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The syntax and semantics of past participle agreement in Alemannic

Martin Salzmann¹ and Gerhard Schaden²¹ Leipzig University, Beethovenstrasse, Leipzig, DE² Université de Lille, CNRS STL, Lille, FRCorresponding author: Martin Salzmann (martin.salzmann@uni-leipzig.de)

This paper investigates agreement on past participles in Highest Alemannic dialects of German. We will first show that participle agreement only occurs in contexts where the participle is adjectival, viz., in stative passives and in resultative perfects, but not in eventive perfects. The participles thus pattern with predicative adjectives, which also display agreement in these varieties. In the main part of the paper, we address double compound perfects and eventive passives, which also display agreement on the lexical participle. Even though it is initially not obvious that the participle is adjectival in these cases, we will provide syntactic evidence for their adjectival status. Furthermore, we will pursue the hypothesis that the adjectival head of all agreeing participles is a stativizer, even in the double compound perfect and the eventive passive. At the same time, both the double compound perfect and the eventive passive also clearly have an eventive component. We will model their behavior by treating the participles as mixed categories, viz., as adjectival heads that take a large amount of verbal structure as their complement (VoiceP/AspP). While recent work on German stative passives has argued that even those should be analyzed as containing a substantial amount of verbal structure, the behavior of participles in the double perfect and the eventive passive in the varieties under consideration is clearly different. They thus contribute to the typology of adjectival passives in German and beyond and show that the familiar distinction between ‘adjectival’ and ‘verbal’ participles needs to be further refined.

Keywords: past participles; Alemannic; agreement; stativity; resultativity; perfect; double perfect; stative passive; eventive passive; adjectival passive; non-verbal predication; verb clusters

1 Introduction: Adjectival vs. verbal participles

Traditionally, participles are regarded as a hybrid category with both verbal and adjectival properties. However, in many instances, even surface-identical forms can be shown to be structurally different, with certain participles being more verbal and others more adjective-like. For instance, the participles of eventive passives in English as in (1a) have been classified as verbal, while participles that appear in stative contexts have been considered adjectival, cf. (1b).

- (1) a. The door was closed by John.
b. The door remained closed.

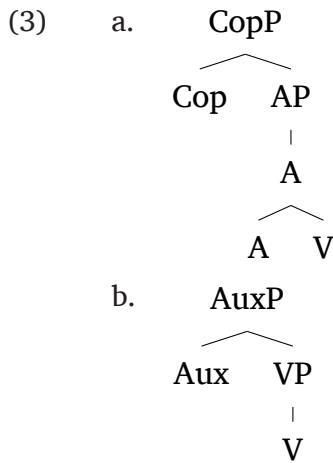
Recent years have seen considerable discussion on stative passives in languages like German and Greek (see, e.g., Alexiadou, Anagnostopoulou & Schäfer 2015: chapter 5 for an overview). Contrary to English, German distinguishes the two constructions by using different auxiliaries:

(2) *Standard German*

- a. Stative passive:
 Der Computer **ist** (*von Maria) (*vor drei Tagen) repariert.
 the computer is by Mary before three days repaired
 ‘The computer is repaired (*by Mary) (*three days ago).’
- b. Eventive passive:
 Der Computer **wurde** (von Maria) (vor drei Tagen) repariert.
 the computer became by Mary before three days repaired
 ‘The computer was repaired (by Mary) (three days ago).’

Intuitively, (2a) is about a current state (resulting from an event of closing), whereas (2b) is about a past event. In (2b), the agent or the time of the closing event can be specified by a PP (like in (1a)), whereas this is not (or only in limited form, cf. below) possible in (2a). Somehow, the event in (2a) seems to be inaccessible to such modifications.

One possible way of explaining the difference is to assume that the so-called stative passive is a combination of an adjectival participle and the copula *be* – while the eventive passive involves the auxiliary *be* embedding a fully-fledged verbal structure so that VP-related modifiers are licensed. Stative passives thus essentially involve the same structure as copula sentences with adjectival predicates as in *John is old*. Since there is no (or only very little) verbal structure (this type of participle is referred to as “lexical” in Kratzer 2000), it is predicted that VP-related modifiers such as PP-agents or temporal adverbials that refer to the event should be unavailable, in line with what is observed in (2a) above. Such an analysis has been defended by Rapp (1996); Gese, Stolterfoht & Maienborn (2009); Gese, Maienborn & Stolterfoht (2011); and Maienborn, Gese & Stolterfoht (2016). The (simplified) structures of adjectival and verbal participles thus look as follows, according to this view:



However, there is also another tradition of analysis of stative passives, inspired mainly by stative passives in Greek, where there are fewer restrictions on modification than in German:¹

- (4) *Greek* (Anagnostopoulou 2003: 18; Alexiadou, Gehrke & Schäfer 2014: 127)
 - a. To psari itan tiganismeno apo tin Maria.
 The fish was fried by the Mary
 ‘The fish was fried by Mary.’ [stative, that is: the fish was in a fried state, and the frying had been done by Mary]

¹ A further aspect that seems cross-linguistically relevant for the modification possibilities is the difference between target and resultant state participles, cf. Parsons (1990); Kratzer (2000); resultant state participles generally tend to be compatible with a wider range of modifiers.

- b. To pc itan diorthomeno prin tris meres.
 the pc was repaired before three days
 ‘The PC was repaired three days ago.’ [stative, that is: was in a repaired
 state, where the repair took place three days before]

In Greek, stative participles have therefore been argued to involve a substantial amount of verbal structure, i.e., a VoiceP, or even an AspP, embedded under a stativizing adjectival head (since the adjectival head applies to an entire verb phrase and not just a verbal root, such participles have been referred to as “phrasal” in Kratzer 2000). Stative passives in Swedish also display fewer restrictions with respect to event modification and have therefore also been argued to contain more verbal structure, see Larsson (2009: 302–311).

In a series of articles (see Alexiadou & Anagnostopoulou 2008; Gehrke 2012; McIntyre 2013; Alexiadou, Gehrke & Schäfer 2014; Bruening 2014; Alexiadou, Anagnostopoulou & Schäfer 2015; Gehrke 2015), it has been argued that even in languages such as German or English, there is considerably more verbal structure in stative passives than a simple verb coerced into an adjective.

For instance, as shown in Gehrke (2015: 904, 921), PP-agents, instrumental-PPs, and locative-PPs are possible, as long as they only function as event-kind modifiers.² The following example illustrates this for instrumental-PPs:

- (5) *Standard German* (Gehrke 2015: 904)
 Der Brief ist mit (*dem/einem) Bleistift geschrieben.
 the letter is with the/a pencil written
 ‘The letter is written with (*the/a) pencil.’

Crucially, such modifiers are not possible with genuine adjectives (cf. Rapp 1996: 254). Thus, a certain amount of verbal structure seems motivated in German/English adjectival passives after all.³

The difference between German/English stative participles on the one hand, and Greek stative participles, on the other, is modelled by postulating more structure for Greek participles: While in both languages, stative participles can contain VoiceP, only Greek stative participles involve an aspect-phrase on top, which is argued to be necessary to actually instantiate an event-token (and thus license event-related modifiers of all sorts). The structures of stative participles in German/English and Greek, respectively, thus look as follows according to this approach:⁴

² Assuming that the denotation of the verb in these contexts is an event-kind rather than an actually instantiated event (that is, an event-token) essentially means that the event expressed by the verb is not actually instantiated in the real world, but remains in the more abstract realm of kinds — as would be the case with generic nominals. Since the (non-)instantiation of events also impacts the status of the elements they combine with, any arguments or modifiers (such as specific and referential elements) that entail or require an actually existing event token are ruled out. For a detailed investigation of the issue of event-kinds, see Gehrke (2017).

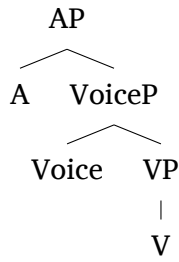
³ Part of this ongoing debate is whether all adjectival participles contain a certain amount of verbal structure. For instance, Anagnostopoulou (2003) argues that unlike other adjectival participles, participles with an *un-*prefix (a widely accepted diagnostic for adjectiveness) are lexical (and thus basically involve an adjectivized verb); but more recently, Alexiadou, Anagnostopoulou & Schäfer (2015: 166), following Bruening (2014), have proposed that even these participles should be analyzed as phrasal after all, based on examples like (i):

- (i) a. Invading Commander: I want the treasury left untouched!
 b. Underling: Untouched by anyone but you, you mean.

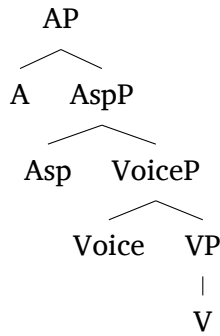
Given the presence of a *by*-phrase, it is concluded that a VoiceP must be present. We will not take a stand on whether stative passives involve any (phrasal) verbal structure, although we believe that the facts discussed below with respect to the double compound perfect tend to argue against a VoiceP in German stative passives.

⁴ Many of the authors actually postulate category-neutral roots instead of V/VP; we will abstract away from this difference in what follows as it is orthogonal to our concerns and will simply adopt two layers for the verb phrase with V introducing the internal argument(s) and Voice the external argument.

(6) a. German/English:



b. Greek:



While we will not deal with stative passives in our article in much detail, our aim is to bring to bear new data on the question of how much verbal structure adjectival participles can contain. Crucially, we will present data from Highest Alemannic dialects spoken in Switzerland (more precisely, in (parts of) the cantons of Valais, Bern, Fribourg, Schwyz, Zug, Uri, Ob- and Nidwalden, Glarus, and Grisons) which suggest that double compound perfects (henceforth: DCPs) and eventive passives also contain an adjectival head, without however showing the very stringent restrictions on modification displayed by stative passives in German. The initial motivation for treating these constructions as adjectival comes from the fact that these constructions display obligatory agreement on the innermost, lexical participle as is illustrated in (7), i.e., they behave like predicate adjectives, which also agree in these varieties (for a more precise characterization, see Section 2).

(7) a. *Bernese German*, stative passive (Hodler 1969: 345)

Jetzt isch' fertig, d' Rächnigi gschrib-nu.
 now is finished, the bills.F.PL written-F.PL
 'Now it is over, the bills are written.'

b. *Bernese German*, double compound perfect (Hodler 1969: 346)

win er der Namen Gottes het usgsprochn-a ghabe
 when he the name.M.SG God.GEN has pronounced-M.SG had
 'once he had pronounced the name of God'

c. *Obersaxen (Grisons)*, eventive passive (Szadrowsky 1936: 453)

Ds Chorä chund im Settember g'hüwe-s.
 the corn.N.SG comes in the September hit-N.SG
 'Wheat is harvested in September.'

We will show that in these constructions, an event-token is present and accessible, so that event-related modification is not restricted to the kind-domain, and thus, any type of modifier (specific or non-specific, referential or non-referential) is in principle possible (contrary to what has been shown in Gehrke 2015 to hold for adjectival passives). As we will see, while there are no restrictions in the eventive passive, the DCP only allows event-modification by means of event-internal adverbials but not by higher adverbials like

temporal adverbials. This thus implies that the typology of adjectival participles in German (and possibly beyond) should be expanded.

On a more general level, we argue in favor of a close between agreement and category, i.e., participles agree in Highest Alemannic dialects when they are adjectival, but not when they are verbal. While this is certainly not always the case cross-linguistically (cf., e.g., participle agreement in Romance, where uncontroversially verbal participles agree), we believe that we have solid evidence for this view language-internally. Both the double compound perfect and the eventive passive are crucial here because, at least at first sight, they do not represent constructions that are usually considered adjectival. But upon closer inspection, there is solid evidence for the assumption that they are adjectival in their external distribution.

Furthermore, we assume that the adjectival head that occurs in agreeing past participle constructions is of the same type in all of its uses and that it is a stativizer. While the stativity of the construction is obvious in the case of stative passives, neither the double compound perfect nor eventive passives seem obviously stative. We will show, though, that even for these constructions, a case can be made for a stative component. As a result, there emerges a strong link between adjectivehood and interpretation, i.e., stativity (a link that is currently widely adopted in work within Distributed Morphology, see Bruening 2014; Alexiadou, Anagnostopoulou & Schäfer 2015). The similarity between the constructions displaying agreeing participles is captured by the assumption that they are all APs externally; the fact that the constructions that display agreement still differ from each other to some extent syntactically and semantically is linked to the internal structure of participles, i.e., differences in the amount of verbal structure (see also Lundquist 2013). Note that we do not wish to maintain that there is a bi-directional relationship across the board between category and interpretation, as this is evidently wrong (as, e.g., shown by the fact that verbs can be stative). We aim to show that there is a demonstrable uni-directional relationship with respect to past participles: adjectivehood implies stativity (but not necessarily vice versa). Furthermore, we will also explore up to which point one can defend the reverse link, namely that – in past participles – stativity implies adjectivehood.

