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(Article begins on next page)

# Remotivating inflectional classes

## An unexpected effect of grammaticalization

Livio Gaeta

In Titsch, a Walser German dialect spoken in the Aosta Valley, a remodeling of the old strong/weak verb classes found in the rest of the Germanic languages has taken place, whereby verbs belonging to the strong class turn out to display both strong and weak past participles. This outcome results from the reuse or exaptation of the original morphological differentiation based on a purely lexically-governed distribution which has been remotivated by associating the morphological features with specific constructional schemas resulting from several processes of grammaticalization.

**Keywords:** morphology, verb, inflection, grammaticalization, exaptation

### 1. Introduction

The Walser German varieties, found at the South-Western edge of the German dialectal continuum, belong to the so-called Highest Alemannic branch and are fairly well known for their extreme conservatism (cf. Russ, 1990 for an overview). On the other hand, due to intense contact with the Romance languages, they also present highly interesting innovative features. This is especially true of those varieties which still survive as linguistic islands in Northern Italy, even though they are subject to a process of language decay which has become dramatically fast-paced in the last decades (cf. Del Negro, 2004 for details and discussion). In this paper, data collected in the village of Gressoney in the Aosta Valley will be discussed, as part of the ongoing research project ArchiWals, an initiative which aims to safeguard the cultural and linguistic heritage of these endangered minorities (cf. Angster et al., 2017 and the website [www.archiwals.it](http://www.archiwals.it)). This variety has been subject to intense contact with Piedmontese, Francoprovençal, French, and Italian. Especially after World War I during the Fascist Regime, the local Walser German variety called Titsch was expressly forbidden; moreover, after World War II the impact of

Standard Italian has increased dramatically also because of strong processes of in- and out-migration with the consequent mixed marriages. At any rate, in Gressoney the Walser community is still quite alive, also producing a significant number of written records which have been collected and stored in the digital archive so that they are freely accessible online. This will provide the main textual basis for the analysis presented below.

This paper will focus on the development of the so-called strong/weak verb classes in Titsch which have been reorganized in the context of a particular bundle of morphosyntactic features. The paper is structured as follows: in § 2 grammaticalization as an adaptive change is introduced, as well as its effect on the so-called complexity mismatch and on decategorialization, which is at the heart of the loss of compositionality and motivation of the original construction; in § 3 the complexity mismatch is discussed with regard to Titsch, providing a brief sketch of the properties of its verbal complex and depicting the development of the complexity mismatch in this variety. Finally, § 4 presents the conclusion.

## **2. Grammaticalization as an adaptive change**

Relying basically on analogous concepts exploited in evolutionary biology (see Lass, 1990, and the papers in Norde & Van de Velde, 2016), in Gaeta (2016) the conceptual pair adaptive vs. exaptive change was introduced. By adaptive changes a typology of changes is understood which are characterized as oriented and responding to a general design of economy and plasticity which manifests itself in the occurrence of developmental patterns which are repeatedly found language after language. In contrast, exaptive changes are normally non-oriented and result from the refunctionalization of extant linguistic material, partially or entirely devoid of any apparent function (see Smith, 2011 for a discussion of this point). Grammaticalization, basically intended in its most widespread meaning as the development of a former lexical item into a grammatical one, is deemed to represent an adaptive change insofar as it generally instantiates recurrent channels or paths of meaning extension leading from concrete to abstract; it is usually oriented, i.e. unidirectional, and presupposes a well-defined set of ecological conditions in which it is likely to take place, including communicative or social benefits attained by means of the extravagance of the perceptual benefits (the salience, the communicative efficacy, etc.) of the expressions undergoing grammaticalization. Furthermore, in light of the increased conventionality of the resulting markers one can also assume that grammaticalization has the effect of increasing the overall complexity of the grammar insofar as the latter has become more conventional or arbitrary as a consequence of the change.

To provide one concrete example, we can discuss the well-known case of the rise of two distinct verbal macro-classes observed in the Germanic languages, i.e. the older strong apophonic class, e.g. Gothic *haffjan* ‘to raise’ / *hōfum* ‘we raised’, and the newer weak class, e.g. Goth. *nasjan* ‘to save’ / *nasidēdum* ‘we saved’. While the former goes back to an old Proto-Indo-European pattern, the latter results from a grammaticalization process which led the old causative DO to develop into an inflectional marker for the past tense (cf. Lehmann, 1989; Ringe, 2006, p. 167, Hill, 2010):<sup>1</sup>

- (1) \**nasjan dēdum* ‘we did save’ > *nasidēdum* ‘we saved’

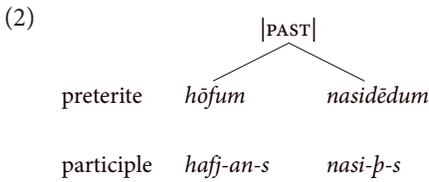
Many verbs belonging to this so-called “weak” class resulted from derivational processes based on other primary lexemes, namely strong class verbs, nouns, and adjectives (cf. Ringe, 2006, p. 252 and passim). By recruiting the causative verb DO, it was possible to build a past tense for these – mainly causative – verbs which could not exploit the older apophonic pattern. The grammaticalization of the DO periphrasis can be understood as an instance of an adaptive change insofar as it is strictly connected with favorable ecological conditions like the increase of the salience via emphasis and consequently of the communicative efficacy of the expression containing the originally causative verb. By developing such a pro-verb function, the latter also underwent a process of phonological reduction and of semantic bleaching, ultimately leading to its grammatical status as an inflectional marker (cf. Szczepaniak, 2009, pp. 112–117 for a detailed reconstruction). The process can be observed in several related changes described throughout the world’s languages (cf. Heine & Kuteva, 2004, p. 119 for an overview).

## 2.1 Grammaticalization and the complexity mismatch

Once the new class is fully grammaticalized, it gives rise to the effect of paradigm layering, i.e. to inflectional classes, which is an instance of complexity mismatch in the sense of Francis & Michaelis’ (2003) because a discrepancy is observed in the number of elements involved (and, consequently, in the complexity of the structure) at different levels of representation (see also Gaeta, 2008):

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1. Actually, Ringe assumes that the original periphrasis contained a past participle: *nasida(n) dēdum* ‘to make so. saved’, subsequently reduced because of the loss of inflection and haplology. It must be added that other analyses have been suggested as well (see Hill, 2010 and references therein).



