skewed in favor of the perfect – show with the help of a linear regression trendline the polarized distribution of the weak and the strong participles in dependence of the respective morphosyntactic environments in which inflection is required:

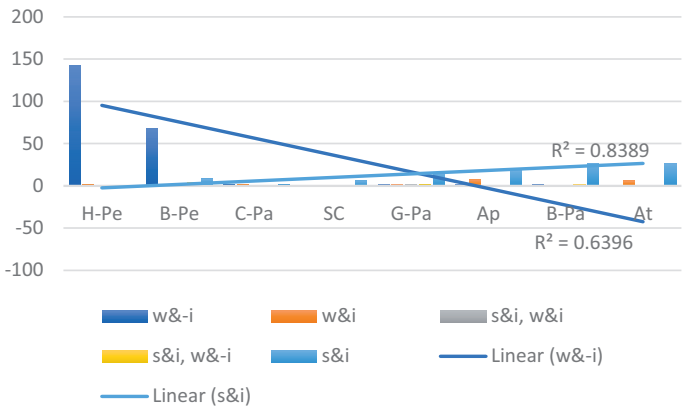

Figure 1: Past participles of the IC I scattered across their morphosyntactic environment (types).

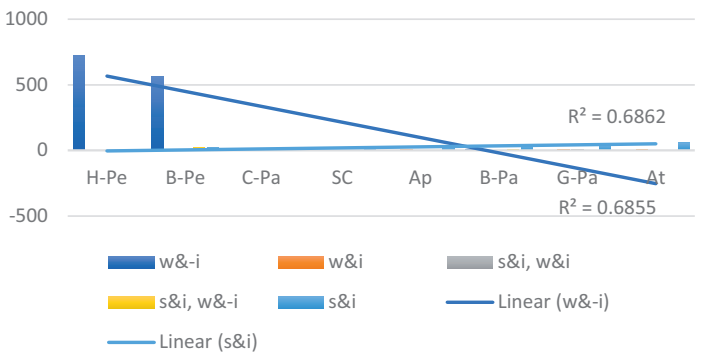

Figure 2: Past participles of the IC I scattered across their morphosyntactic environment (tokens).

In order to better visualize the polarized distribution, the morphosyntactic environments are aligned according to their type/token frequency shown in the last row of Tables 11 and 12, considered respectively from left to right for the two weak

uninflected contexts and from right to left for the inflected strong contexts. Note that the values are clearly more solid for the type distribution, while among the tokens a robust quantitative prevalence of the perfect constructions flattens the results. However, such a skewed distribution is not surprising in the light of the relevance of the perfect construction as the only way to express anteriority in Titsch, and the comparatively low frequency of the passive constructions normally observed cross-linguistically.

Between the poles sparse examples are found, where either only verbs selecting weak suffixes are found (type (b) in Tables 11 and 12), or uninflected weak participles are accompanied by their inflected strong correspondents within one and the same verb (type (d) in Tables 11 and 12). The only case in which the correlation between the morphosyntactic environment and the distribution of the strong / weak suffix crashes is represented by the type (c) in Tables 11 and 12, but this only regards the two verbs *ertue* 'to open' (6a–b) and *läse* 'to read' (6c–d), where strong and weak suffixes are found with inflected participles.

(6) a. *En heiò éscht e nu-e teil vòm*
in July is INDEF new-M.SG part[M] von.DEF.N.SG
ekomuseum Walser ertòa-n-s kanget
eco-museum[N] Walser open-PST.PTCP-N.SG gone
'In July a new part of the Walser eco-museum has been opened'.

b. *Desch-e Sommer éscht ertoa-t-s kanget*
DEM-M.SG summer[M] is open-PST.PTCP-N.SG gone
. . . z Hus fer Sport
DEF.N.SG house[N] for sport
'This summer the house for sport has been opened'.

c. *bés nid langorsch éscht em hitteg-e tag*
until NEG longest is in.DEF.M.SG present-M.SG day[M]
en friemäsch kanget gläs-n-e
INDEF.F.SG High.Mass[F] gone read-PST.PTCP-F.SG
'Until not long ago a High Mass has been celebrated in the present day'.

d. *dernoa gséchéber de eppes geit*
thereafter see.1PL then something[N] goes
ou gläs-z
also read-PST.PTCP.N.SG
'Thereafter let's see then, something has also to be read'.