The remainder of this paper is structured as follows: in Section 2, we will introduce the empirical background, viz., agreement on adjectives and past participles in Highest Alemannic dialects spoken in Switzerland. In Sections 3 and 4, we address the double compound perfect, while Section 5 is devoted to the eventive passive. Section 6 concludes.

Before moving on, a few words on methodology. The data we base our claims on are mainly drawn from dialect grammars most of which were written in the first half of the 20th century. Agreement on adjectives and participles in the contexts discussed in this paper is usually described as obligatory in these sources. Perhaps due to influence of other Swiss German varieties, agreement has become optional for many (and especially younger) speakers (in all constructions with agreement investigated here); see Egger (1993); Fuchs (1993); Bucheli Berger & Glaser (2004); Bucheli Berger (2005a); Fleischer (2007); Baechler (2009); and Glaser (in preparation) for sociolinguistic and dialectal details.⁵ As far as we can tell, agreement still occurs in the syntactic and semantic environments described in the older sources, the only difference being that the non-agreeing form can nowadays also be used in these contexts. In modern theoretical terms this means

⁵ As shown in Fleischer (2007) for predicative adjectives, instances of optional agreement can also be found in older sources, suggesting that there has not been a categorical shift from obligatory to optional but rather a certain decrease in frequency. Next to a certain general degree of optionality, there have always been factors that condition the uninflected form, e.g., lexical factors (borrowed adjectives usually do not inflect) and morphological factors (morphologically complex adjectives like comparatives are less likely to inflect than simplex ones); see Fleischer (2007: 217–221) for an overview.

that the (phi-)probe/agreement target on the adjectival head in predicative position is optional or that the realization of (phi-)agreement on these adjectives is optional, i.e., the difference between the grammar described in the older sources and that of contemporary speakers is not deeply syntactic but rather superficial. Where necessary, examples have been double-checked with Raffaella Baechler, a native speaker of the dialect spoken in Fribourg, and Sandro Bachmann, a native speaker of the dialect of Visp (Valais). To the best of our knowledge, apart from agreement, the constructions under investigation in this paper have the same syntactic and semantic properties, not only across Alemannic, but also in Colloquial German more generally. We will therefore also use examples from non-agreeing Alemannic varieties or from Colloquial German where appropriate to make the data more accessible.⁶

2 Agreement on adjectives and past participles

In this introductory section we will describe under which circumstances adjectives and past participles display agreement in Highest Alemannic dialects of Switzerland. We will show that pattern of agreement on these categories differs significantly in these varieties not only from that of the standard language but also from that of neighboring Romance languages.

2.1 Agreement on adjectives in German

In contemporary Standard German (as in most contemporary German dialects), only attributive adjectives agree in gender, number and case with the noun they modify (see (8)), whereas in predicative position, adjectives occur in uninflected form (see (9)).

(8) *Standard German*

- a. Hans sah ein schön-es Haus.
John saw a beautiful-ACC.N.SG house
'John saw a beautiful house.'
- b. Hans sah eine schön-e Katze.
John saw a beautiful-ACC.F.SG cat
'John saw a beautiful cat.'
- c. Hans sah einen schön-en Baum.
John saw a beautiful-ACC.M.SG tree
'John saw a beautiful tree.'

(9) *Standard German*

Das Haus | die Katze | der Baum ist schön-Ø.
the house | the cat | the tree is beautiful
'The house/the cat/the tree is beautiful.'

In earlier stages of German (Old High German), however, predicative adjectives did agree with the subject in gender, number and case:

(10) *Old High German* (Bucheli Berger & Glaser 2004: 193)

- a. Tatian, 22, 16:
Sâlig-e birut ir.
holy-NOM.M.PL are you.2.PL
'You are holy.'

⁶ Examples without explicit reference were constructed by the authors, native speakers of Zurich and Vorarlberg German, respectively.

- b. Parzival, 213, 14:
 Mîn gewalt ist sîht-er.
 my power is small-NOM.M.SG
 ‘My power is small.’

Some contemporary Highest Alemannic dialects in Switzerland have maintained predicative agreement, see Fleischer (2007: 198–201) for references; in (11a), the adjective is the primary predicate, in (11b), it functions as a depictive; the inflection in predicative position corresponds to the so-called strong adjectival inflection (which generally obtains in contexts without determiners or with uninflected determiners):⁷

- (11) a. *Giffers (Fribourg)* (Bucheli Berger & Glaser 2004: 195)
 wül er nass-a isch
 because he wet-M.SG is
 ‘because he is wet’
- b. *Visperterminen (Valais)* (Bucheli Berger & Glaser 2004: 197)
 Dü müoscht d=Milch de heiss-i triichu.
 you must the=milk.F.SG PRT hot-F.SG drink.INF
 ‘You have to drink the milk hot.’

In both of these contexts, other German dialects (including the Standard language) would use the uninflected form, see Bucheli Berger & Glaser (2004) and Bucheli Berger (2005a) for details.

2.2 A note on terminology

Before addressing agreement on past participles, we will need to introduce some terminology. The current section will deal in some detail with different kinds of perfect-type constructions. We borrow the notion of *perfect-type constructions* from Larsson (2009) in order to refer to any construction involving a form of ‘have’ or ‘be’ combined with a past participle which is surface-identical to a perfect tense (modulo inflection on the participle) – without however meaning to imply that such a form has to be analyzed syntactically or semantically as a perfect in a narrow sense. Perfect-type constructions we will deal with in our paper include the so-called *haben*-passive, the stative/*sein*-passive, double compound perfects and perfects in a narrow sense (present, past or future perfects).

Within perfects in a narrow sense, different readings are commonly distinguished, viz., *existential* (also known as *experiential*), *universal* (or *continuous*) and *resultative* readings (see, e.g., McCoard 1978; Portner 2011, or any other reference on perfects). We will classify the first two readings as eventive (that is, their main content concerns the core event of the lexical verb), while the last one will be referred to as stative (that is, its at-issue content is a state resulting from the core event).

Since our concern will be perfect-type constructions more generally, we will use the dichotomy stative (*haben*-passive, stative/*sein*-passive, and resultative readings of perfects) vs. eventive (existential and universal perfects) in the larger context, while we reserve the terminology of universal vs. existential vs. resultative to perfects in the narrow sense. Notice that there is a wide-spread assumption that all perfects, even eventive ones, come with a state (the so-called *perfect state*), but which is not necessarily the at-issue content of a sentence.⁸

⁷ As discussed in Fleischer (2007), the synchronic agreement system in Highest Alemannic dialects can neither be reduced to preservation of the Old High German system nor to language contact with the neighboring Romance languages since it differs from both agreement systems in relevant respects. Although both factors have arguably played a role in the development of the Highest Alemannic agreement pattern, it has to be analyzed in its own terms. See Hodler (1969: 473–477) for further discussion.

⁸ For a thorough argument for the presence of a perfect state in (English) perfects, see Katz (2003).

Concerning the *forms* of perfect-type constructions, we will distinguish *simple* versions, containing a single instance of a (finite) auxiliary and a participle (e.g., *has eaten*) from *double* or *double compound* versions, where we have a first, finite form of the perfect auxiliary, combined with a past participle of the perfect auxiliary, and a past participle of the lexical verb (e.g., *has had eaten*). In principle, both simple and double compound versions may be perfects in a narrow sense or not, and the participle of the lexical verb may or may not be inflected.

Finally, since we will be dealing with at least two different forms of stative (and adjectival) passives, we will need to distinguish them. We will refer to the German *Zustandspassiv* (which is based on the copula *sein* ‘be’ and is generally called “adjectival” or “stative” passive) as the *sein*-passive, to set it apart from the *haben*-passive, which is based on *haben* ‘have’.

2.3 Agreement patterns on past participles

Given that participles are traditionally thought to form a mixed category with both verbal and adjectival properties, it is little surprising that in these Alemannic dialects, past participles can inflect as well in non-attributive position.

With predicative adjectives (including depictives), agreement is straightforward, as illustrated in (11) above: The predicate agrees with its (semantic) subject. In the case of perfect-type constructions, however, participles agree with the underlying theme (that is: in case of a transitive verb, with the object, and in case of an unaccusative verb, with the subject):⁹

- (12) *Bernese German* (Hodler 1969: 345)
- a. bis der Schnea ganz vergangn-a ist
until the snow.M.SG completely gone-M.SG is
‘until the snow is completely gone’
- b. Jetzt hiigi = s d = Mueter verlorn-i.
now have.COND = it the = mother.F.SG lost-F.SG
‘Now it (i.e., the child) has lost her mother.’ ≈ ‘It was without her mother.’

Importantly, participle agreement in Highest Alemannic only occurs in certain perfect-type constructions:

⁹ Inflection also occurs with unergative verbs; however, since there is no underlying object, default agreement (neuter singular) obtains:

- (i) *Bernese German* (Hodler 1969: 346)
- bis wer z'nachtet-s hei
until we eat.supper-N.SG have
‘until we have finished supper’

For reasons that we do not fully understand, our informants accepted inflected participles with unergative verbs only to a limited extent.

Hodler (1969) also provides examples with default agreement despite the presence of an underlying object: in (iia), one would expect *vergrab-na*; in (iib), one would expect *glad-nu*.

- (ii) *Bernese German* (Hodler 1969: 346, 493)
- a. Er ist under em Tungelschuß vergrabe-s.
he.M.SG is under the Tungelschuss buried-N.SG
‘He is buried under the T.’
- b. we si scho numen drüi, vier Burdeni glade-s hei
if they already only three, four bundle.F.PL loaded-N.SG have
‘given that they have only loaded three, four bundles’

Importantly, though, default agreement seems to have the same distribution as proper agreement, i.e., only occurs in the syntactic/semantic contexts discussed below.

We have found no instances of participle agreement with an indirect object in dialect grammars, and as far as we could ascertain, current speakers of those dialects reject agreement in these contexts.

- (13) *Steg (Valais)* (Fuchs 1993: 72–73)
- a. Present Result:
Ds rächt Bei het är üüsgschtreckt-s.
the right leg.N.SG has he extended-N.SG
‘He holds his right leg in extension.’
- b. Past Event:
Ds rächt Bei het är üüsgschtreckt.
the right leg.N.SG has he extended
‘He extended his right leg.’
- (14) *Steg (Valais)* (Fuchs 1993: 72–73)
- a. Present Result:
Der Chrüèch isch umgikippt-ä.
the jug.M.SG is toppled.over-M.SG
‘The jug is toppled over.’
- b. Past Event:
Der Chrüèch isch umgikippt.
the jug.M.SG is toppled.over
‘The jug toppled over.’

(13a) illustrates a *haben*-passive,¹⁰ which we will discuss in detail in Section 3.2, whereas (13b) illustrates a perfect in a narrow sense, namely a present perfect tense. (14a) illustrates a *sein*-passive based on an unaccusative verb, while (14b) is a present perfect. In these present perfect-type constructions, inflection is limited to what we will refer to as *stative* interpretations (as is also indicated by the translations in (12)–(14)), whereas standard, *eventive* perfects do not show agreement.¹¹ Remember that *eventive* means that the main assertion is about the event expressed by the lexical verb itself (i.e., existential or universal perfects), whereas we will speak of *stative* readings whenever the main assertion is about a state resulting from (or caused by, or posterior to) the event expressed by the lexical verb (i.e., resultative perfects or *sein*- and *haben*-passives). This can be diagnosed by the behavior with respect to certain types of adverbials, like adverbials of the type *since timepoint/timespan* (e.g., *since yesterday/last year/2012*): with eventive forms, the core event is located within the interval denoted by the adverbial, whereas with stative forms, the subsequent state is located within this interval. We will use such adverbials to

¹⁰ The construction may remind readers not familiar with German of the English causative/experiencer construction *to have DP V-ed*, as illustrated in (i):

- (i) a. John had his house painted.
b. John had his car stolen.

However, the meaning of the German construction is crucially different: There is neither a causative nor an experiencer reading (where the experiencer is adversely affected); rather, the *haben*-passive simply expresses that the object is in a certain state and that the subject is in a broadly possession-like relationship with the object.