The same content |PAST| is associated with two different coding forms. Notice that the different morphological patterns found in the preterite are mirrored in the different suffixes selected in the past participle, a nasal and a dental, respectively. This paradigm layering is still found in every modern Germanic language, even though the strong class is observed to be generally recessive insofar as it loses members in favor of the newer dental class, while the opposite trend is seldom attested:

- (3) a. MHG *melken* / *molk* / *gemolken* ‘to milk / milked / milked’  
*weben* / *wob* / *gewoben* ‘to weave / wove / woven’  
 ↓  
 MSG *melken* / *molk* ~ *melkte* / *gemolken* (*gemelkt*)  
*weben* / *webte* (rare *wob*) / *gewebt*
- b. Afr *breek* ‘to break’ / *ek het gebreek* ‘I broke’  
*werk* ‘to work’ / *ek het gewerk* ‘I worked’

In (3a) the two Middle High German (= MHG) verbs *melken* and *weben* used to belong to the strong class while their Modern Standard German (= MSG) followers shifted to the weak class. This happened almost entirely in the case of *weben* in which the older form *wob* is only found in stylistically marked contexts or in the more conservative varieties found in the South. On the other hand, in the case of *melken* the strong and weak forms co-exist in a classical context of ongoing variation in which the strong form of the past participle is more frequent while both forms are commonly used in the preterite. In the case of Afrikaans (= Afr) (3b) the preterite has completely disappeared while at the same time no apophonic alternation has survived in the past participle, with the exception of a couple of cases in which the preterite is still attested such as *dink* ‘to think’ / *dag* ~ *dog* ‘thought (pret.)’ / *gedink* ~ *gedag* ~ *gedog* ‘thought (past part.)’ and *weet* ‘to know’ / *wis* ‘knew’ / *geweet* ‘known’ (cf. Donaldson, 1993: 222). Besides, in a consistent number of participles used as adjectives the strong / weak forms are still preserved with the strong form typically reflecting a translated meaning: *n gebroke hart* ‘a broken heart’ vs. *n gebreekte koppie* ‘a broken cup’. In other words, in all Germanic languages the strong class proves to be recessive and to cede to the weak class. In Afrikaans, this process has almost reached its end, radically eliminating the complexity mismatch.

## 2.2 Grammaticalization and decategorialization

One of the effects of grammaticalization is decategorialization (cf. Hopper & Traugott, 2003: 106) whereby morphosyntactic features of the original elements undergoing the change are lost. Moreover, such loss is normally held to be a clear-cut signal of the completion of the grammaticalization process. For instance, while in Old High German (= OHG) the past participle found in combination with the verb HAVE still displayed agreement with the object of HAVE and can accordingly be interpreted as an attributive participle (4a), this is not possible anymore after the completion of the change as shown by the MSG example in (4b):

- (4) a. *phigboum habeta sum giflanzot-an in sinemo wingarten*  
 fig:tree[M] had:3SG some planted-M.SG.ACC in his:DAT vineyard  
 ‘Somebody had a fig tree planted in his vineyard’ (Tat. 102, 2)
- b. *Jemand hat in seinem Weingarten ein-en Feigenbaum gepflanzt*  
 somebody has in his:DAT vineyard a-M.SG.ACC fig:tree[M] planted  
 ‘Somebody has planted a fig tree in his vineyard’
- c. *Jemand hat ein-en in seinem Weingarten gepflanzt-en*  
 somebody has a-M.SG.ACC in his:DAT vineyard planted-M.SG.ACC  
*Feigenbaum*  
 fig:tree[M]  
 ‘Somebody has a fig tree planted in his vineyard’

Notice that in MSG it is still possible to use the participle in attributive function (4c): in this case, while the latter displays agreement with the object of HAVE, the structure cannot be considered a grammaticalized perfect.<sup>2</sup>

Decategorialization is the reason why grammaticalization has to be understood as constructionalization to the extent that the new grammatical(ized) morpheme becomes part of a broader construction (cf. Traugott, 2003). As a matter of fact, the process of constructionalization implies a decategorialization insofar as the construction as a whole prevails over the compositionality and the categorial properties of its parts. To make one concrete example, when the Latin NP *clarā mente* ‘with a clear mind’ was grammaticalized into an adverb formed with the suffix *-mente* in almost any Romance language (cf. French *clairement*, Italian *chiaramente*, etc.), the original inflectional marker *-ā* signaling the agreement of

2. There is a more marginal option in which the attributive participle does not belong to the nominal phrase as in (4c) but is extraposed in appositive position: *Jemand hat einen Feigenbaum, in seinem Weingarten aber gepflanzt* ‘Somebody has a fig tree, planted however in his vineyard’. Notice that in this case no agreement between the direct object and the participle appears (cf. Murelli, 2017 for a general description).

the adjective with its nominal head was decategorialized into a dysfunctional base allomorphy required by the suffix. In some cases, it also displays true properties of constructionalization, for instance with Italian adjectives like *cruento* ‘bloody’, *violento* ‘violent’, etc. where the adverb has the form *cruente-mente*, *violente-mente* instead of the expected *\*cruenta-mente*, *\*violenta-mente* because of the analogical influence of the quite large family of adjectives ending with *-nte*, mostly going back to old present participles like *corrente-mente* ‘currently’, *sapiente-mente* ‘wisely’, etc. (cf. Gaeta, 2016: 85). In this regard, it has to be stressed that inflectional markers – especially in languages belonging to the fusional type – generally are a clear cue of a lexeme’s categorial membership, whose change or loss indicates decategorialization (cf. Gaeta, 2014 for a discussion of the issue with regard to conversions).