Note that *ertue* is one of those short-formed verbs which display a high number of morphological idiosyncrasies and in fact has been grouped with the IC I only for convenience, while *läse* only occurs in the two tokens reported above and is

therefore difficult to judge. It must be added that – as expected on the basis of what has been discussed with respect to (2) and (3) above – the BE-perfect, which typically characterizes unaccusative verbs, normally follows the same pattern of the HAVE-perfect insofar as an uninflected weak participle is used, while only in few cases the inflected strong model prevails (see the types (d) and (e) under B-Pe in Tables 11 and 12).

A global pattern emerges from the polarized distribution reported in Table 11, which is made evident by the comparison of the total number of types found in the last column of Table 11 with the total number of the verbs of the IC I reported in Table 10. The increment of hundred types (viz. 342 vs. 241) is apparently due to the total number of types displaying an inflected strong participle. This, however, only means that for most inflected strong participles occurring in the appropriate morphosyntactic environment an uninflected weak participle in the HAVE-perfect is found. In other words, besides verbs where only the weak inflection is found such as *fénne* 'to find', *gwénne* 'to win', *schnide* 'to cut' and few others, the strong / weak alternation has been completely remodeled according to the construction type in which the verb is involved. Therefore, most verbs of the IC I display two past participles which are selected in dependence of the morphosyntactic environment, as exemplified below by the verbs *schribe* 'to write' and *wäsche* 'to wash'. When agreement is not required by the context as in the HAVE-perfect, the weak uninflected form is found (7a–b), while the strong inflected form shows up when agreement is contextually required as in the passive (7c–d).

(7) a. *wenn Benito Leopold Curtaz . . . hät éndsch*
when Benito Leopold Curtaz has 1PL.OBL
gschréb-et / **gschréb-n-e*
write-PST.PTCP / write-PST.PTCP-M.SG
'When Benito Leopold Curtaz . . . has written to us'.

b. *heintsch d'anket-e entfläcko-t*
have.3PL DEF=skirt[F]-PL remove.stain-PST.PTCP
òn d'hus-gspònnt-o woll-schtrangn-a
and DEF=house-woven-PL wool-skein-PL
gwässch-et / **gwässch-n-e*
wash-PST.PTCP / wash-PST.PTCP-PL
'They have removed the stains from the skirts and washed their home-made wool-skeins'.

c. *al-z* *éscht* *kanget*
all-N.SG is gone
gschréb-en-z / **gschréb-et-s*
write-PST.PTCP-N.SG / write-PST.PTCP-N.SG
'Everything has been written'.

d. *òn* *d'gròss-ò* *lougò* *ésch*
and DEF=big-F.SG laundry[F] is
gwässch-n-e / **gwässch-et-e* *kanget*
wash-PST.PTCP-F.SG / wash-PST.PTCP-F.SG gone
'And the big laundry has been washed'.

Note that this remodeling is also found with a few originally weak verbs where the strong suffix is not expected etymologically, such as for instance *spreite* 'to spread' in (8).

(8) a. *En* *de* *sòmmermaned-a* *hämmò* *schén* *déck*
in DEF.PL summer.month-PL has.one beautiful thick
òn *géere* *d'wäsch* *òf*
and gladly DEF=laundry[F] on
d'husmattò *gspreit-et*
DEF=house.meadow spread-PST.PTCP
'In summer months one has quite often and gladly spread the laundry on the meadow in front of the house'.

b. *d'Mann-a* *hein* *de* *Trosso* *gmach-t:*
DEF=man-PL have.3PL DEF.M.SG hay.bundle[M] make-PST.PTCP
dri *Seil-ene* *uf* *em* *Bode* *gschpreit-n-e,*
three rope[N]-PL on in.DEF.M.SG ground spread-PST.PTCP-PL
dä *Tregi-e* *em* *Bode* *engschtackt-e*
DEF.PL packing.wood-PL in.DEF.M.SG ground[M] pouch.PST.PTCP-PL
un *druf* *Ooarfal* *uf* *Oarfal*
and thereupon armful on armful
'The men have made the bundle of hay: three ropes spread out on the ground, the packing wood pouched in the ground, and thereupon armful on armful of hay'.

Note that even in the cases assumed to display only the strong or the weak suffix in previous investigations, we observe in the corpus the scattered distribution of Tables 11 and 12. For instance, Zürrer (1982: 91), based on fieldwork carried out in the Seventies, deems as "strong verbs" *sénge* 'to sing' for which the strong / weak alternation is documented in the corpus (see (9a–b) below), while other verbs

labelled as “strong verbs with weak ending of the past participle” such as *bache* ‘to bake’ and *zie* ‘to pull’ also display the alternation (see (9c–d)).