¹¹ The same agreement asymmetry can be found in more complex verb clusters like the following:

- (i) *Fribourg* (Raffaella Baechler, p.c.)
- a. dass de Student bis Endi Manet d Arbit muess gschrübn-i ha
that the student until end.of month the essay.F.SG must written-F.SG have.INF
‘that the student must have finished the essay by the end of the month’
- b. dass de Student d Arbit säuber muess gschrübe/*gschrübn-i ha
that the student the essay.F.SG self must written/written-F.SG have.INF
‘that the student must have written the essay himself’

(ia) essentially means that the essay must be finished (i.e., in a written state) by the end of the month and thus focuses on the result/post-state. (ib), on the other hand, merely states that the writing must have been carried out independently, i.e., the event is foregrounded.

distinguish the eventive readings of the double perfect from the stative readings of the *haben-* and *sein-*passive in Sections 3.2.1 and 4.2.2.

Additionally, the difference between the *haben-*passive and any kind of perfect also manifests itself in the status of the subject in (13): in (13b), the subject is necessarily the agent of the event, whereas this need not be the case in (13a).

2.4 Stativity in agreeing past participles

The importance of the presence of a state in perfect type constructions with agreeing participles is an old observation that can be found both in traditional descriptions (in the form of dialect grammars) and in more recent accounts like Bucheli Berger (2005a: 150–151). The sources are also quite explicit that inflection indicates a true resultant state and not merely something weaker like telicity, perfectivity or the termination of the event. In what follows, we will provide some statements from the descriptive literature together with illustrative examples.

According to Stucki (1917), agreement in the dialect of Jaun (canton of Fribourg) expresses a present or past state. He provides the following contrast:¹²

- (15) *Jaun (Fribourg)* (Stucki 1917: 288)
- a. ər hət ts suntək kxüra:tə.
 he has the.GEN Sunday married
 ‘He (got) married on Sunday.’
- b. ər hæk kxüra:tə-s.
 he.M.SG has married-N.SG
 ‘He is married.’

In the eventive perfect in (15a), the event is modified by a temporal adverbial. In the resultative perfect in (15b), however, the result of getting married is foregrounded.

For the dialect of Uri, Clauss (1929: 186) notes that the participle is apparently only inflected if the state resulting from the action is meant to be denoted. It is uninflected when the mere termination of an action is expressed. This becomes clear in (16), where as a result of eating the bread there is nothing left:

- (16) *Uri* (Clauss 1929: 186)
- Mər hent ts prɔ:k kæssə-s.
 we have the bread.N.SG eaten-N.SG
 ‘We have eaten the bread.’ (i.e., nothing is left in the house)

The same characterization in terms of resultativity can be found in Hodler (1969: 345–347) for the dialects spoken in the Bernese Oberland,¹³ in Hotzenköcherle (1934: 407) for the

¹² Essentially the same characterization can be found in Henzen (1927: 204), who describes the variety spoken in the Sense district of the canton of Fribourg.

¹³ For the dialect spoken in the Haslitaal of the Bernese Oberland, Dauwalder (1992) offers a somewhat vaguer description in terms of termination of the event, but his example in (i)

- (i) *Haslitiitsch (Bernese)* (Dauwalder 1992: 50)
- I ha gsträält-s.
 I have combed-N.SG
 ‘I have finished combing.’

arguably means that someone is combed and thus ready to go, which would thus be compatible with the characterization in terms of resultativity.

dialect of Mutten (Canton of Grisons), and in Szadrowsky (1936: 457) for the Walser dialects (spoken in the Canton of Grisons).

As another indication of stativity, in several of the examples very high current relevance seems to be involved and the state is often localized at the moment of utterance by an adverbial:

- (17) *Bernese German* (Hodler 1969: 346)
 Jetzt hei mer 's gwunne-s.
 now have we it.N.SG won-N.SG
 'Now we have won it.'

The fact that agreement does not simply mark perfectivity can be seen in the fact that in narrative sequences, which are generally assumed to require perfective aspect (see Smith 1991), the inflected versions are inappropriate:

- (18) *Lötschental (Valais)* (Bucheli Berger 2005a: 151)
 Dr = Chorb ischt um-ggfalln (*-ä) und d = Epfl sind
 the = basket.M.SG is over-tipped (*-M.SG) and the = apple:PL are
 usa- gghid (*-i).
 out- fallen (*-PL)
 'The basket tipped over and the apples fell out.'

Now, does the presence of inflection generally indicate that we are not dealing with perfects in a narrow sense, but rather with *haben*-passives? Should this be the case, one would expect the following to hold: i) the subject in sentences with an inflected participle should never be required to be the agent; and ii) agent-oriented adverbials (like e.g., *selber* 'self') should always be ungrammatical with agreeing participles. At first sight, these predictions seem to be borne out, since in examples like (13a), the subject is not necessarily the agent, and one can explicitly deny that the subject was the agent of the verb. Similarly, as shown in (19), *selber* is indeed ungrammatical when inflection is present.

- (19) *Visp (Valais)* (Sandro Bachmann, p.c.)
 a. Är het ds Bei üsgstreckt-s, aber är het sus nit sälber üsgstreckt.
 he has the leg.N.SG extended-N.SG but he has it not self extended
 'His leg is extended, but he didn't extend it himself.'
 b. *Är het ds Bei sälber üsgstreckt-s.
 he has the leg.N.SG self extended-N.SG
 intended: 'He extended the leg himself.'

However, the presence of agreement on a participle does not always imply that we are dealing with a *haben*-passive. If we extend an example like (16) and try to deny that the subject is the agent here, this leads to infelicity.

- (20) *Visp (Valais)* (Sandro Bachmann, p.c.)
 Wier hei ds Broot ggässu-s, #d Miisch hent alles üfgfrässu.
 we have the bread.N.SG eaten-N.SG the mice have all up.eaten
 intended: 'Our bread is eaten, the mice ate all of it.'

If (20) were an instance of a *haben*-passive, we would expect the continuation to be felicitous, since it should mean something along the lines of ‘we are in possession of bread that is in an eaten state’. Therefore, examples like (20) (and probably also (i) in footnote 9 and (15b)) have to be classified as instances of resultative readings of perfects in a narrow sense.¹⁴

The facts above thus show that the agreement on participles does not necessarily indicate that we are dealing with a *haben*-passive. Rather, the generalization is somewhat weaker: Agreement obtains when the construction is stative and is not limited to mere *haben*-passives (a fact that will become even clearer when we address agreeing participles in the double compound perfect and eventive passives below).¹⁵

Participle agreement in Alemannic is thus different from participle agreement in Romance (see Belletti 2017 for a recent overview) in that agreement is restricted to stative contexts, while in Romance, participle agreement is widespread with eventive perfects. In French, for example, agreement not only obtains in *haben*-passives (as, e.g., (21)) but also in eventive perfects, as long as the controller moves across the participle, see (22):

- (21) *French*
 Il a la jambe cassé-e.
 he has the leg break.PFV-F.SG
 ‘His leg is broken.’

- (22) *French*
 a. la maison_i qu_i’ il a construit-e t_i
 the house.F which he has build.PFV-F.SG
 ‘the house which he has built’
 b. Il a construit-(*e) la maison.
 he has build.PFV-F.SG the house.F
 ‘He has built the house.’

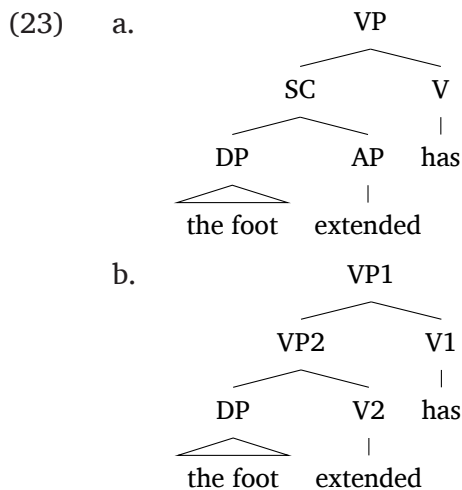
Importantly, movement of the controller in eventive perfects in Highest Alemannic does not affect agreement, it is impossible irrespective of the surface position of the controller.

We propose instead that agreement on the participle is linked to syntactic category in Highest Alemannic dialects: Agreement obtains when the participle is adjectival externally, but not when it is verbal. That the participle is adjectival in stative passives is uncontroversial since this is a copula construction. We will propose below that the *haben*-passive is also a copula construction, with *haben* ‘have’ being the spell-out of the copula + a preposition. It thus involves a small clause (SC)-structure that relates the semantic subject (the object) to a predicate, viz., the inflected participle. In the eventive perfect, however, the participle functions as the main predicate and there are two VPs. The difference is roughly illustrated in (23), with the *haben*-passive in (23a) and the eventive perfect in (23b):

¹⁴ Our informants spontaneously offered versions of the adjectival passive in order to express a state of affairs where agent and possessor are non-identical:

(i) *Visp (Valais)* (Sandro Bachmann, p.c.)
 Ds Broot isch ggässu-s, d Misch hent nächti alles üfgfrässu.
 the bread.N.SG is eaten-N.SG the mice have in the night everything up.eaten
 ‘The bread is eaten, the mice have eaten everything up during the night.’

¹⁵ Notice in any case that there is no restriction concerning target- vs. resultant states in a Kratzerian sense: while both examples in (13) show a target-state, *to lose one’s mother* in (12b) triggers a resultant state.



Agreeing participles thus pattern with predicative adjectives in these varieties, and the agreement asymmetry supports the traditional classification into adjectival and verbal participles. We further assume that the stativity of stative and *haben*-passives and resultative perfects comes about via the adjectival head, which we thus treat as a stativizer, in line with previous work, see, e.g., Bruening (2014); Alexiadou, Anagnostopoulou & Schäfer (2015).

Independent support for the classification into verbal and adjectival participles comes from verb cluster orders: Perfect forms without inflection can generally occur in both ascending (the governing verb precedes the governed) and descending (the governed verb precedes the governing verb) order in these Highest Alemannic dialects. However, once the participle is inflected, only the descending 21-order is grammatical:

(24) *Fribourg* (Raffaella Baechler, p.c.)

- a. dass er s Bei het₁ usgstreckt₂/ usgstreckt₂ het₁
 that he the leg.N.SG has extended/ extended has
 ‘that he extended his leg/holds his leg in extension.’
- b. dass er s Bei het₁ usgstreckt₂(*-s)/ usgstreckt₂-s het₁
 that he the leg.N.SG has extended-N.SG/ extended-N.SG has
 ‘that he extended his leg/holds his leg in extension.’

Given that predicative adjectives cannot occur after the right sentence bracket, i.e., after the clause-final verb in German, cf. (25), this is expected if agreeing participles are adjectival:

(25) *Standard German*

- dass er {*ist stolz}/ {stolz ist}
 that he is proud proud is
 ‘that he is proud’

Uninflected participles like in (24a), on the other hand, are verbal, and therefore can occur in both orders that are generally possible in the verbal complex in these varieties.¹⁶

This simple solution will, however, turn out to be inadequate because there are two constructions in these dialects where agreement on the participle is obligatory even though the participle seems to have verbal properties, viz. double compound perfects and eventive passives, as in (7) above. We will discuss them in Sections 3, 4 and 5, respectively.

¹⁶ Essentially the same contrast has been noted for the dialect spoken in Vienna by Abraham (2005: 274, 292), which also in principle allows both orders: While both eventive and stative interpretations are possible in the descending 21-order, the 12-order only allows the eventive interpretation.

3 The double compound perfect

In the double compound perfect (DCP) a *simple* perfect is augmented by adding a further participle of *sein* ‘be’ or *haben* ‘have’ (see (26a) and (27a) vs. (26b) and (27b)).

(26) *Colloquial German*

- a. Simple perfect:
Ich habe das Buch gelesen.
I have the book read
‘I have read the book.’
- b. Double perfect:
Ich habe das Buch gelesen gehabt.
I have the book read had
‘I had read the book.’

(27) *Colloquial German*

- a. Simple perfect:
Er ist schon abgereist.
he is already checked.out
‘He has already checked out.’
- b. Double perfect:
Er ist schon abgereist gewesen.
he has already checked.out been
‘He had already checked out.’

The DCP, which roughly corresponds to a pluperfect (but see below for a more precise characterization and Brandner, Salzmann & Schaden 2016 for a general appraisal of the limits of this comparison), occurs in all German varieties, including the Colloquial Standard language. However, it is more prominent in Southern German varieties because they lack the simple past tense so that the DCP is the only option to express a pluperfect-like meaning.