In the same vein, the original biclausal structure witnessed by (4a) in which the single parts could be independently decomposed and analyzed gives rise after the grammaticalization to a partially arbitrary monoclausal construction in which the past participle loses its independence and its morphosyntactic property of agreement while the originally main verb of possession becomes an auxiliary (cf. Harris, 2003):

- (5) [Subject<sub>i</sub> *haben* Object<sub>j</sub> [Subject<sub>i,k</sub> Verb<sub>PSTPTCP[+AGR]</sub> Object<sub>j</sub>]]  
 ↓  
 [Subject [*haben* Verb<sub>PSTPTCP[-AGR]</sub>] Object]

Notice incidentally that before the grammaticalization the subject of the main verb, i.e. the possessor of the fig tree, and the subject of the embedded verb, i.e. its planter, might be interpreted as coreferential although this was not obligatory, while in the subsequent stage coreferentiality has become mandatory.

Moreover, the decategorialization of the participle resulting from the loss of agreement has become in MSG a canonical trait characterizing any past participle which has entered a grammaticalization process in contrast to OHG, as for instance in the passive construction formed either with the auxiliary *werden* ‘to become’ (6a) or with the auxiliary *sein* ‘to be’ (6b):

- (6) a. OHG *huuanda so dhin-e dag-a arfullid-e*  
 when so your-PL.NOM day-PL.NOM completed-PL.NOM  
*uuerdhant* (Is. 9, 3)  
 become:3PL  
 ‘when your days will be completed in this way’  
 MSG *wenn dein-e Tag-e so erfüllt werden*  
 when your-PL.NOM day-PL.NOM so completed become:3PL  
 ‘when your days will be completed in this way’

- b. OHG *sint thir furlazan-o sunt-a* (Tat. 193, 24)  
 are you:SG.DAT forgiven-PL.NOM sin-PL.NOM  
 ‘your sins are forgiven you’  
 MSG *dein-e Sünde-n sind dir vergeben*  
 your-PL.NOM sin-PL.NOM are you:SG.DAT forgiven  
 ‘your sins are forgiven you’

Decategorialization is even more radical when the perfect construction is combined with other constructions, as for instance with the modal construction and the so-called AcI-construction (from *Accusativus cum Infinitivo*) in which a bare infinitive is governed either by a modal or by the causative verb *lassen* ‘to let’:

- (7) a. *Hans hat einen Feigenbaum pflanzen wollen* / \*gewollt.  
 Hans has a fig:tree plant:INF want:INF / \*want:PSTPTCP  
 ‘Hans wanted to plant a fig tree’.  
 b. *Hans hat jemanden einen Feigenbaum pflanzen lassen* / \*gelassen.  
 Hans has somebody a fig:tree plant:INF let:INF / let:PSTPTCP  
 ‘Hans made somebody plant a fig tree’.

In these cases, for reasons that will not be discussed here (but cf. Gaeta, 2008, 2010, 2013) a substitutive infinitive takes the place of the expected past participle, which can be interpreted as a kind of featureless, unmarked form of the verb.

Finally, decategorialization also characterizes MSG adjectives insofar as they have lost any inflectional agreement in predicative position, i.e. when they carry the main verbal function either accompanied by a copula or in a small clause:

- (8) a. OHG *sie sint... wīsdūam-es foll-e* (O. I, 1, 111–112)  
 they are wisdom-GEN full-PL.NOM  
 ‘They are full of wisdom’  
 MSG *sie sind voll an Weisheit*  
 they are full at wisdom  
 ‘They are full of wisdom’  
 b. OHG *uuanta her sin-az folc heil-az tuot fon*  
 because he his-N.SG.ACC people[N] saved-N.SG.ACC does of  
*iro sunton* (Tat. 5, 8)  
 their sins  
 ‘because he will make his people saved from their sins’  
 MSG *denn er wird sein Volk von seinen Sünden*  
 because he becomes his people of their sins  
*heil machen*  
 saved make:INF  
 ‘because he will make his people saved from their sins’

The decategorialization of adjectives in MSG goes even further to the point that they have become multifunctional insofar as they have lost any overt marking in adverbial position (9a) and can now carry the function of verbal modifiers:

- (9) a. OHG *ubil* ‘bad’ / *ubilo* ‘badly’ > MSG *übel* ‘bad / badly’  
 b. OHG *min tohter ubilo fon themo tiuuale giuuegit ist*  
 my daughter badly of the:SG.DAT devil:DAT tormented is  
 ‘my daughter is terribly tormented by the devil’ (Tat. 85, 2)  
 MSG *meine Tochter wird schrecklich vom*  
 my daughter becomes bad of:DEF.SG.DAT  
*Teufel gequält*  
 devil tormented  
 ‘my daughter is terribly tormented by the devil’

The development of a typical analytic feature like multifunctionality, which blurs the clear-cut distinction between adjectives and adverbs that were still in use in OHG, has a number of far-reaching consequences with regard to a synchronically productive process of decategorization in MSG (cf. Gaeta, 2010, 2014 for details and discussion).

### 3. The complexity mismatch in Walser German

As in other Walser German varieties, in Titsch the verb inflectional classes of OHG are quite well preserved insofar as the class I corresponding to the original strong (apophonic) macro-class is distinct from the original weak classes II and III, going back respectively to the Proto-Germanic *-ja-* or *-ē-* and *-ō-* classes:<sup>3</sup>

- (10) class I: *bisse* ‘to itch, bite’ / *bésset, biete* ‘to offer’ / *bottet, fénne* ‘to find’ / *gfönnet*  
 class II: *fieri* ‘to lead’ / *gfiert, läbe* ‘to live’ / *gläbt*  
 class III: *moalò* ‘to paint’ / *gmoalòt, rächnò* ‘to calculate’ / *grächnòt*

Notice that as a consequence of the so-called *Präteritumschwund* (preterite loss) commonly found in Southern German varieties, all that is left of the stem vowel alternations typical of the strong class is found in the past participle (cf. Russ, 1990, p. 377), although past subjunctive forms are also sporadically attested with

3. The Titsch forms are provided in compliance with the orthographic norms adopted by the dictionary compiled by the *Walser Kulturzentrum*. Note that <é>, <ä> and <ò> roughly correspond to [ɪ], [æ] and [o], respectively, while vowel sequences like <ie>, <ée>, etc. correspond to true (falling) diphthongs: [iɛ], [ɪɛ], etc. It must be added that the texts acquired in our database do not always follow these orthographic norms, also because to a large extent they were written before their adoption (cf. Angster et al., 2017 for discussion).