(9) a. *Ende der Mäsch heintsch met däm*
end DEF.F.SG.GEN Mass[F] have.3PL with the.M.SG.DAT
Pfoaher z’Stabat Mater gsung-et
priest[M] DEF.N.SG=Stabat Mater sing-PST.PTCP
‘At the end of the Mass they have sung the Stabat Mater with the priest’.

b. *Of jede fall éscht z’lied*
on any-M.SG fall[M] is DEF.N.SG=song[N]
gsong-en-z kanget
sing-PST.PTCP-N.SG gone
‘In any case the song has been sung’.

c. *de ma wò hannensch noch hientoa*
DEF.PL men REL have.3PL.1PL.OBL yet occasionally
z’Noversch schwoarz brot bach-et
to=Noversch black bread bake-PST.PTCP
‘The persons who still have occasionally baked us brown bread in Noversch’.

d. *Ennéra halb stòn òngefer ésch*
in.F.SG.DAT half hour[F] about is
z’bròt bach-en-z gsid
DEF.N.SG=bread[N] bake-PST.PTCP-N.SG been
‘Within about half an hour the bread was baked’.

However, independently of the diachronic aspects, the synchronic treatment of this remodeling raises a number of questions centering on the key factors which have to be made responsible for the occurring alternation. This issue will be pursued in the next section.

6 Remodeling verbal ICs in Titsch

To sum up, the verbal ICs in Titsch are organized around different properties. First, it is necessary to consider (morpho-)lexical information. While IC III verbs are clearly individuated on the basis of ThV *-ò* found in the infinitive and in the participle, this is not straightforward for the other two ICs because in both classes the infinitive ending is *-e*. For IC I verbs the vowel *-e* can be held to be a true ThV because it is found both in the infinitive and in the participle. On the other hand,

IC II verbs are exclusively individuated by the ending of the past participle *-t* in the absence of any ThV. Accordingly, the vowel *-e* found in their infinitive might be taken to be a default vowel required by syllabic well-formedness: recall that in the past participles of IC II verbs ending with a coronal stop or sonorant the same vowel *-e* is inserted as in *leite* 'to lead' / *gleitet* and *entwéckle* 'to develop'/ *entwécklet*, blurring in this way the contrast with IC I verbs.

Second, once the verbs of the respective ICs have been distinguished on a (morpho-)lexical basis, then we need to know – again on a lexical basis – which verbs belonging to IC I only show the weak suffix. This is a significant subset which consists of verbs displaying stem vowel alternations (those going back to etymological strong verbs) and of verbs not displaying any alternation (mostly going back to etymological weak verbs). We will comprise this first subset under the label of IC I_W. In addition, we find the verbs where both strong and weak suffixes are found. The latter represent the majority of IC I verbs and will be comprised under the label of IC I_S. Here is where (morpho-)syntactic information is required. In fact, in clear contrast to IC I_W verbs where only the weak suffix is adopted IC I_S verbs select either suffix in dependence of the (morpho-)syntactic context in which they occur.

How can we account for the peculiar situation found in Titsch? The result of our corpus-based investigation can be summarized by means of the following Strong Verb Rule (= SVR):

> **SVR**: In verbs belonging to IC I_S the strong suffix is used when the past participle is found in the context of morphosyntactic agreement; otherwise, the weak suffix is used.

Clearly, morphosyntactic agreement needs to be specified with regard to the contexts seen above, namely (i) the passive construction and (ii) the BE-perfect in a partial way for the adverbal position, and (iii) the attributive, (iv) the appositive and (v) the small clause construction for the adnominal position. Note that as an expression of contextual inflection the agreement markers are placed after the past participle markers expressing inherent inflection, namely tense (see Booij 1993 for the distinction). In other words, inherent inflection, i.e. the selection of the strong or the weak suffix to encode tense, is sensitive to contextual inflection, i.e. type of syntactic environment in which the participle is employed. This peculiar property displayed by all past participles independently of their ICs, as shown in Table 10 above, is the crucial factor for determining the selection of the strong suffix. Thus, it is not that the strong suffix is sensitive to agreement, because the latter is also found with the weak suffix.