Crucially, in the Highest Alemannic dialects, the agreement on the lexical participle is obligatory, according to Hodler (1969: 346, 494):

(28) *Bernese German* (Hodler 1969: 346, 494)

- a. win er der Namen Gottes het usgsprochn-a ghabe
when he the name.M.SG God.GEN has pronounced-M.SG had
‘once he had pronounced the name of God’
- b. wo mir Zmorge gchochet-s u g’ässe-s hei gchaa
when we breakfast.N.SG cooked-N.SG and eaten-N.SG have had
‘after we had eaten breakfast’
- c. we der Att isch i ds Chötteli gschloffn-a gsii
when the father.M.SG is in the vest slipped-M.SG been
‘after the father had put on his vest’

At first sight, the DCP seems eventive and one therefore expects the participle to be verbal; however, we will show that while there are indeed eventive components, it is crucially adjectival externally and involves the same stativizer as in the *sein*- and the *haben*-passive. We will thus treat the participle in the DCP as a mixed category, with an adjectival head taking a substantial amount of verbal structure as its complement. We will first present evidence for adjectivehood, which will mainly come from a stative component in the DCP, before discussing its verbal properties, which involves showing that it contains significantly more verbal structure than a *sein*-/or *haben*-passive. The DCP thus also provides evidence for a new type of adjectival participle (in German).

In what follows, we will not so much focus on the precise semantics of the construction but rather on the evidence for both a stative and an eventive component.

3.1 Stativity in double compound perfects in Alemannic

In this section, we will investigate the stative component in DCPs, which has given rise to a popular analysis of DCPs in terms of resultative aspect (see, e.g. Litvinov & Radcenko 1998; Rödel 2007; Brandner, Salzmann & Schaden 2016). Notice that the relevant literature distinguishes several readings of DCPs, but like Brandner, Salzmann & Schaden (2016), we will assume that these are different use-cases of the same underlying structure and semantics.

In a first use, the so-called anterior use, the DCP describes an event in the past as being complete/anterior to some reference point in the past:

- (29) a. *Zug* (Bossard 1962: 94)
 Wo s Anni der eërscht Walzer gmacht ghaa hed, isch em
 where the Anni the first waltz made had.PTCP has, is him
 schlächt wòorde.
 bad become
 ‘When Anni had finished her first waltz, she became nauseous.’
- b. *Vorarlberg German (Sulzberg)*
 Wia i huiku bi, hot d Anna ihre schuulsacha frsorgat ghet.
 when I home.come am, has the Anna her school.stuff cleaned.up had.
 ‘When I came home, Anna had already cleaned up her material for school.’

The DCP can occur in both subordinate and in (possibly independent) main clauses, but in any case, there is another event with respect to which the event marked by the DCP is interpreted as anterior. Now, to what degree is such a construction stative? Evidence for a stative component comes from the compatibility of DCPs in anterior uses with *how long* (see Rothstein 2008: 42–43), which is infelicitous with achievements in the preterite, but acceptable with (resultative) perfects:

- (30) *Standard German*
- a. ?*Wie lange entdeckte Hans die Formel (schon)?
 how long discovered Hans the formula (already)
 ‘How long did John (already) discover the formula?’
- b. Wie lange hat Hans die Formel (schon) entdeckt?
 how long has Hans the formula (already) discovered
 ‘How long has John (already) discovered the formula?’

Since *discover* is a punctual event, it has no duration in itself; hence the incompatibility of the event itself with adverbials like *how long*. However, the state resulting from that event – the formula being discovered – has a duration, and can therefore be modified by such adjuncts. Unsurprisingly, as shown by Brandner, Salzmann & Schaden (2016: 26), the DCP also allows for such modifiers:

- (31) *Zurich German*
 Wie lang hät de Einstein d Formle (dootsmaal) scho bewise ghaa,
 how long has the Einstein the formula at.the.time already proven had
 wo ...?
 when ...
 ‘How long had Einstein (at that point) already discovered the formula, when ...’

DCPs behave very similarly to resultative perfects; however, they do not show the full range of eventive readings one would expect from a “standard” pluperfect (see, e.g., Squartini 1999; Brandner, Salzmann & Schaden 2016). Consider the English example in (32a) and its Alemannic translation in (32b):

- (32) a. Peter didn’t go to work on Tuesday. He had resigned on Monday.
 b. *Zurich German* (Brandner, Salzmann & Schaden 2016: 23)
 De Peter isch am Ziischtig nöd go schaffe ggange. Er hät am
 the P. is on Tuesday not PRT work.INF gone he has on
 Määntig kkiünt ghaa.
 Monday resigned had
 ‘Peter didn’t go to work on Tuesday. He had resigned on Monday.’

The most obvious interpretation of (32a) is that Peter resigned *on* Monday; consequently, the adverbial *on Monday* can modify the event time of *resigning*. This is not a possible interpretation of the (Alemannic) DCP: (32b) can only mean that Peter resigned *before* Monday; thus, *on Monday* cannot modify the event time but only a post-state, viz., the state of having resigned.¹⁷ This thus crucially shows that the DCP contains a stative component, and that the event is not as foregrounded or accessible as it would be in a full-blown pluperfect.¹⁸

The second interpretive possibility is the so-called *superperfect* or *two-way action* reading (see Thieroff 1994), as in (33):

¹⁷ Notice also that the vague temporal localizer *dootsmaal* in (31) modifies the state of the formula being discovered and not the event of discovering the formula.

¹⁸ Further differences between the DCP and a full-fledged pluperfect concern the impossibility of embedding an eventive passive under a DCP (as was pointed out in Schaden 2007) – which is perfectly grammatical with a pluperfect (as illustrated by the contrast in (i)), or the impossibility of embedding a modal (like *must*) under the DCP – which is grammatical with a run-of-the-mill pluperfect (see (ii)).

- (i) a. DCP, *Vorarberg German (Sulzberg)*:
 *S bier isch ustrunka wora gsi.
 the beer is up.drunk become.PTCP been
 ‘The beer had been drunk.’
 b. Simple perfect, *Vorarberg German*:
 S bier isch ustrunka wora.
 the beer is up.drunk become.PTCP
 ‘The beer has been drunk.’
 c. Pluperfect, *Standard German*:
 Das Bier war ausgetrunken worden.
 the beer was up.drunk become.PTCP
 ‘The beer had been drunk.’
- (ii) a. DCP, *Vorarberg German (Sulzberg)*:
 *Ea hot abroisa müassa ghet.
 he has depart must had
 ‘He had had to depart.’
 b. Simple perfect, *Vorarberg German*:
 Ea hot abroisa müassa.
 he has depart must
 ‘He had to depart.’
 c. Pluperfect, *Standard German*:
 Er hatte abreisen müssen.
 He had depart must
 ‘He had had to depart.’

- (33) *Vorarlberg German (Sulzberg)*
 Des hob i jetz komplett fagäässa ghet.
 that have I now completely forgotten had
 ‘I had completely forgotten that.’

In this use there is no textually given reference point; it generally expresses a reversal of the resultant state/perfect state with respect to the moment of utterance (cf. the presence of ‘now’). Thus, (33) would be typically uttered when what had been forgotten is remembered again by the speaker. In any case, no contextually salient past event is necessary in order to licence the DCP.

As argued in Brandner, Salzmann & Schaden (2016: 27), the superperfect interpretation can be related to the anterior reading as follows: Like the anterior reading, it expresses the fact that a state held prior/up to some reference point in the past. However, since no such reference point is given, the moment of utterance is used as the reference point. But if one wanted to express the fact that a state still holds at the moment of the utterance, one would have used a simple perfect instead. The use of a DCP thus leads to pragmatic reinterpretation: Given that the more complex form has been used, it is deduced that the state that held at some point in the past no longer holds at the moment of speaking. Thus, this second reading of DCPs in Alemannic also depends crucially on the presence of a state.

Importantly, both the anterior and the superperfect use require inflection in Highest Alemannic dialects (cf. Hodler 1969: 346); given the agreement pattern so far, this suggests that the participle is adjectival externally, and given the stative component of the DCP, we consequently assume that the DCP involves the same stativizing adjectival head as the *stative-passive*/the *haben*-perfect.¹⁹

¹⁹ In their discussion of the DCP in Dutch dialects, Koenenman, Lekakou & Barbiers (2011) show that the lexical participle cannot occur in the last position in the verb cluster, unlike what is possible in regular Dutch clusters like ‘must have read’. They interpret this as evidence that the lexical participle is adjectival and therefore has to occur preverbally, exactly as in the Swiss German 2-verb clusters in example (24) above.

In Swiss German, a strictly ascending 123 order is not possible with DCPs either, whether inflected or not; the attested orders are 312, 321 and 132:

- (i) *Bernese German* (Hodler 1969: 684–685)
- a. Es het is nid rächt gfalle, dass ihri Tochter am Tag vorhär verreisets₃ isch₁ gsi₂.
 it has us not quite pleased that their daughter at the day before left is been
 ‘We didn’t like it that her daughter had left the day before.’
 - b. Wenn me de ds Gschirr use gruums₃ gha₂ het₁, so hei d Chinder d Ufgabe
 when one then the dishes out moved had has than have the children the homework
 gmacht.
 done
 ‘After we had carried the dishes outside, the children did their homework.’
 - c. Es isch es Läbe gsi, wi me’ s no nie het₁ gseh₃ gha₂.
 it is a life been as one it still never has seen had
 ‘That was a life like one had never seen it before.’

However, for reasons that are still poorly understood (but see Salzmann 2019), Swiss German (and arguably German dialects more generally) seem to disallow cluster-final lexical participles in 3-verb clusters. An interesting and crucially relevant exception are the data from Bernese in Hodler (1969: 684), who provides examples for clusters like ‘want have said’ or ‘must be been’ with 123 orders. But most of the other examples of this cluster type in the grammar involve 132, 312 and (more rarely) 321 orders. Other sources on Bernese, cf. Burri & Imstepf (2002: 32); Kolmer (2011), only report the orders 132, 312 and 321 for both the double perfect and clusters like ‘must have read’. According to Christoph Landolt from the *Schweizerisches Idiotikon*, there may be reason to question the validity of Hodler’s examples with 123 order. On the one hand, some of the sources (i.e., authors) he bases himself on tend to aim at an overly authentic form of the dialect, which can lead to errors; furthermore, even in these sources, orders with the participle in non-final position prevail.

Thus, while the cluster order facts in the double perfect are compatible with a treatment of the lexical participle as an adjective, it is not quite clear that they provide conclusive evidence in favor of it.

3.2 Double compound perfects vs. *Haben-passives*

While the DCP has a stative component, it very clearly also contains an eventive component. The eventive component of the DCP can be diagnosed most easily by comparing it to the (perfect version of the) *haben*-passive, cf. Businger (2011; 2013); Gese (2013), which we have already introduced in Section 2.

- (34) *Standard/Colloquial German*
 Ich habe die Haare gefärbt.
 I have the hairs colored
 a. ‘My hair is in a colored state.’ [haben-passive, present tense]
 b. ‘I have colored the hair.’ [eventive present perfect]
- (35) *Colloquial German*
 Ich habe die Haare gefärbt gehabt.
 I have the hairs colored had
 a. ‘My hair was in a colored state.’ [Simple Perfect of *haben*-passive]
 b. ‘I had colored the hair.’ [DCP; agentive & eventive]

In the following, we discuss interpretive and structural asymmetries between these two constructions.

3.2.1 Interpretive asymmetries

The examples in (34) and (35) are ambiguous as indicated by the translations. Under reading (34a)/(35a), the hair in question is the hair of the speaker, and the sentence asserts that they were in a colored state. There is no committal as to whether the speaker was the agent of the event of coloring or not, i.e., somebody else might have done the coloring. Under reading (34b)/(35b), the speaker has to be the agent of the coloring-event, but *the hair* may well belong to another person, mentioned in the preceding context (one could, e.g., also add a disjunct possessor to the direct object, as illustrated in (36)).

- (36) *Colloquial German*
 Ich habe die Haare von der Vroni gefärbt gehabt.
 I have the hair of the V. colored had
 ‘I had colored Vroni’s hair.’

Crucially, the perfect type constructions with agreeing participles discussed in Section 2 above are mostly instances of the *haben*-passive. Evidence for their adjectival nature comes from the properties discussed below (in addition to the general eventive vs. stative asymmetry discussed above).

It has been shown by Businger (2013) and Gese (2013) that the *haben*-passive is essentially the transitive equivalent of adjectival passives based on *sein* ‘be’ and thus patterns like bona fide adjectives with respect to a number of tests (while verbal participles fail these tests): The adjective can undergo *un*-prefixation, appear as a synthetic comparative, can be coordinated with bona fide adjectives and can be modified with the adverbial *genug* ‘enough’:

- (37) *Zurich German* (Brandner, Salzmann & Schaden 2016: 31–32)
 a. Ich ha s feischer hüüfig ung-göffnet ghaa.
 I have the window often un-opened had
 ‘I often kept the window unopened.’