highly frequent verbs like *éch gange* 'I would go'. Moreover, the original opposition between the nasal vs. the dental suffix illustrated by the Gothic participles in (2) above has been levelled in favor of the dental suffix, although the stem vowel alternation is preserved as shown by Titsch *biete / bottet, fénne / gfonnet*, etc. in (10).<sup>4</sup> However, in a significant number of cases a certain variation is observed between the nasal and the dental suffix:

- (11) *bräche* 'to break' / *brochen* ~ *brochet*, *schribe* 'to write' / *gschrében* ~ *gschrébet*, *usstéerbe* 'to die out' / *usgstòrben* ~ *usgstòrbet*, *vergässe* 'to forget' / *vergässen* ~ *vergässet*, *verliere* 'to lose' / *verlòren* ~ *verlòret*, etc.

While this might be apparently interpreted on a par with the levelling in favor of the weak class as shown by the MSG examples in (3) above,<sup>5</sup> in Titsch the situation is essentially more complex, as will be shown below. In fact, the variation depicted in (11) happens to be construction-sensitive as it has been remodeled according to well-defined grammatical contexts. Before going into the detail, however, it is necessary to have a brief look at the verbal complex in Titsch in order to understand the real place of the alternation observed in (11).

4. It must be added that with (weak) class II verbs the phenomenon of so-called *Rückumlaut* 'regressive umlaut' shows up also in non-etymological cases such as Titsch *schenge* 'to donate' / *gschengt* ~ *gschant*, *setze* 'to seat' / *gesetzt* ~ *gsatz*, etc. (cf. Zürrer, 1982, p. 92).

5. Actually, this is the common interpretation provided in the traditional literature, as for instance by Bohnenberger (1913, p. 232): "Eine Neigung zu Beseitigung der starken Konjugation zeigt sich in der häufigen Bildung schwacher Konjunktive Præt. und passiver Partizipien zu starken Verben. Der Stammvokal ist dabei teilweise wie beim regelrechten starken Verbum abgelautet, so daß diese Bildungen sich ohne weiteres als Mischformen darstellen, teilweise aber auch mit dem des Præsens identisch, so daß diese Formen für sich allein genommen wie reine schwache aussehen". [A tendency towards the elimination of the strong class manifests itself in the frequent formation of weak subjunctive preterites and of passive participles of strong verbs. In these cases, the stem vowel is partially derived according to the regular apophonic pattern of the corresponding strong verb, so that these formations readily look like mixed forms, but also partially identical with the present stem, so that these forms taken by themselves appear purely weak, my translation].

### 3.1 Conservative and innovative features in the Titsch verbal complex

While decategorialization largely affects MSG as shown in § 2.2 above, in the Walser German varieties the inflectional properties of participles and adjectives are largely preserved. In particular, Walser German varieties are fairly well known for preserving conservative features like the systematic agreement of the adjective in predicative position.<sup>6</sup>

- (12) *Of de Beärga esch d'Loft guet-e on ds'Wasser*  
 on the mountains is the:F.SG-air[F] good-F.SG and the:N.SG-water[N]  
*eschd gsond-s, Der Appetit escht doā gross-e, der*  
 is healthy-N.SG, the:M.SG appetite[M] is there big-M.SG the:M.SG  
*Mage wie an Bronz* (BEL\_0019)  
 stomach[M] as a:M.SG cauldron[M]  
 'On the mountains the air is good and the water is healthy, the appetite is big there and the stomach like a cauldron'

This trait also characterizes the other Walser German varieties spoken in Switzerland, as shown by the Example (13a) from Bosco Gurin (cf. Russ, 1990: 373), and more in general the Highest Alemannic dialects (13b) (cf. Fleischer, 2007: 221):

- (13) a. *ds weerch isch gmachut-s.*  
 the work[N] is made-N.SG  
 'The work is done'.  
 b. *Das ischt nie luub-s.*  
 this:N.SG is not scary-N.SG  
 'This is fishy'.

To account for this state-of-affairs, an internal explanation has traditionally been suggested consisting in the direct preservation of the OHG situation sketched in (8) above; alternatively, the effects of a more or less recent contact with Romance varieties have been emphasized (see Fleischer, 2007 for a detailed discussion and further references). At any rate, the effects of the constant contact with Italian and with the other Romance varieties are clearly tangible in the robust system of agreement found in Titsch.

Reproducing strictly the constructional model of the predicative construction, participle agreement is also found in the perfect when the BE-auxiliary is selected by unaccusative verbs:

- (14) *Hilde òn Cristina sinn drobèr gsatz-t-é* (D\_0010)  
 Hilde[F] and Cristina[F] are thereon seated-F.PL  
 'Hilde and Cristina are seated on that'

6. The examples given in the text follow the numeration assigned in the corpus accessible online at [www.archiwals.it](http://www.archiwals.it). The latter presently amounts to about 41,000 tokens for the variety of Gressoney.

However, uninflected forms are normally found with weak verbs (15a–b), also verbs belonging to the class I, in which case they take the form of weak – i.e. dental-suffixed – participles, independently of the apophony of the stem vowel which is mostly retained (15c–d):<sup>7</sup>

- (15) a. *Uf em obr-e Platz sinn d'Medra*  
 on the:M.SG.OBL upper-M.SG place[M] are the-mowers  
*bim Ronkreschtentsch-Hus gsetzt* (DOK-0086)  
 at:DEF.N.SG.OBL R.-house[N] seated  
 'At the upper place the mowers are seated close to the Ronkreschtentsch-house'
- b. *wenn észht-er eréfiert en Amerika* (DOK\_0002)  
 when is-he arrived in A.  
 'when he arrived in America'
- c. *Laura òn Augusta sinn vòn ussna kchéemet als jòng-é*  
 Laura and Augusta are of abroad come as young-F.PL  
*techtre* (DOK\_0016)  
 daughters[F]  
 'Laura and Augusta came from abroad as young daughters'
- d. *Zumschtein escht anno 1783 z'Noversch (Gressoney) bored on*  
 Zumschtein is year 1783 to-Noversch (Gressoney) born and  
*eschht doa gschtorbet anno 1861* (DOK\_0041)  
 is there died year 1861  
 'Zumstein was born in Noversch (Gressoney) in 1781 and died there in 1861'