In addition, the weak suffix clearly serves as the default suffix because it appears when no contextual inflection, i.e. agreement, occurs. Accordingly, the verbal paradigm of a strong verb must be provided with two slots for the past par-

ticiple which stand in competition and in fact in complementary distribution, in accordance with the SVR.

This state-of-affairs might also be taken as an instance of syncretism insofar as the marker of the I_W-class is spread to a slot of the I_S-class, amounting to a lexical split – intended as a case of segmentation of a paradigm into parts determined on a (morpho-)lexical basis – of the kind advocated by Corbett (2015).

Table 13: Syncretism in the Titsch past participles.

		Types	[+ AGR]	[– AGR]
IC I [ThV = *-e*]	I_S-class	73	(*-e*)-*n*	(*-e*)-*t*
	I_W-class	10	(*-e*)-*t*	
IC II		105	*-t*	
IC III [ThV = *-ò*]		58	(*-ò*)-*t*	

In Table 13, the figures refer to verbs for which both inflected and uninflected past participles are found in the corpus. This excludes all verbs whose participles are not found in agreement environments in the corpus.

In sum, the presence of agreement as an instance of contextual inflection, which is a conservative property of Titsch as seen above, has been recast as a crucial feature for deciding about IC membership. Thanks to the functionalization of the new feature [AGR] for IC membership – an I_S-class can now be distinguished from an I_W-class. Viewed from a diachronic perspective, the functionalization of the feature [AGR] guarantees the survival of the strong class. In the light of the systematic distribution observed in Table 13 and of the examples of extension to etymologically weak verbs, this functionalization can be treated as an exaptation, i.e. the reuse of morphological junk devoid of any evident function (cf. Lass 1990; Gaeta 2016 for discussion).

Such a reuse can also be observed in other parts of verbal ICs, namely in the RU verbs discussed in Table 8 above. Recall that the latter are etymologically weak verbs that happened to display a root-vowel alternations resembling the AB classes of IC I. The class of RU verbs has functionalized the root-vowel alternation in connection with the occurrence of agreement in the past participle, as shown by Table 14.

Table 14: RU verbs and past participle agreement.

IC II	+RU, +AGR	+RU, –AGR	–RU, +AGR	–RU, –AGR
IC IIb (RU-1: *e*/*a*)	22	1	–	3
IC IIc (RU-2: *ie*/*ue*)	4	3	2	–
IC IId (RU-3: *é*/*ò*)	4	1	1	–
IC IIe (RU-4: *é*/*oa*)	2	–	–	–
Tot.	32	5	3	3

The first left column (+RU, +AGR) refers to the RU alternations described in Table 4 above. In the second column (+RU, –AGR) the figures refer to the verbs found in the corpus displaying RU alternations in concomitance of a past participle displaying agreement, while in the absence of agreement no alternation is found, as in the following examples in (10).

(10) a. *darnoa* *hämmo* *d'Meschtre* *pteckt*
afterwards has.one DEF=manure[F] cover.PST.PTCP
'Afterwards, one has covered up the manure'.

b. *dass* *z'ganz-a* *sigge* *ptack-z*
that DEF=whole-N.SG be.SUBJ.3SG cover-N.SG
'that the whole thing be covered up'.

In the other columns, deviant cases are found in which a participle shows RU alternation but no agreement in the expected context (+RU, –AGR), or no RU alternation but agreement in the expected context (–RU, +AGR), or finally no RU alternation and no agreement in the expected context (–RU, –AGR). Apart from these few deviations, the figures speak clearly in favor of a context-sensitive distribution of the RU alternation, which however follows the same pattern covered by the SVR seen above for IC I_S verbs. Namely, when the environment requires agreement, the RU alternation shows up; elsewhere the infinitive root-vowel occurs. The functionalization of the root-vowel alternation in concomitance with the occurrence of the feature [+AGR] resembles another interesting change observed in another WG variety that is now extinct, namely Saley (see Dammel 2011: 248–259 for data and discussion). In this variety, past participles displaying agreement are used to express resultative value in contrast to the uninflected participles which simply carry a past value (cf. Dammel 2011: 256).

(11) a. [diʃɪ muiru iʃt tserfɑllæ fægæm vættær]
DEM.F.SG wall[F] is collapse.PST.PTCP because.of whether
'This wall has collapsed because of the thunderstorm'.

b. [diʃɪ muiru iʃt tserfɑlln-ɪ]
DEM.F.SG wall[F] is collapse.PST.PTCP-F.SG
'This wall has collapsed'.

c. [nʊŋ heʃt's tsærdræt, ts mæsser –
now have.2SG=it twist.PST.PTCP DEF.N.SG knife[N]
dʊmnɑ: makʃt's tsærdrɑ:t-s hæ]
afterwards can.2SG=it twist.PST.PTCP-N.SG have.INF
'Now you've twisted it, the knife – afterwards you can have twisted it'.