- b. Ich ha de baart immer pflägt-er ghaa als er.
I have the beard always tended-COMP had than he
'My beard was always better groomed than his.'
- c. Ich ha s feischter putzt und offe ghaa.
I have the window cleaned and open had
'I kept the window cleaned and open.'
- d. Ich ha d Wonig uufgruumt gnueg ghaa.
I have the flat tidied.up enough had
'My flat was clean enough.'

Crucially, in these environments, a double perfect interpretation is no longer possible. As shown by Brandner, Salzmann & Schaden (2016), (37c) becomes ungrammatical once an agentive reading of the participle (and thus a DCP-interpretation) is forced by means of an agentive adverbial:

- (38) *Zurich German* (Brandner, Salzmann & Schaden 2016: 32)
*Ich ha s feischter sälber putzt und offe ghaa.
I have the window self cleaned and open had
intended: 'I have cleaned the window myself and have it in an open state.'

As shown in Gese (2013), the *haben*-passive shares with the *sein*-passive (Gehrke 2015; McIntyre 2015) the property that the event denoted by the participle is generic and therefore not easily accessible to modification. As already discussed in the introduction, Gehrke (2015: 904–905, 921) has shown for the *sein*-passive that modification is possible as long as the modification is kind-modification (a slightly different characterization is provided by McIntyre 2015, who argues that such modifiers are possible as long as they are still relevant for the result state). As a consequence, instrumental-PPs, locative PPs and passive agents are possible, but they are necessarily non-specific/non-referential and therefore cannot be picked up by anaphoric pronouns, i.e., the event participants are discourse-opaque, as the *haben*-passive in (39a) shows (the temporal adverbial triggers a stative interpretation). Crucially, in the DCP, there is no such restriction, and the PP can be referential, see (39b):

- (39) *Zurich German*
- a. *Haben*-passive
Er hät d Haar sit geschter (*mit em Shampo vo sinere Muetter/ mit
he has the hair since yesterday with the shampoo of his mother/with
Henna_i) gfärbt ghaa. *Es_i isch tüür gsii.
Henna colored had it is expensive been
'His hair has been colored since yesterday (*with his mother's shampoo/with
Henna). It was expensive.'
- b. DCP:
Er hät d Haar mit [em Shampo vo sinere Muetter]_i gefärbt ghaa. Si
he has the hair with the shampoo of his mother colored had she
hät sich drüber uufgregd, wil s_i tüür isch.
has self about got.annoyed because it expensive is
'He had colored his hair with the shampoo of his mother. She was upset about
it because it is expensive.'

A similar asymmetry emerges with bridging to events, i.e., anaphora to the event itself (by means of a demonstrative), cf. Gese (2013: 177–178). Again, while unproblematic

under a DCP-interpretation, this is not easily possible in the *haben*-passive. Consequently, the following example, while in principle ambiguous, is felicitous only if interpreted as a DCP, where the prisoner is the agent of tattooing (as noted by Gese, bridging is possible if the pronoun refers to an event kind rather than an event token):

(40) *Zurich German*

De Häftling häd de Ärm tätowiert ghaa; das hät wee taa.
 the prisoner has the arm tattooed had that has painful done
 ‘The prisoner had tattooed his arm; that was very painful.’

The absence of an event-token is further illustrated by the following minimal pair, which shows that manner adverbs are possible in the *haben*-passive only if they still hold during the post-state, but not when they only apply to the event (cf. also the notion of relevance to the state in McIntyre 2015); in the DCP, there is no such restriction (coordination with a bona fide adjective like *fettig*, ‘greasy’ in (41a) forces the *haben*-passive reading):

(41) *Colloquial German*

- a. Er hat die Haare (*langsam/schlampig) geschnitten und fettig gehabt.
 he has the hair slowly/sloppily cut and greasy had
 ‘His hair is (*slowly/sloppily) cut and greasy.’
- b. Der Friseur hat die Haare (langsam/schlampig) geschnitten gehabt.
 the hairdresser has the hair slowly/sloppily cut had
 ‘The hairdresser had cut the hair (slowly/sloppily).’

Thus, while there is only an event kind in the *haben*-passive, an event-token is instantiated in the DCP.

The difference in agentivity mentioned at the beginning can be made explicit by means of the following minimal pair illustrating Control into purpose clauses (inspired by Gese 2013: 177):

(42) *Zurich German*

- a. De Aarzt hät s Bää amputiert ghaa, zum en Infektion vermeide.
 the doctor has the leg amputated had to an infection prevent
 ‘The doctor had amputated the leg to prevent an infection.’
- b. #De Patiänt hät s Bää amputiert ghaa, zum en Infektion vermeide.
 the patient has the leg amputated had to an infection prevent
 intended: ‘The patient had his leg in an amputated state to prevent an infection.’

Control is felicitous in (42a) because of the presence of the subject, which can function as the agent. (42a) can thus only be interpreted as a DCP. The *haben*-passive interpretation is ruled out in a Control context, cf. (42b), suggesting that no implicit agent is present (of course, (42b) is grammatical if the patient carried out the amputation himself).²⁰

²⁰ Alexiadou Gehrke & Schäfer (2014: 128–129) provide examples of the *sein*-passive with – putatively – acceptable cases of Control. While we are rather sceptical whether their examples represent proper instances of Control, what is crucial for the present discussion is that Control is clearly rather restricted in the *sein*- and also in the *haben*-passive but not in the DCP. Thus, even if Control turns out to be acceptable with the *haben*-passive to some extent, there remains a clear asymmetry with respect to the DCP, which in our view is sufficient to show that they represent different constructions. See Alexiadou, Gehrke & Schäfer (2014) for a semantic proposal to capture the difference in the availability of control between adjectival and verbal passives.

Another important difference between the *sein-/haben*-passive and the DCP concerns the kinds of verbs that can occur in the constructions. As shown in Gehrke (2015: 906–918), only verbs with certain kinds of lexical aspect, roughly verbs that denote a change of state, can be used out of context in the *sein*-passive. Other kinds of verbs like statives require pragmatic licensing. Consider the following pair:

- (43) a. *Standard German* (Kratzer 2000)
 ?*Die Antwort ist gewusst.
 the answer is known
 ‘The answer is known.’
- b. *Vorarlberg German* (Sulzberg)
 Des hob i doch gwisst ghet!
 that have I but known had
 ‘I know the answer in principle (but I cannot remember it right now;
 a superperfect-reading, cf. Section 3.1 above).’

Kratzer (2000) takes the *sein*-passive (43a) to be ungrammatical, but it has been shown by Maienborn (2009) that in the right context, such sentences are acceptable (e.g., in a quiz-show setting). The DCP in (43b), however, is fully grammatical in isolation, i.e., does not require any special contextual support.²¹

3.2.2 Structural differences

Next to these semantic asymmetries, there are also clear structural asymmetries: The subject of a *sein*-passive/the object of a *haben*-passive occur in a position above the participle, i.e. they c-command it, while in the double perfect the object of the lexical participle occupies a position in the c-command domain of the participle. This can be shown by means of their placement with respect to certain adverbial modifiers. As shown in Frey & Pittner (1998), instrumental-, comitative-, and locative-PP modifiers occur between the base-position of the subject and the direct object in unmarked order. The following triple shows that while the instrumental modifier occurs above the direct object in the DCP, it occurs below the object in the *haben*-passive (and, unsurprisingly, below the subject of a *sein*-passive in (44c)):

- (44) *Colloquial German*
- a. dass er [mit Henna] die Haare gefärbt gehabt hat
 that he with Henna the hair colored had has
 ‘that he had colored his hair with Henna’
- b. dass er seit gestern {*mit Henna} die Haare {mit Henna} gefärbt
 that he since yesterday with Henna the hair with Henna colored
 gehabt hat
 had has
 ‘that the hair has been colored with Henna since yesterday’
- c. dass {*mit Henna} die Haare {mit Henna} gefärbt sind.
 that with Henna the hair with Henna colored are
 ‘that the hair is colored with Henna’

²¹ Verbs that cannot easily be used in the *sein*-passive seem to be even more difficult to accommodate in the *haben*-passive. It seems to us that the *haben*-passive is also more restricted with respect to modification, i.e., it does not easily allow instrumental- or agent-PPs. This is in line with the general tendency for the *sein*-passive to be more productive than the *haben*-passive, cf., e.g., Businger (2011; 2013).

(44a) only allows the DCP-interpretation,²² while in (44b) the temporal modifier forces a *haben*-passive interpretation. In that case, the PP-modifier has to follow the object – just like it has to follow the subject in the *sein*-passive in (44c).²³

Another difference between the *haben*-passive and the DCP is that in the former, the object always bears accusative case, while in the DCP, oblique cases are possible:

(45) *Colloquial German*

- a. Ich habe dem Peter geholfen.
I have the.DAT Peter helped
'I have helped Peter.'
*'I have Peter in a state of having been helped.'
- b. Ich habe dem Peter geholfen gehabt.
I have the.DAT Peter helped had
'I had helped Peter.'

Once the object bears oblique case, the *haben*-passive interpretation is no longer available. No such restrictions obtain in the DCP. Thus, while objects are case-marked by the participle in the DCP, this does not seem to be the case in the *haben*-passive. Associated with this difference is the fact that the object in the *haben*-passive is necessarily interpreted as a theme, while in the DCP, the object bears whichever thematic role the lexical verb assigns.²⁴

3.3 The limits of event-modification in the double compound perfect

So far we have clear evidence that the double perfect involves an event token, unlike the *haben*-passive. In this subsection, we will discuss in detail which modifiers are licensed in the DCP. As we will see below, even though there is an event token, event modification is more restricted than in a simple (active or passive) perfect. We will adopt the terminology of Frey & Pittner (1998) and show that only event-internal modifiers are possible but not event-related ones. We will relate this restriction to a sortal incompatibility between VoiceP and temporal modifiers.

Contrary to Cinque (1999), Frey & Pittner (1998) do not assume that all adverbial positions are syntactically ordered but conclude that, in German, there are five different

²² A DCP-interpretation is also available if the PP follows the object because the object can scramble across the PP; the order object-PP is then ambiguous between *haben*-passive and DCP.

²³ Another diagnostic that has often been used in the literature to distinguish between stative participles and eventive participles concerns the possibility of a coreferential reading. In the *sein*-passive a reflexive reading is sometimes possible where the theme-subject is coreferential with the implicit agent, cf. e.g. *the guests are registered*, where the guests can have registered themselves. The same holds for the *haben*-passive (to the extent that such examples can be constructed):

- (i) *Colloquial German*
Er hat das Kind seit Tagen schlampig gekämmt.
he has the child since days sloppily combed
'He has had his child in a state of being sloppily combed for several days.'

A coreferential reading is, however, absent with eventive participles as in the eventive passive. These facts have been interpreted as showing that there is no implicit agent in the adjectival passive (otherwise a Principle C effect should obtain). However, as noted by McIntyre (2013); Alexiadou, Gehrke & Schäfer (2014); and Bruening (2014) only naturally reflexive verbs can have a coreferential reading in adjectival passives, while most other verbs cannot. They thus conclude that even stative participles may contain implicit agents and do not significantly differ from eventive participles in this respect.

²⁴ For the *haben*-passive in Swedish, see Larsson (2009: 104–112, 336–345). As far as we can tell, the properties seem largely the same as in German. The agent can be different from the subject, the construction is compatible with both target and resultant states, stative and unaccusative verbs are unacceptable, and the object occupies a different structural position than in the simple present perfect. While it occurs in the preverbal position in the *haben*-passive, it occurs post-verbally in the eventive simple perfect, in line with the VO-nature of the language.

classes of modifiers, and that the position of the modifiers within a class is free. These classes are defined in terms of c-command relations of the adverbial with respect to other elements in the sentence. Simplifying somewhat, *event-internal* modifiers (like instrumentals, locatives, or subject-attitude modifiers like *willingly* or *deliberately*) are located below the base-position of the highest argument of the event, whereas *event-related* modifiers (such as localising temporal expressions, habitual adverbials, etc.) are located above the base-position of all arguments of the event – including the agent.

Example (41b) above has already shown that manner adverbs of various kinds (i.e., crucially not only result-oriented ones) are freely available in the DCP. The following examples show that instrumental, comitative, locative and subject-related adverbials are also licensed in the DCP and crucially can involve referential participants.