On the other hand, the strong verbs of the class I also display either a form ending with the old nasal suffix which agrees with the subject (16a) or an uninflected form resulting from the deletion of the final nasal (16b–c):

- (16) a. *Kréchterle hüt glotzt bés és sécher-s gsid dass de*  
 K.[M] has lain:in:wait until is sure-N.SG been that de  
*Jönker-Ronker észht rächt antschloafn-e gsid* (DOK\_0123)  
 J.[M] is right fallen:asleep-M.SG been  
 'Kréchterle lay in wait until he was sure that Jönker-Ronker had fallen completely asleep'
- b. *e chatzò észht kchéeme én vòn der fänschtrò*  
 a cat[F] is come in of the:F.SG.OBL window  
 'a cat came in through the window' (Angster, 2004–05, p. 66)

7. It must be added that the participle of auxiliary verbs is never inflected in neat contrast with the predicative adjective:

- (i) *de Greschoneyera woa en titsch-e Gägente teteg-e sin gsid*  
 the Greschoneyera that in German-PL countries active-N.PL are been  
 'the people from Gressoney who were active in German regions' (DOK\_0048)

- c. *òn én ganz Europa sin vèlle dra gschtorbe* (DOK\_0014)  
and in whole Europe are many there:at died  
'and in all of Europe many died because of it'
- d. *aber all-e beuvisen dass éndsché verstòrbn-ò gangen nie*  
but all-PL attest that our:PL deceased-PL go:3.PL.SUBJ.IPF never  
*vergässn-e* (DOK\_0190)  
forgotten-PL  
'but everybody attests that our deceased should never be forgotten'

The full inflected form containing the nasal is still found in cases of adjectival or nominal usage of the participle as shown by the nominalized participle found in (16d), going back to an unattested verb °*verschtéerbe* 'to pass away'. In a similar way, nasal-ending past participles of class I verbs normally displaying the dental suffix (*biete* 'to bid' / *bottet* 'bid', *vergoa* 'to pass away' / *verganget* 'gone', *glénge* 'to succeed' / *glönget*) are still found when they are used as adjectives:

- (17) a. *Schtefantsch-Tag esch gsid bottn-e Fiertag* (DOK\_0076)  
S.-day is been bidden-M.SG holiday[M]  
'Stephen's day was a holy day of obligation'
- b. *en dé vergangen-é zitte* (DOK\_0015)  
in the:F.SG past-F.SG time[F]  
'in the past time'
- c. *En wònderbar glungn-e oabe* (DOK\_0185)  
a:M.SG wonderful succeeded-M.SG evening[M]  
'A wonderfully successful evening'

This reminds us of the scenario depicted in § 2.1 above for Afrikaans in which strong participles are only retained in adjectival usage of the past participles.

Another conservative feature which is fairly robust in the Walser German varieties is the preservation of the BE-passive as the normal, unmarked way to express passive voice exemplified below with different tenses and moods, respectively present, perfect and infinitive:<sup>8</sup>

- (18) a. *òn en der Chélchò em Lido vòn Venedig sinn*  
and in the:F.SG.OBL church in:M.SG.OBL Lido of Venice are  
*ufbewart-é dschin Reliquie* (DOK\_0002)  
preserved-PL their remains  
'and in the church at the Lido of Venice their remains are preserved'

8. Even though also in this case the influence of Italian and of the Romance varieties which normally display a BE-passive as the unmarked form is tangible, it should not be forgotten that the BE-passive is also commonly found in Alemannic varieties, especially with a resultative value, as for example in Zürich: *De Stock isch verboche* 'The stick is broken' (cf. Reese, 2007, p. 46).

- b. *chammo erchenne wette d'Beldong von de*  
 can:one recognize how the:F.SG-culture of the:PL  
*Greschoneyer-Walser set 1500 bes 1850 entwecklot-e gsid escht*  
 Greschoneyer-Walser from 1500 until 1850 developed-F.SG been is  
 'one can recognize how the culture of the Greschoneyer-Walser was developed from 1500 to 1850'
- c. *hätt-er welle si vergrabt-e em eigen-e land*  
 had-he want:INF be:INF buried-M.SG in:N.SG.OBL own-N.SG country  
 'he would have wanted to be buried in his own land' (DOK\_0016)

Notice that in all these cases the past participle of the main verb systematically agrees with the subject, reproducing once more the schema of the copula construction seen in (12) above while the past participle of the BE-auxiliary is uninflected (see fn. 7 above).

In addition to the BE-passive two other types of passives are found in Titsch in which respectively the verb COME – only in the present tense (19a) – and the verb GO – only in the past tense (19b) – are used as auxiliaries (cf. Gaeta, 2018 for a detailed discussion on the role played by Italian as contact language):

- (19) a. *hitzötäg sinn éndsche woalda bschéttzt-e an*  
 nowadays are our:M.PL forests[M] protected-M.PL and  
*d'Wiehnbachtsboumiéné chéemen kontrölliert-e* (DOK\_0202)  
 the-Christmas:trees come.3PL monitored-M.PL  
 'Nowadays our forests are protected and the Christmas trees are monitored'
- b. *De toufnoamna sin of franzesésch abkändret-e kanget*  
 the:M.PL forenames[M] are up French changed-M.PL gone'  
 'The forenames were changed into French' (DOK\_0014)

While the COME-passive is widespread throughout the whole Alpine area (cf. Wiesinger, 1989; Ramat, 1998; Wiemer, 2011), the GO-passive is a particular development of (some of) the Walser German dialects. Actually, the GO-passive is also used in the present, typically with a strong modal (deontic) value as shown in the following example:

- (20) *al-z was ésch kannet ufgrében-z geit von allhand glört-e*  
 all-N.SG what is gone up:written-N.SG goes of all:sorts learned-PL  
*litte genou prueft-s* (DOK\_0124)  
 people exact proved-N.SG  
 'everything which has been noted has to be exactly proved by all sorts of learned people'

Notice that in all the examples in (18), (19) and (20) the past participle of the main verb systematically agrees with the sentence subject basically reproducing the syntactic schema of the copula construction in (12).