In contrast to the resultative value of inflected past participles, the construction containing the uninflected participle focuses on the process leading to the resultant state. Note that the past participle displaying agreement also displays root-vowel alternation (see [tsærdrɑ:t-s] in (11c)), while this is not the case when no agreement occurs (see [tsærdræt]). In other words, the class of RU verbs has functionalized the root-vowel alternation in connection with the occurrence of agreement in the past participle, triggered in its turn by the feature [resultative].

7 Conclusion

To conclude, far from merely being the result of the contact of German plus Italian, WG varieties display significant examples of the rise of secondary inflectional features, that exploit in an original way old pieces of junk coming from the Germanic repertoire in combination with contextual information available in morphosyntactic constructions in which past participles display agreement. In particular, I must stress the relevance of such a small language such as Titsch for discovering developments unprecedented within the Germanic family. This was also possible thanks to the text corpus which could be collected and elaborated in a data-base. Combining these methods with traditional fieldwork is a promising research perspective which allows us to document, preserve, and make available for research the invaluable cultural heritage represented by language islands. I am confident that these tiny phenomena will be of interest to the Festschriftee whose works has largely contributed to a better understanding of the intriguing factors involved in language contact, grammaticalization. . . and junks: *Ad multos annos!*

Abbreviations

AB	Ablaut
AGR	agrement
Ap	appositive position
At	attributive position
B-Pa	BE-passive
B-Pe	BE-perfect
C-Pa	COME-passive
DAT	dative
DEF	definite
DEM	demonstrative
F	feminine
GEN	genitive
G-Pa	GO-passive
H-Pe	HAVE-perfect
IC	inflectional class
IND	indicative
INDEF	indefinite
INF	infinitive
M	masculine
MSG	Modern Standard German
N	neuter
NEG	negation
OBL	oblique
OHG	Old High German
PASS	passive
PERF	perfect
PL	plural
PP	past particilpe
PS	person
PST	past
PTCP	participle
REL	relative
RU	*Rückumlaut* (backwards metaphony)
S	strong
SC	small clause construction
SG	singular
SUBJ	subjunctive
SVR	Strong Verb Rule
ThV	thematic vowel
W	weak
WG	Walser German

References

Angster, Marco & Livio Gaeta. 2018. Wie kurz sind die Kurzverben? Morphologische Merkmale in Gressoney und Issime. *Germanistische Linguistik* 239–240. 211–237.

Bohnenberger, Karl. 1913. *Die Mundart der deutschen Walliser im Heimattal und in den Außenorten*. Frauenfeld: Huber.

Booij, Geert. 1993. Against split morphology. In Geert Booj & Jaap van Marle (eds.), *Yearbook of Morphology 1993*, 27–49. Dordrecht: Kluwer.

Braune, Wilhelm & Ingo Reiffenstein 2004. *Althochdeutsche Grammatik I. Laut- und Formenlehre*. 15th ed. by Ingo Reiffenstein. Tübingen: Niemeyer.

Corbett, Greville G. 2015. Morphosyntactic complexity: A typology of lexical splits. *Language* 91. 145–193.

Dal Negro, Silvia. 2004. *The Decay of a language: The case of a German dialect in the Italian Alps*. Bern: Peter Lang.

Dammel, Antje. 2011. *Konjugationsklassenwandel. Prinzipien des Ab-, Um- und Ausbaus verbalflexivischer Allomorphie in germanischen Sprachen*. Berlin: De Gruyter.

Eufe, Rembert & Mader, Anna. 2018. Das Walserdeutsche im deutschen und italienischen Sprachgebiet. In Nicole Eller-Wildfeuer, Paul Rössler & Alfred Wildfeuer (eds.), *Alpindeutsch*, 113–138. Regensburg: vulpes.

Fertig, David. 2020. Verbal inflectional morphology in Germanic. In Michael T. Putnam & Richard B. Page (eds.), *The Cambridge Handbook of Germanic Linguistics*, 193–213. Cambridge: Cambridge University Press.