(46) *Vorarlberg German (Sulzberg)*

- a. demonstrative local modifier
Ea hot da briaf i dera schtuba gschrieba ghet.
he has the letter in this living.room written had
'He had written the letter in this living room.'
- b. demonstrative instrument
Ea hot dean briaf mit deam kuli gschrieba ghet.
he has this letter with this ballpoint written had
'He had written this letter with this ballpoint pen.'
- c. definite comitative modifier
Ea hot s mätsch mit m Hans agluagat ghet.
he has the match with the John watched had
'He had watched the match with John.'
- d. subject-related adverbial
Ea hot da gäscht mit fliß s falsche zimmer zoigt ghet.
he has the guests deliberately the wrong room shown had
'He had deliberately shown the wrong room to the guests.'

These are all event-internal modifiers whose base-position in German is below the base-position of the external argument and above the base position of the object according to Frey & Pittner (1998).

However, once we look at adverbials that occur higher in the structure, we can observe that they are not acceptable in the DCP (a restriction that, unsurprisingly, also holds for the *sein*- and the *haben*-passive, cf. Gese 2013: 170–171, 175–176). This has already been shown for temporal adverbials in (32b) above. The following example shows that with *wieder* 'again', only the result-oriented restitutive, but not the event-related repetitive reading is available:

(47) *Zurich German*

- De Arzt hät de Arm vo de Patientin wider verbunde ghaa.
the doctor has the arm of the female.patient again bandaged had
'The doctor had bandaged the arm of the patient again.' (✓ restitutive, *repetitive)

In a simple- or pluperfect-version of (47), both readings would be available. The lack of the repetitive reading becomes clear in the following example, where a restitutive reading is ruled out for independent reasons because amputation cannot be restitutive (one cannot restore a foot to an amputated state); the fact that the example is ungrammatical shows that the repetitive reading is not available in the DCP (since a person has two legs, the event 'amputate' can, in principle, be repetitive):

(48) *Vorarlberg German (Sulzberg)*

?*wia dr doktr am Hans wider an Fuass amputiert ghet hot, ...
 when the doctor the.DAT Hans again a foot amputated had has ...
 ‘after the doctor had amputated one of John’s feet again, ...’

Again, the repetitive reading is available under a simple present perfect or pluperfect version of (48).

An interesting case are frequency adverbials. They can occur in two different positions, with different consequences for scope, see, e.g., Cinque (1999: 25–28, 91–93); Frey & Pittner (1998): In a high position above the base-position of the subject, they quantify over the entire event. In the lower position, they quantify over the act/process denoted by the verb. Only in the latter case are they thus event-internal. As we would expect by now, only the event-internal reading is available in the double perfect. In (49), the entire event comprises three acts of knocking:

(49) *Zurich German*

Erscht won i drüümal klopft ghaa han, isch d Tüür uufggange.
 only when I three.times knocked had have is the door opened
 ‘Only after I had knocked three times did the door open.’

If, however, the frequency adverbial quantifies over the entire event, the result is infelicitous (note that no such restrictions obtain with a regular pluperfect):²⁵

(50) *Zurich German*

Er hät siini Muetter im Altersheim (??regelmässig) bsuecht ghaa.
 he has his mother in.the elderly.home regularly visited had
 ‘He had visited his mother (regularly) in the elderly home.’

Something similar seems to hold for durative adverbials, which can also occur in higher positions with scope over tense and in lower positions that are arguably event-internal, cf. Ernst (2002: 335, 339–341). As (51) shows, they are acceptable under their event-internal interpretation:

(51) *Zurich German*

Won er 20 Semeschter gstudiiert ghaa hät, hät er äntlich uufggää.
 when he 20 semesters studied had has has he finally given.up
 ‘After he had studied for 20 semesters, he finally gave up.’

To summarize, only event-internal modifiers are possible in the DCP. They thus cover a contiguous segment of the functional hierarchy. In simplified structural terms, there is not only evidence for a VP, but, given the possibility of Control into purpose clauses and subject-related manner adverbs, also evidence for a VoiceP.

In terms of restrictions, the DCP is thus somewhere in between the Greek adjectival passive, where temporal modifiers are possible, and the German adjectival passive, where only kind-modification is possible. The question thus arises how to account for the restrictions in the DCP and the differences with respect to the other constructions.

²⁵ Habitual adverbials like ‘habitually’ ‘generally’ behave like high frequency adverbials in being incompatible with the DCP. Since they quantify over a fairly large time interval, cf. Ernst (2002: 350–351), they are never event-internal; in fact they usually take higher scope than high frequency adverbs such as ‘often’, cf. Cinque (1999: 106).

The unavailability of localising temporal expressions for direct event modification in DCPs follows from the assumption that the AP in DCPs embeds a VoiceP, but no purely functional structure like an AspectP. Up to and including VoiceP, the denotation of the expression should be a predicate of events, as illustrated in (52):

$$(52) \quad \llbracket \text{saturated VoiceP} \rrbracket = \lambda e. [P(e) \& \text{Ag}(e)(j) \& \text{Theme}(e)(m)]$$

At the same time, the most natural denotation one can assume for something like *yesterday* is a predicate of intervals:

$$(53) \quad \llbracket \text{yesterday} \rrbracket = \lambda i. [\text{yesterday}(i)]$$

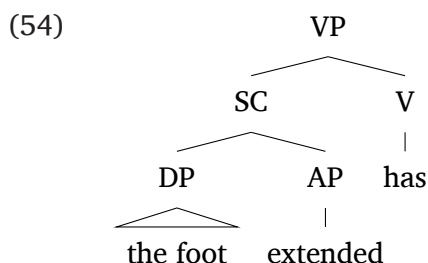
Assuming once again the simplest method of combining these elements, namely predicate modification, the combination of (52) and (53) will produce a sort-mismatch between the event-predicate coming from VoiceP (or anything below), and the interval/time predicate *yesterday*. Higher up in the tree, after Aspect or Tense, the combination will be unproblematic, since AspP/TP will denote predicates of intervals.

4 The structure of the double compound perfect and the *haben*-passive

We now turn to the structural analysis of the *haben*-passive and the DCP. We will first address the *haben*-passive, then the DCP based on transitive and unergative verbs and finally the DCP based on unaccusatives.

4.1 The *haben*-passive

There seems to be a consensus that the *haben*-passive involves a small-clause structure with the accusative object as the subject and the adjectival participle as the predicate, as already roughly indicated in (23a) above, repeated in (54):

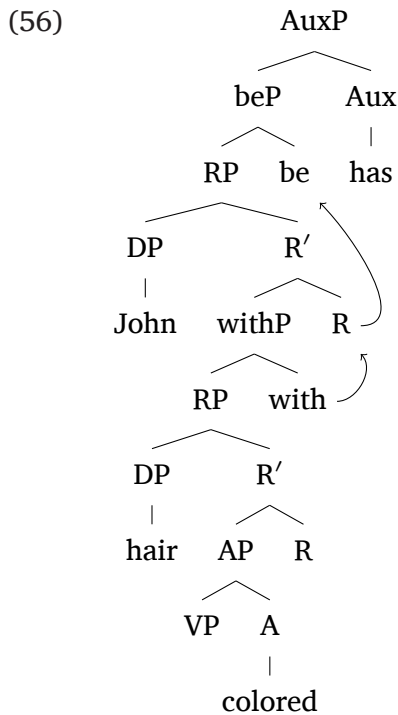


Given that a small clause is involved, the predicate position can also be occupied by a genuine adjective or a PP:

- (55) *Colloquial German*
- a. Er hat die Haare sauber.
he has the hair clean
'His hair is clean.'
 - b. Er hat den Arm im Gips.
he has the arm in.the cast
'His arm is in a cast.'

Instead of an exocentric SC-structure, we will postulate an endocentric RelatorP (RP, with a silent head), following den Dikken (2006), which we take to be identical to PredP. Furthermore, we follow Businger (2011: Chapter 2.6); Businger (2013: 153–155) in that

possessive *have* is decomposed into ‘be’ + a PP headed by *mit* ‘with’ (cf. also Levinson 2011). The pre-position in turn embeds a small clause, viz., an RP with the object as the specifier and the predicate as the complement; the motivation for the RP-structure under *with* is the existence of an absolute construction where *with* relates a subject and a predicate, cf. *Mary sat with her head tilted*. The complex head resulting from head-movement of the preposition to *be* (via R) is then realized as *have*.²⁶ Finally, when the *haben*-passive occurs in the simple perfect tense as in many examples in this section, there is another verbal projection above beP, viz., the projection of the auxiliary (we use the label Aux for reasons of legibility and remain agnostic as to whether auxiliaries should also be decomposed like the copula *have*). The structure of the reading in (35a) thus looks as follows:²⁷



The structure in (56) thus essentially means that John is (or has been) with colored hair. We represent the stative participle as an AP embedding a VP for expository purposes only; we remain non-committal whether the adjective embeds verbal structure at all and if it does how much (e.g., VP vs. VoiceP); as far as we can tell, this does not affect our analysis; we will briefly come back to this issue at the end of this section. Importantly, under this structural analysis, the object is projected outside the c-command domain of the adjectival participle, in accordance with the word order facts discussed in (44) above: instrumental modifiers that modify the event kind and thus attach to VP (or the AP, if one assumes no verbal structure inside the AP) must therefore obligatorily follow the object. To precede the object, they would have to attach to projections that they cannot obviously modify.

²⁶ The proposal thus differs from more prominent decomposition analyses like Freeze (1992), where it is the possessor that is introduced by a preposition, which in addition is locative in nature. As discussed in Businger (2011), there is no motivation for a locative structure in possessive structures in languages like German. The structure proposed by Businger is more similar to the one in Koeneman, Lekakou & Barbiere (2011: 52), where *have* is decomposed into *be* + *to*, with ‘to’ as the head of RP. They differ from Businger in assuming that the preposition can take a DP complement rather than always an RP-complement. Businger assumes that sentences with only a DP-object on the surface nevertheless involve an RP, but with a silent predicate.

²⁷ The preposition *mit* ‘with’ assigns dative case if it is not incorporated, while possessive ‘have’, i.e., when the preposition incorporates into ‘be’, assigns accusative case. See Businger (2011: 83–84) and Levinson (2011: 386–392) for possible explanations of this alternation.

As we will see below, the *haben*-passive patterns with the *sein*-passive with respect to the base position of the theme: It does not originate VP-/AP-internally but rather externally to AP/VP; the *haben*- and the *sein*-passive crucially differ from the eventive passive (and the double compound perfect), where the theme is merged as a complement of the verb, see below.²⁸ The structure also accounts for the agreement facts discussed in the introduction: Recall that the adjective agrees with the object, i.e., the DP in SpecRP. This can be captured if predicative adjectives/participles (or functional heads associated with them) can undergo upward Agree (Baker 2008: 44–48). In the structure in (56), the DP in SpecRP is the closest goal so that its phi-features can be copied onto the adjective.²⁹

4.2 The double compound perfect

We now turn to the double perfect. There are basically two cases to consider: the DCP based on unaccusative verbs (which take the auxiliary BE), and the DCP with transitive and unergative verbs (which feature the auxiliary HAVE). We will start with the latter.

4.2.1 Double compound perfects based on verbs taking an external argument

We have already established the hybrid nature of the lexical participle: While it is adjectival externally, it embeds a fully fledged VoiceP (but no AspP to account for the incompatibility with event-related adverbials). To encode the fact that in the double perfect the surface subject is identical to the agent of the lexical participle, we assume that a PRO is

²⁸ Adjectival passives differ systematically from verbal passives in this respect cross-linguistically, see, e.g., McIntyre (2013: 25–26), for evidence and further references. In other words, the theme has to be externalized. The implementation of externalization is still a matter of debate. There is a certain consensus that the adjective denotes an unsaturated predicate (derived via lambda-abstraction), which is then saturated by the external DP. Next to purely syntactically motivated approaches as in Bruening (2014), where lambda abstraction comes about via empty-operator movement, there are also more semantically motivated approaches as in McIntyre (2013: 36–37), where the adjectival head combines with a lambda-abstracted VP that does not contain any material in the structural position of the theme.

²⁹ Recall from Section 2 fn. 9 above that unergative verbs can also occur with (neuter) agreement. Since both *sein*-passives and *haben*-passives generally involve externalization, we expect them to be possible only if an underlying theme is present. As a consequence, unergative verbs should only occur in the *haben*-passive if there is a silent object; otherwise, there is no argument that can be externalized. To be compatible with the RP-structure in (56), unergatives therefore have to be treated as hidden transitives. There would thus be a silent noun in SpecRP nevertheless (e.g., a cognate object), which, however, due to its deficiency, cannot trigger agreement on the participle.

Note that the problem may be more general given the possibility of impersonal adjectival passives as in (i):

(i) *Colloquial German*

Jetzt ist genug getanzt.
now is sufficient danced

‘There has been enough dancing going on.’ (i.e., it’s time to stop)

Unless this construction can be shown to involve ellipsis of the participle of ‘become’, viz. *worden* (and thus represent a verbal passive), the same questions about externalization arise.