In sharp contrast with these cases, the past participle is uninflected when the HAVE-auxiliary is selected in the perfect, which clearly shows the effects of the decategorialization discussed in § 2.2 above:<sup>9</sup>

- (21) a. *wòà éndschè Sèndég hät fèr éndsch artòat / \*artòat-s /*  
 where our mayor has for us opened / \*opened-N.SG /  
*\*artòat-é an paar butèllè wi* (DOK\_0010)  
 opened-PL a pair bottles wine  
 ‘where our mayor opened for us a couple of bottles of wine’
- b. *Wéwél foto héintschnè gmacht / \*gmacht-e !!* (DOK\_0010)  
 how:much picture have:they:them made / \*made-PL  
 ‘How many pictures they took of them!!’

Notice that the HAVE-perfect is also found with unergative verbs such as *lache* ‘to laugh’ / *glachet*, *schloafe* ‘to sleep’ / *gschloafet*, etc., in which unsurprisingly only the uninflected weak form occurs:

- (22) a. *aber héibèr véll glachet* (DOK\_0010)  
 but have:we much laughed  
 ‘but we laughed a lot’
- b. *Noch én der glichò nacht wenn alle hein hert*  
 still in the:F.SG.OBL same night when all.PL have:3PL hard  
*gschloafet* (DOK\_0199)  
 slept  
 ‘still in the same night when everybody was sleeping deeply’

Besides the development of the perfect shared by the whole German-speaking area, a couple of innovative features occur in Titsch which are generally found in the Southern dialects as well as in the West-Germanic languages, namely the diffusion of the DO periphrasis in the pro-verb function (see Weber, 2017 for a recent overview):

9. Notice that the only case of past participle agreement in the presence of the HAVE-perfect reflects an attributive construction like that seen in (17) above:

- (i) *Mo häd die vom Heer kriegt, wenn mo d’Oschtre häd*  
 one has those by:DEF.M.SG.DAT lord taken, when one the-Easter has  
*gmacht-e ghätt* (D\_0047)  
 made-PL.ACC had  
 ‘One took those from the Lord, when one received those made at Easter’

- (23) a. *va woa de noame tuet chéeme weiss mo ni rächt*  
 from where the name does come knows one not right  
 ‘One does not know precisely wherefrom the name comes’ (DOK\_0014)
- b. *D’léck-é zòcht tin ganz täl sproache lére* (DOK\_0016)  
 the-small-PL children do entirely easy languages learn  
 ‘The small children do quite easy learn languages’

The auxiliary verb *tin* ‘to do’ carries the agreement features and basically replaces the inflected forms of the main verb which appears in the infinitive. In the long run, this substitutive effect can be deemed to have the general impact of reducing the inflectional inventory of the verbs as the latter will usually appear in the infinitive form (cf. Angster & Gaeta, 2018 for a discussion on the basis of the so-called ‘short verbs’), unless the pro-verb becomes an inflectional marker as in the case of the dental suffix of weak verbs discussed above.

Finally, Titsch also shares with Southern dialects the development of the so-called *Doppelperfekt* (cf. Zybatow & Weskott, 2018 for a recent overview), in which as a consequence of the generalized preterite loss a complex tense displaying a sequence of two past participles is found with a pluperfect reading as shown in Example (16a) above and in (24):

- (24) *Aber sibber noch ni gsit arrivièrt* (DOK\_0010)  
 but are:we yet not been arrived  
 ‘But we had not yet arrived’

Note that the past participle of the main verb swings between inflected forms agreeing with the subject as in Example (16a) above or uninflected forms as in this latter Example (24), as has been discussed above for the BE-perfect (see (15) above). Finally, the *Doppelperfekt* apparently does not occur with the HAVE-perfect, in contrast to what is found in many other Southern varieties.

### 3.2 Remodeling the complexity mismatch

Given *Präteritumschwund*, the inflectional classes which result from the grammaticalization of DO in early Germanic and which are responsible for the complexity mismatch are only visible in the past participle. In fact, as shown in the previous paragraph, weak forms ending with *-et* – independently of the apophony of the stem vowel – are dominant and are extended to older strong forms ending with *-en*. In spite of the apparent parallel hinted at above with the situation in Afrikaans, in which strong participles are only found with lexicalized adjectives, strong participles in Titsch are not merely the relic of an earlier inflectional class. In fact, the strong/weak alternation has been completely remodeled according to the

construction type in which the (strong) verb is involved. Accordingly, the doublets mentioned in (11) follow a clear distribution which relies upon the constructional type pertaining to that participle:

- (25) a. *wenn heintsche brochet hein d'bueba de henne d'fädre*  
 when have:they broken have:3PL the-children the hens the-feathers  
*uszochet* (DOK\_0192)  
 stripped:off  
 'When they broke them, the children stripped off the feathers of the hens'
- b. *Dez Hus escht ends vom letscht-e Joahrhondert*  
 the.N.SG house[N] is at:end of.N.SG.OBL last-N.SG century[N]  
*abbröchen-s canget* (DOK\_0021)  
 off:broken-N.SG gone  
 'The house was demolished at the end of last century'

When the construction selects the HAVE-auxiliary (25a), the weak form *-et* appears, which does not display any agreement in accordance with its decategorized character. On the other hand, the strong suffix *-en* shows up in the past participle when the construction selects other auxiliaries such as, for instance, the GO-passive in (25b), forcing the occurrence of agreement. It should be stressed that it is not possible to have an inflected form of the participle of the strong verb when the latter appears with the weak dental suffix: \**Dez Hus escht abbröchets canget*. Such a state of affairs is regularly found also with the BE-passive and with the COME-passive (besides the BE-perfect seen in (16) above) in contrast to the HAVE-perfect, as shown by the following pairs of Examples (26)–(29) reflecting the variation depicted in (11) above:

- (26) *vergässe* 'to forget' / *vergäset ~ vergässen*
- a. *òn hatt-er nie vergäset dschis Titsch* (DOK\_0016)  
 and has-he never forgotten his Titsch  
 'and he never forgot his Titsch'
- b. *ietza en Ireland d'oalt-ò sproach, daß ésht gsit schier*  
 now in Ireland the-old-F.SG language[F] that is been almost  
*ganz vergässn-é, éscht nid nòmma läbén-é* (DOK\_0016)  
 entirely forgotten-F.SG is not only alive-F.SG  
 'now in Ireland the old language which was almost completely forgotten is not only alive'
- (27) *schribe* 'to write' / *gschrébet ~ gschрэben*
- a. *wënn Benito Leopold Curtaz... hät éndsch gschрэbet* (DOK\_0015)  
 when B. L. C. has us written  
 'when Benito Leopold Curtaz ... wrote to us'

- b. *al-z éscht kanget gschрэben-z* (DOK\_0015)  
 all-N.SG is gone written-N.SG  
 ‘everything was written’
- (28) *verliere* ‘to lose’ / *verlòret ~ verlòren*
- a. *Doa häd de Tifol d’Wetté verlore* (DOK\_0015)  
 there has the devil the-bet lost  
 ‘there the devil lost the bet’
- b. *Was hein éndsché Òaltò tòat òn gseit ésch nie verlòren-z*  
 what[N] have:3PL our elders done and said is never lost-N.SG  
 ‘what our elders did and said is never lost’ (DOK\_0011)
- (29) *wässche* ‘to wash’ / *gwässchet ~ gwässchen*
- a. *Kroa vor dä Fiertaga hämmu z’Hus al-z subber*  
 right before the holidays has:one the:N,SG-house[N] all-N.SG clean  
*gwescht* (DOK\_0076)  
 washed  
 ‘Immediately before the holidays one cleaned the whole house’
- b. *Wiber un Techtre hein ou chät en der Chelcho*  
 wives and daughters have:3PL also had in the:F.OBL church[F]  
*z’tue: di hät musso si ni numma subber gwäschn-e*  
 to-do: that:F.SG has must:INF be:INF not only clean washed-F.SG  
 ‘Wives and daughters also had to do in the church: it didn’t only need to  
 be cleaned’ (DOK\_0083)
- c. *di hät mössò chéeme suber gwäschn-e* (fieldwork)  
 that:F.SG has must:INF come:INF clean washed-F.SG  
 ‘That had to be cleaned’.

In general, when agreement, i.e. inflection, is required by the syntactic environment, the strong participles regularly appear, as in the context of a small clause (30a) and of an appositive construction (30b), as well as in the attributive position already seen in (17) above:

- (30) a. *Fenné ou ufgschрэben-z of enz notizbuech dass wier hättéber*  
 find:1SG also up:written-F.SG on our notebook that we had:we  
*sollò noasieché* (DOK\_0015)  
 should:INF investigate  
 ‘I also find written down on our notebook what we should have had to  
 investigate’
- b. *mé dem eigen-e noame drönder gschрэbn-e*  
 with the:M.SG.OBL own:M.SG name[M] thereunder written-M.SG  
 ‘with one’s own name written thereunder’ (DOK\_0002)

Accordingly, the lexically motivated distribution of verbs belonging to the strong classes in earlier stages of this Upper German variety (cf. Bohnenberger's quote in fn. 6) has been remotivated as construction-specific. The class I verbs display either the strong or the weak suffix depending on the construction in which they are employed:

- (31) a. strong form *-n*
- i. [Subj<sub>j</sub> [[AUX<sub>BE/GO/COME</sub>] PastPart<sub>+AGRj</sub>]
  - ii. [Subj [[V] Obj<sub>j</sub> PastPart<sub>+AGRj</sub>]
  - iii. [NP<sub>j</sub> PastPart<sub>+AGRj</sub>]
  - iv. [PastPart<sub>+AGRj</sub> N<sub>j</sub>]<sub>NP</sub>
- b. weak form *-t*
- [Subj<sub>j</sub> [[AUX<sub>HAVE</sub>] PastPart<sub>-AGRj</sub>]

When agreement is operational, the strong form is selected (31a), while the uninflected participles select the weak suffix showing the decategorialization resulting from grammaticalization of the perfect construction (31b). Weak past participles of the verb classes II and III are also compatible with the constructions requiring agreement (31a), as shown in Examples (14), (18), and (19) above. Thus, it is not the case that in the constructional schemas of (31a) only inflected strong participles are allowed.

The crucial point is that only with the (strong) class I verbs has a refunctionalization taken place whereby morphological expression is given to the different syntactic environments in which the participles occur. In other words, the complexity mismatch characterizing the inflectional class distinction resulting from the grammaticalization of the DO periphrasis seen in (2) above was not levelled as happened in Afrikaans. Instead, the mismatch was remotivated by increasing the number of past participles found in the paradigm of class I verbs. Far from being a recessive trait like in Afrikaans, where it is only found with some inflected adjectives going back to older participles, the strong/weak distinction has been significantly refunctionalized to convey agreement features in specific constructional schemas.

How can we interpret this change from a general perspective? Should we consider this on a par with grammaticalization because of the rise of a new grammatical differentiation between strong and inflected vs. weak and uninflected participles? As shown above, the opposition between two inflectional classes in Gothic ultimately goes back to what in Gaeta (2016) has been called an adaptive change, namely the grammaticalization of the DO periphrasis illustrated in (1) above for Gothic. This is characterized by bleaching, constructionalization, and decategorialization. In our case, the new opposition between inflected and uninflected past participles displaying the strong and the weak suffix, respectively, is a means for strongly characterizing the participles, depending on the specific construction in

which they are involved. Far from displaying bleaching, as in typical grammaticalization, the refunctionalization of the strong/weak distinction can be treated as an exaptive change, the reuse of a morphological differentiation devoid of any evident function. In fact, the strong / weak inflectional classes of Gothic as well as of MSG – categories which used to have a fully lexical distribution – have been remotivated in Titsch insofar as the class I verbs display two participles distributed across different constructions.