Fleischer, Jürg. 2007. Zur Herkunft des flektierten prädikativen Adjektivs im Höchstalemannischen. *Zeitschrift für Dialektologie und Linguistik* 74. 196–240.

Gaeta, Livio. 2016. Co-opting exaptation in a theory of language change. In Muriel Norde & Freek Van de Velde (eds.), *Exaptation in language change*, 57–92. Amsterdam / Philadelphia: John Benjamins.

Gaeta, Livio. 2018. Im Passiv sprechen in den Alpen. *Sprachwissenschaft* 43. 221–250.

Gaeta, Livio. 2020. Remotivating inflectional classes: an unexpected effect of grammaticalization. In Bridget Drinka (ed.), *Historical Linguistics 2017. Selected papers from the 23rd International Conference on Historical Linguistics*, 205–227. Amsterdam & Philadelphia: John Benjamins.

Gaeta, Livio. 2023. Phonology and conventionalization: Naturalness and beyond in German(ic) sonorants. In Jennifer Brunner, Petra Hödl, Veronika Mattes & Thomas Schwaiger (eds.), *Für Bernhard Hurch*. Special issue of *Grazer Linguistische Studien* 94. 121–134.

Gaeta, Livio, Marco Angster, Raffaele Cioffi & Marco Bellante. 2022. Corpus linguistics for low-density varieties. Minority languages and corpus-based investigations. In Maria Grossmann, Fabio Montermini, Diana Passino, Diego Pescarini & Florence Villoing (eds.), *Corpus et données en morphologie*. Special Issue of *Corpus* 23; available at https://journals.openedition.org/corpus/7345.

Gaeta, Livio, Raffaele Cioffi & Caterina Saracco. In press. Korpuslinguistik am Beispiel der walserdeutschen Sprachinseln in Italien. Sprachkontakt, Spracherhaltung, Sprachwandel. In Angélika Prediger (ed.), *Deutsche Sprachminderheiten in der Welt: Empirische Studien zur Sprachvariation und Sprachideologie*. Berlin: de Gruyter.

Gaeta, Livio, Caterina Saracco & Raffaele Cioffi. 2024. *Greschòneytisch. Nuovo Dizionario Titsch – Italiano / Tedesco*. Alessandria: Edizioni dell'Orso.

GrW 1998 = Walser Kulturzentrum (ed.), *Greschòneytitsch Wörterbuch: Vocabolario Titsch / Italiano*. Quart: Musumeci.

Hotzenköcherle, Rudolf. 1956. Umlautphänomene am Südrand der Germania. In Elisabeth Karg-Gasterstädt & Johannes Erben (eds.), *Fragen und Forschungen im Bereich und Umkreis der germanischen Philologie. Festgabe für Theodor Frings*, 221–250. Berlin: Akademie-Verlag.

Lass, Roger. 1990. How to do things with junk: Exaptation in linguistic change. *Journal of Linguistics* 26. 79–102.

Moulton, William G. 1941. *Swiss German Dialect and Romance Patois*. Baltimore: Linguistic Society of America.

Rizzi, Enrico. 1993. *Storia dei Walser*. Anzola d'Ossola (Novara): Fondazione Arch. Enrico Monti.

Russ, Charles V. J. 1990. High Alemannic. In Charles V. J. Russ (ed.), *The Dialects of Modern German: A Linguistic Survey*, 364–393. London: Routledge.

Vennemann, Theo. 1986. Ruckümläut [sic]. In Dieter Kastovsky & Aleksander Szwedek (eds.), *Linguistics across Historical and Geographical Boundaries.* Vol 1: *Linguistic Theory and Historical Linguistics. In Honour of Jacek Fisiak on the Occasion of His Fiftieth Birthday*, 701–723. Berlin: Mouton de Gruyter.

Zürrer, Peter. 1982. *Wörterbuch der Mundart von Gressoney. Mit einer Einführung in die Sprachsituation und einem grammatischen Abriss*. Frauenfeld: Huber.

Zürrer, Peter. 1999. *Sprachinseldialekte. Walserdeutsch im Aostatal (Italien)*. Aarau: Sauerländer.

Zürrer, Peter. 2009. *Sprachkontakt in Walser Dialekten. Gressoney und Issime im Aostatal*. Stuttgart: Steiner.

Zürrer, Peter. 2011. Conservazione e mutamento nei dialetti walser in Italia. In Walter Breu (ed.), *L'influsso dell'italiano sul sistema del verbo nelle lingue minoritarie*, 101–121. Bochum: Brockmeyer.