As discussed in Section 2, however, there is reason to believe that (at least some of) these intransitive cases with ‘have’ are not *haben*-passives but rather resultative perfects; if that connection turns out to be systematic, the problem with a missing object for externalization does not arise for stative constructions based on *have*. See the end of Section 4.2.1 below for discussion of resultative perfects.

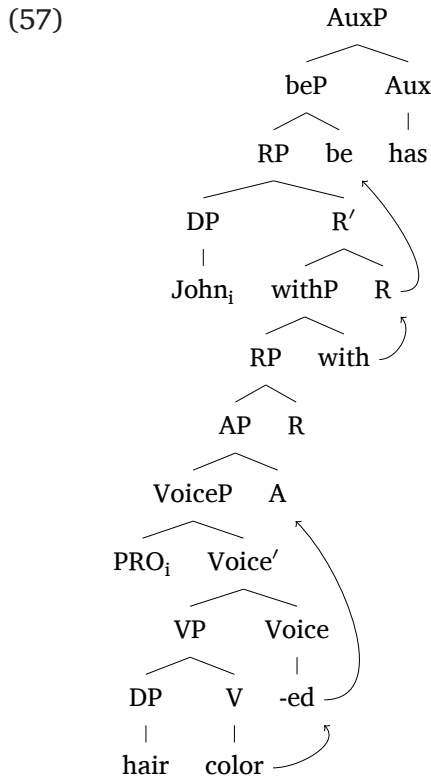
As a final point, for reasons we do not understand, the *haben*-passive is not compatible with unaccusatives, as illustrated in (iia), and as opposed to the grammatical benefactive construction in (iib). Given the possibility of a *sein*-passive with unaccusatives and thus the externalization of the theme argument, there should be a specifier for RP in (iia) so that the unavailability of this option with *have*-passives remains puzzling.

(ii) *Colloquial German*

a. *Ich habe den Brief verschwunden.
I have the letter disappeared
Intended: ‘My letter has disappeared.’

b. Mir ist der Brief verschwunden.
I.DAT is the letter disappeared
‘My letter has disappeared.’

projected in SpecVoiceP.³⁰ What is initially less clear is the nature of the two instances of ‘have’. We follow Koeneman, Lekakou & Barbiers (2011) in assuming that the double perfect does not involve genuine doubling but rather the combination of different variants of *have*. More precisely, the lower instance of *have* should be analyzed as the copula verb ‘have’, while the hierarchically highest verb is a perfect-auxiliary. If we combine these assumptions, we arrive at the following structure for an example like (35b):^{31,32}



³⁰ Koeneman, Lekakou & Barbiers (2011) project PRO in SpecAP. It is not clear to us how this can be ensured given the selectional properties of Voice. Furthermore, as a subject/specifier of a predicative adjective, it should be interpreted as a theme that is ascribed a (stative) property. But this is crucially not what the construction expresses. Furthermore, under such a structure, it seems difficult to prevent case-marking of PRO by the prepositional head.

³¹ Even though on the surface there is only an AP in the complement of *have*, we follow Businger (2011) in assuming that *have* always embeds an RP. Koeneman, Lekakou & Barbiers (2011: 55) assume instead that *have* takes an AP as its complement in the double perfect, but since copular *have* normally only embeds RPs and perhaps DPs (unless they are reanalyzed as RPs with a silent predicate, cf. above), this strikes us as too construction-specific. One possibility is that SpecRP is occupied by a silent proform related to the object. This would then also be a possible goal for the accusative case normally assigned by the preposition contained in *have*. Alternatively, the object moves to SpecRP at LF.

There is a construction in German where copular *have* only occurs with a predicate, cf. (i):

- (i) *Standard German* (Businger 2011: 151–153)
 Wir haben geöffnet.
 we have opened
 ‘We are open.’

It seems plausible to postulate a silent object (i.e., something like ‘*our shop*’) in this construction as it could serve as the semantic subject of the participle. No such motivation is present in the double perfect, however. Perhaps, small clauses without a subject are possible in German because it is a language without an EPP-requirement for subjects, i.e., subjects can stay within vP/VoiceP so that the specifier of T remains unfilled.

³² We will not try to derive the full past participle syncretism that we find in German varieties. However, if we want to allow a common analysis for all past participles even as a remote possibility, the marker of the participle cannot be generated as the head of the AP, since at least some past participles are not adjectival. For *sein*-passives, *haben*-passives, eventive passives and prenominal participles one could follow Bruening (2014: 392) in assuming that they spell out a Voice head without a specifier (which implies that the diagrams for the *haben*-, cf. (56), and the *sein*-passive, cf. (60), would have to be enriched with a VoiceP after all). Obviously, this neither extends to the double perfect nor to the simple eventive perfect, where Voice does have a specifier. We will leave this for future research.

What remains to be accounted for is the agreement pattern in the DCP; recall that the participle always agrees with the internal argument with transitive verbs, while with unergative verbs the participle appears with default agreement. For reasons that we currently do not understand, PRO is apparently not a possible goal for the phi-probe on the adjective, even though it is structurally closer to it than the direct object.³³ Perhaps, agreement is in fact triggered by a silent object-related element in SpecRP (recall fn. 31), but this may create problems for Control and potentially induce a Principle C effect; alternatively, the object undergoes covert movement to SpecRP. We have to leave this issue open for the moment, noting that in fact the very same problem arises with participle agreement in Romance: Agreement in *have*-perfects is usually thought to involve Spec-head agreement between the verb/participle and the fronted object. Since this intermediate position is usually identified with SpecVoiceP and thus the base-position of the subject, one would expect the participle to actually agree with the subject (at least as a possibility, e.g., with unergative verbs). At least in Standard French and Italian, however, this is not the case and thus constitutes a non-trivial problem.³⁴

The structural differences between the *haben*-passive and the DCP account for their different semantic and syntactic behavior: First, since the external argument of the lexical participle (i.e., PRO) is controlled by the surface subject, it is obligatorily interpreted as the agent of the participle. Second, the object appears inside the VP and thus in a position in the c-command domain of the participle. This accounts for its position relative to instrumental adverbs, i.e., the fact that it can follow them, unlike the object in the *haben*-passive, recall example (44) (since the object can be scrambled within VoiceP, it can also precede the PP). Third, the structural asymmetry also accounts for the fact that a DCP cannot be coordinated with a *haben*-passive, recall example (38): for the object to have scope over both conjuncts, R'-coordination would be required. However, since the object occupies the required position (SpecRP) only in the *haben*-passive, coordination is ruled out. Fourth, the structural asymmetry predicts that only the double compound perfect will be compatible with idioms, since verb and object form a unit, while this is not the case in the *haben*-passive. This prediction is borne out:

(58) *Colloquial German*

Er hat ein Auge zuge drückt (gehabt).
he has an eye closed had

- a. 'He generously ignored a mistake.' (✓eventive perfect, ✓DCP, **haben*-passive)
b. 'One of his eyes was closed.' (✓eventive perfect, ✓DCP, ✓*haben*-passive)

Fifth, as for the two other contrasts, viz., *un*-prefixation and the lexical comparative, there are good reasons to assume that they cannot attach to adjectives embedding so much verbal structure. In the case of the comparative, the number of verbal participles readily allowing such modification is generally rather small. This can be explained

³³ One cannot generally rule out agreement with PRO since it can agree with predicative adjectives in languages like German:

(i) *Standard German*

Er/sie hat versprochen, PRO als erst-er/erst-e zu kommen.
he/she has promised as first-M.SG/first-F.SG to come.INF
'He/she promised to come first.'

³⁴ Interestingly, there are varieties of Romance where external arguments can trigger agreement in *have*-perfects, see e.g., the overview in Legendre (2017: 292).

by the fact that many states resulting from events do not provide for easily gradable structures, but rather form complementaries (see Cruse 2000). For instance, the state of being washed could in principle be coerced into a gradable property of \pm CLEAN. However, this does not seem to be accessible, and the participle *gewaschen* does not readily admit the comparative. Thus, the comparative is already limited in the *haben*-passive (cf. Businger 2013: 150–151) and consequently even more so in the DCP, where a stative adjective embedding a fully fledged VoiceP would have to be coerced into a gradable property (see also Lundquist 2013 for evidence that participles with an eventive/verbal component are not gradable). As for *un*-prefixation, it has been shown that *un*-prefixed participles generally do not easily allow for modification, which is why Anagnostopoulou (2003) treats them as lexical (and thus without an embedded VP). Even though Alexiadou, Anagnostopoulou & Schäfer (2015: 166–173) have shown that the restrictions are looser than originally envisaged, participles with *un*-prefixation are generally more limited than regular stative participles so that the incompatibility with the DCP does not come as a surprise. Sixth, since double compound perfects contain a fully-fledged active VoiceP, the object receives case within VoiceP. Similarly, oblique cases are available as well, while in the *haben*-passive, the external object regularly receives accusative case from (decomposed) ‘have’.

Finally, recall from Section 2.3 above that we also find agreeing participles with resultative perfects. We assume that their structure is very similar to that of DCPs: They also contain a VoiceP with a PRO, ensuring that the subject is identical to the agent of the lexical predicate. VoiceP is contained in an AP, accounting for agreement, and the AP is the predicate of an RP, which is selected by the copula ‘have’. The structure of resultative perfects thus only differs from the DCP-structure in (57) in that there is no Aux-layer.

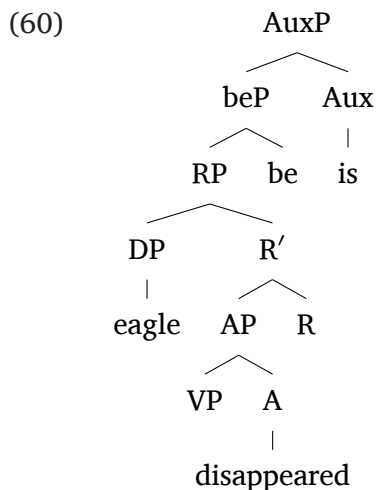
4.2.2 Double compound perfects based on unaccusative verbs

We now turn to unaccusatives in the DCP as in (28c) above and in (59):

- (59) *Standard/Colloquial German*
 Der Adler ist verschwunden gewesen.
 the eagle is disappeared been
 ‘The eagle had disappeared.’

As with *haben*, the surface string is ambiguous between the simple present perfect version of a *sein*-passive and the DCP. Crucially, both constructions require agreement on the adjective in Highest Alemannic dialects, recall Section 2.3.³⁵ The stative version of (59) corresponds to a *sein*-passive based on an unaccusative verb, see Gese, Maienborn & Stolterfoht (2011), and thus will receive an analysis roughly as in (60), where *be* embeds a small clause and the surface subject originates outside of AP/VP (i.e., is externalized; again, we represent the participle as an adjective embedding a VP only for ease of legibility and remain non-committal as to the possible amount of verbal structure; see also the discussion at the end of this section):

³⁵ Note that with only one instance of *be*, the sentence is ambiguous between a *sein*-passive and an eventive simple perfect interpretation. The fact that agreement is only found in the former in dialects with agreeing participles clearly shows that the two constructions must be distinguished, a fact that has been controversial in the literature for some time, see, e.g. Gese, Maienborn & Stolterfoht (2011).



It is not easy to distinguish the stative reading from the DCP-reading since, due to the absence of the external argument, many modifiers are ruled out on independent grounds. What is clear is that under both readings, result-oriented manner adverbs are possible (the temporal adverbial triggers the stative reading):

- (61) *Standard/Colloquial German*
 Er ist (seit gestern) spurlos verschwunden gewesen.
 he is since yesterday traceless disappeared been
 ‘He has been missing without a trace since yesterday.’

There is a difference, though, with respect to event-related manner adverbs like ‘secretly’, which are only acceptable under the DCP-interpretation:

- (62) *Zurich German*
 Ich ha ghofft, dass i en no gsee, aber won i häicho bin, isch
 i have hoped that I him still see but when I home.come am is
 niemert deet gsii, er isch schiinbaar heimlich verschwunde gsii.
 nobody there been he is apparently secret disappeared been
 ‘I had hoped that I would still be able to see him, but when I came home, nobody
 was there, he had apparently secretly disappeared.’

As (63) shows, once a stative-reading is forced (by means of a temporal adverbial), event-related manner adverbs are no longer possible:

- (63) *Zurich German*
 Er isch (*siit geschter) häimlich verschwunde gsii.
 He is since yesterday secretly disappeared been
 ‘He has been secretly missing (since yesterday).’