On the other hand, this change cannot be treated as a degrammaticalization insofar as it cannot be taken to represent a step backwards on the grammaticalization cline (cf. Norde, 2009: 8). In fact, the new differentiation cannot be said to be a step towards restoring the original value of the DO periphrasis, but rather follows its own way, moving orthogonally with regard to the original diachronic development. This is typical of an exaptive change insofar as it contributes to the stabilization of a system which has undergone dramatic changes challenging its original order. Paraphrasing Sturtevant's famous paradox ('sound change is regular but causes irregularity; analogy is irregular but causes regularity'), we can say that adaptive changes – and in particular grammaticalization – follow general patterns but have the effect of destabilizing a system, introducing, for instance, a complexity mismatch, while exaptive changes follow quite specific patterns but have the effect of restoring a certain functionality within a system.

It must be added that this picture only holds for some Walser German varieties like Titsch. It is also found in Titschu, the variety spoken in Rimella (32a–b), for which a similar behavior is observed, but not in Pomattertitsch spoken in Formazza (32c–d), in which strong verbs preserve their original shape (data from personal fieldwork):

- (32) a. *Där Mario het-s gwascht z'glosch*  
 the:M.SG M. has-N.SG washed the:N.SG-glass[N]  
 'Mario washed the glass'
- b. *Z'glosch isch schit gwaschu-s*  
 the:N.SG-glass[N] is been washed-N.SG  
 'The glass was washed'
- c. *Der Marjo het der Chrög brochä*  
 the:M.SG M. has the:M.SG vase[M] broken  
 'Marjo broke the vase'
- d. *Geschter éscht der Chrög fom Marjo*  
 yesterday is the:M.SG vase[M] of:DEF.M.SG.OBL M.  
*prochn-ä cho*  
 broken-M.SG come  
 'Yesterday the vase was broken by Marjo'

It remains to be understood how far the reshaping of the complexity mismatch observed in Titsch and Titschu will also extend to the other varieties and, above all, whether it will also systematically affect the class II and III verbs, giving rise to a generalized association of the strong participles with the constructional schemas in (31a) in which agreement serves as a triggering factor. This would reflect a further step of the exaptive change towards a full remotivation of the purely lexically governed strong/weak class inflection found in the rest of the Germanic languages.

#### 4. Conclusion

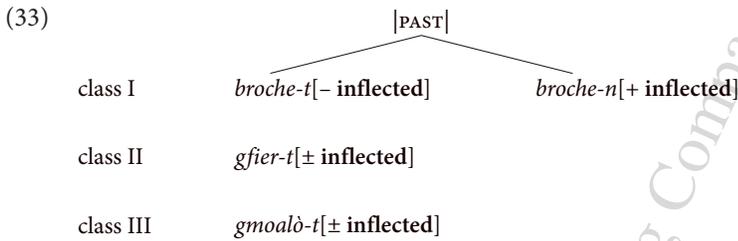
To sum up, in Titsch the past participle of (strong) class I verbs has been remodeled and remotivated (“exapted”) depending on the construction in which it is involved. Namely, strong forms containing the nasal suffix are preserved when they are inflected, i.e. syntactically operational, namely in the following array of constructions:

- |    |                               |                                   |
|----|-------------------------------|-----------------------------------|
| 1. | the BE-perfect construction   | Example (16a–c)                   |
| 2. | the passive construction      |                                   |
|    | a. BE-passive                 | Example (20), (26b), (28b), (29b) |
|    | b. GO-passive                 | Example (25b), (27b)              |
|    | c. COME-passive               | Example (29c)                     |
| 3. | the small clause construction | Example (30a)                     |
| 4. | the appositive construction   | Example (30b)                     |
| 5. | the attributive construction  | Example (17)                      |

In all these cases, they resemble the behavior of adjectives in copula constructions seen in (12). Weak forms of the past participle displaying the dental suffix only appear when the latter is decategorialized (uninflected) in the HAVE-perfect construction and, apparently, only in this environment, as shown by Example (25a), (26a), (27a), (28a) and (29a) above. Furthermore, note that the past participles of all auxiliaries (*kanget*, *gsid*) are weak and decategorialized.

On the other hand, past participles of (weak) class II and III verbs do not display this construction-related inflectional split but share the same morphosyntactic behavior of inflected and uninflected forms. Therefore, the occurrence of strong past participles is not a specific property of the single constructions as a whole, but is only related to the (strong) class I verbs when they enter into such constructional schemas, as summarized in (31) above.

With regard to the picture of the complexity mismatch as it holds in Gothic and many other Germanic languages provided in (2) above, in Titsch it has been remodeled in the following terms:



The strictly lexically-governed distribution of strong and weak markers requiring previous lexical knowledge found in Gothic as well as in MSG has been functionalized depending on specific constructional schemas connected with the activation of inflectional agreement: when the latter is activated, the strong nasal suffix is selected, while the weak dental suffix appears elsewhere. It remains to be seen whether the exaptive change underlying the remodeling of the complexity mismatch can be further generalized to other verb classes beyond the original domain of the strong verbs in Titsch, as well as in other varieties in which the exaptive change has taken place. This would remove the need for previous lexical knowledge on the part of the speakers, but this must be left for future research.

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### Abbreviations

|     |                        |      |                 |
|-----|------------------------|------|-----------------|
| ACC | accusative             | N    | neuter          |
| Afr | Afrikaans              | NOM  | nominative      |
| AGR | agreement              | NP   | noun phrase     |
| AUX | auxiliary              | OBJ  | object          |
| DAT | dative                 | OBL  | oblique         |
| DEF | definite               | OHG  | Old High German |
| F   | feminine               | PL   | plural          |
| GEN | genitive               | PST  | past            |
| INF | infinitive             | PTCP | participle      |
| IPF | imperfect              | SG   | singular        |
| M   | masculine              | SUBJ | subject         |
| MHG | Modern High German     | 3    | third person    |
| MSG | Modern Standard German |      |                 |

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