The same contrast obtains with comitative adverbials:

- (64) *Zurich German*
 a. Won i häichoo bi, isch de Dieb scho mit mim Gäld
 when I home.come am is the thief already with my money
 verschwunde gsii.
 disappeared been
 ‘When I came home, the thief had already disappeared with my money.’

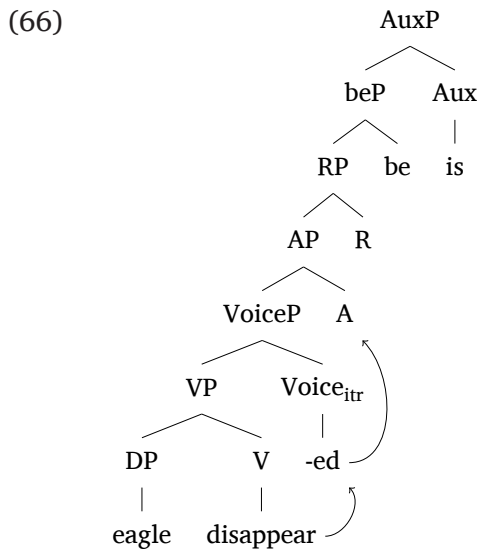
- b. De Dieb isch (*sit geschter) mit mim Gäld verschwunde gsii.
 the thief is since yesterday with my money disappeared been
 ‘The thief has been missing with my money (since yesterday).’

There is thus solid evidence for a verbal component in the DCP based on unaccusative verbs. There are also (somewhat subtle) ordering differences between the two constructions. In the *sein*-passive, the subject has to precede manner adverbials, while in the DCP, the subject can occur after the adverbials:

(65) *Colloquial German*

- a. *sein*-passive:
 dass seit heute Morgen {ein Gemälde} spurlos {*ein Gemälde}
 that since today morning a painting traceless a painting
 verschwunden gewesen ist
 disappeared been is
 ‘that a painting has been missing without a trace since this morning’
- b. DCP:
 nachdem {ein Gemälde} spurlos {?ein Gemälde} verschwunden
 after a painting traceless a painting disappeared
 gewesen ist
 been is
 ‘after a painting had disappeared without a trace’

This suggests that the subject occupies different structural positions. The facts are in line with our structure for the stative unaccusative passive in (60), where the subject is generated outside of the participle phrase. The DCP, on the other hand, is based on an unaccusative structure; the surface subject is generated as an object of V, where it may remain until the end of the derivation (raising of subjects is generally optional in German). This accounts for why the subject can follow the manner adverb in (65b). Assuming that as in the DCP based on *haben*, one cannot stack perfect auxiliaries (cf. Koeneman, Lekakou & Barbiers 2011), the structure of the DCP based on unaccusatives thus looks as in (66) with a perfect auxiliary *be* embedding copular *be*, which in turn embeds an RP (as with the double perfect based on *have*, the specifier of R is not overtly filled). The presence of an intransitive VoiceP is supposed to account for the greater flexibility with regard to modification than in the *sein*-passive:³⁶



³⁶ In Koeneman, Lekakou & Barbiers (2011: 50–51), the unaccusative subject is generated outside the VP, in SpecAP (which is the complement of the copula in their analysis). They thus assign the same structure to adjectival passives and DCPs based on unaccusatives; given the difference with respect to event-related modification and word order discussed above, their proposal thus cannot be extended to the German data as these differences would remain unaccounted for.

The fact that we find agreement in both the stative-passive and the DCP can be accounted for by means of the flexible probing nature of adjectives (Baker 2008: 44–48, 67–74): Since they can both probe upwards and downwards, agreement with the theme is correctly predicted in both cases. Finally, in both constructions, the theme is assigned nominative case by T (or whatever head assigns nominative case in German).

Let us summarize the main findings of this section and their broader theoretical implications. The tests we have considered concerning admissible event-related modifiers indicate that in a DCP, the structure embedded below the AP is a VoiceP (at least in DCPs based on transitive and unergative verbs). Note that this is exactly the same structure which Bruening (2014) and Alexiadou, Anagnostopoulou & Schäfer (2015) have proposed for the stative passive in German/English. Yet, stative passives show many more restrictions than DCPs and are much more afflicted by exceptions. Therefore, a solution assuming the same syntactic structure for two constructions that show such diverging behavior does not look very satisfactory. However, the assumption of an embedded VoiceP in DCPs would be much less astonishing against the background of the more traditional perspective on *sein*-passives, as recently championed in work by Claudia Maienborn (see, e.g. Maienborn 2007; Gese, Stolterfoht & Maienborn 2009; Maienborn, Gese & Stolterfoht 2016). In essence, they argue that *sein*-passives are cases of adjectival conversion, where the adjectival head simply selects a verb which expresses an event-kind. The adjective may inherit arguments from the verb, but there is no VP or more verbal structure embedded in the AP. We therefore believe that the phenomena we describe here for Alemannic can provide an indirect argument against postulating a rich verbal structure in *sein*- and *haben*-passives in German.

Be that as it may, the big difference between DCPs and *sein*-passives in German is that there clearly is an event-token in the former, whereas there seems to be general agreement that the latter only contains an event-kind. Since event-kinds are orthogonal to the main points of our paper, we leave an exploration of this issue for further research.

5 Agreement in eventive passives

In the dialects under discussion, both stative (67a) and eventive passives (67b–e) show agreement on the lexical participle:^{37,38}

³⁷ In these Highest Alemannic dialects, ‘come’ is used as the auxiliary for the eventive passive and as the copula in non-verbal predication meaning ‘become’, while Standard German and other Alemannic dialects use *werden* in these contexts:

- (i) *Avers (Grisons)* (Szadrowsky 1936: 453)
 Schi ist tunkl-i choⁿ.
 she is dark-F.SG come
 ‘It (the pan) has become dark.’

As shown in Bucheli Berger (2005b), there is a very close connection between the use of this auxiliary and the presence of agreement in the passive and inflected adjectives/participles quite generally. While *werden* has been gaining ground in Highest Alemannic dialects, *cho* remains preferred and crucially, inflection is generally only observed with *choo*, but not with *werden*. A rare example of agreement with *werden* is provided in Hodler (1969), who notes that it is not regular, which can be seen in the fact that only the last of the three adjectives bears agreement morphology:

- (ii) *Bernese German* (Hodler 1969: 354)
 Er isch rächthaberisch-Ø, großhansig-Ø, vor allem zornmüetig-e **worde**.
 he is bossy, loud-mouthed, before all angry-M.SG become
 ‘He became bossy, loud-mouthed, and above all, angry.’

For further discussion about ‘come’ as an auxiliary, see Hodler (1969: 473–477); for residual cases in Bernese where the eventive passive is formed by means of ‘be’ rather than ‘become’, see Hodler (1969: 477–480).

³⁸ This does not seem to hold for all dialects. Szadrowsky (1936) notes the following opposition for the dialect of Safien:

- (67) a. *Bernese German* (Hodler 1969: 346)
 Wen r ischd häichun, sii d Chind gsträält-i ung
 when he is come.home are the children.PL combed-PL and
 gwäschn-i gsiin.
 washed-PL been
 ‘When he came home, the children were combed and washed.’
- b. *Visperterminen (Valais)* (Wipf 1910: 145)
 Wie chund daas gmacht-s?
 how comes that.N.SG made-N.SG
 ‘How is this done?’
- c. *Steg (Valais)* (Fuchs 1993: 68)
 Der chunnt dernaa va denä Gsellu im Regierigssaal
 he.M.SG comes after of those guys in the government.hall
 gidreet-ä und chesslut-ä.
 turned-M.SG and manipulated-M.SG
 ‘Then, he is manipulated by those guys in the government hall.’
- d. *Obersaxen (Grisons)* (Szadrowsky 1936: 453)
 Ds Choorä chund im Settember ghüüwe-s.
 the grain comes in September harvested-N.SG
 ‘Grain is harvested in September.’
- e. *Avers (Grisons)* (Szadrowsky 1936: 453)
 Schi ischt bruucht-i cho.
 she is used-FEM.SG come.PTCP
 ‘She (i.e. the bowl) has been used.’

As has already been shown in the introduction, the *sein*-passive in (67a) does not contain any direct reference to the underlying event but only to the resultant/subsequent state. The fact that the participle agrees is in line with the adjectival (and thus stative) nature of the participle. In (67b–e), however, we find inflection even though the participle seems to be eventive, and clearly contains an accessible event-token. In (67c) there is an explicit agent, and in (67d), there is a temporal adverbial that refers to the event-token. Again, as in DCPs, it seems clear that there is a substantial eventive and thus arguably verbal component in eventive passives. At least at first sight, it therefore seems difficult to relate agreement to the adjectival nature of the participle. However, we will show that there is evidence for the presence of an adjectival head in eventive passives as well, and we will therefore argue that all passives in Highest Alemannic (and arguably other non-agreeing varieties of German, where this is difficult to investigate, though) are at some level adjectival. We will further argue that this adjectival head is even a stativizer in the eventive passive and crucially the same stativizing head as in the other agreeing participle constructions discussed in this paper. Passive participles are thus also treated as mixed categories. In what follows, we will first discuss semantic and structural differences between

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- (i) *Safien (Grisons)* (Szadrowsky 1936: 454)
- a. *sein*-passive:
 D'r Tisch išt g'wäschn-e'.
 the.M.SG table is washed-M.SG
 ‘The table is washed.’
- b. eventive passive:
 D'r Tisch chunt g'wäsche".
 the table comes washed
 ‘The table is being washed.’

The *sein*-passive in (ia) shows agreement of the participle with the subject, whereas in the eventive passive in (ib), the participle does not agree. However, this seems to be the exception confirming the rule.

stative and eventive passives before presenting our arguments in favor of the presence of an adjectival head.

5.1 Differences between stative and eventive passives

As was already briefly discussed in Section 1 above, it is uncontroversial that the eventive passive and the *sein*-passive differ with respect to event-related modification. Eventive passives are quite unrestricted in this respect in that both event-internal and event-related adverbials are possible. As already discussed in Section 1, the *sein*-passive, however, only allows “result-oriented” modifiers and additionally restricts modification to kind-modification (cf. Gehrke 2015), which generally entails that any event-participants are non-referential; manner adverbs are only possible if they apply to the resultant state. The following pair illustrates the contrast:³⁹

(68) *Colloquial/Standard German*

a. eventive passive:

Diese Datei ist (von Inge) (vor drei Tagen) (absichtlich) (vorsichtig)
 this file is by Inge before three days deliberately carefully
 gelöscht worden.
 deleted become

‘This file was (deliberately) (carefully) deleted (by Inge) (three days ago).’

b. *sein*-passive:

Diese Datei ist (*von Inge) (*vor drei Tagen) (*absichtlich)
 this file is by Inge before three days deliberately
 (*vorsichtig) gelöscht.
 carefully deleted

lit.: ‘This file is deleted (*by Inge) (*two days ago) (*deliberately) (*carefully).’

In the eventive passive, agentive *by*-phrases, agent-oriented adverbs like *deliberately*, temporal adverbials that refer to the event time and manner adverbs that modify the event rather than just the result are all felicitous. The eventive passive also crucially involves an event token, which is why event-related participants can be referential and therefore be picked up by anaphoric pronouns (recall also the contrast between the *haben*-passive and the DCP, cf. example (39)).

(69) *Colloquial/Standard German*

Diese Notiz ist mit diesem roten Stift_i geschrieben worden. Er_i gehörte
 this note is with this red pen written become he belonged
 dem Mörder.
 the.DAT murderer

‘This note has been written with this red pen. It belonged to the murderer.’

This very much suggests that eventive passives not only contain VoiceP – given the possibility of Voice-related modifiers like *by*-phrases and adverbs like *deliberately/carefully* –, but also AspP because of their compatibility with temporal adverbials.⁴⁰ In terms of restrictions,

³⁹ It can easily be shown that in the eventive passive, the modifiers are not licensed by the auxiliary but indeed by the participle: They can be topicalized together with the lexical VP, showing that they attach below the auxiliary:

(i) *Colloquial/Standard German*

[Von Inge gelöscht] wurde die Datei nicht.
 by Inge deleted became the file not
 ‘The file was not deleted by Inge.’

⁴⁰ Prenominal past participles in German seem to allow the same range of modification options and thus also contain significant amounts of verbal structure, see Rapp (2000).

the eventive passive is thus closer to the DCP than to the *sein*-passive, the major difference being the possibility of event-related adverbials. Eventive passives containing agreeing participles display the same behavior: as shown at the beginning of this section, they are compatible with temporal adverbials referring to the event time (see, e.g., (67d)) and referential *by*-phrase-agents (see, e.g., (67c)).

Eventive and *sein*-passives also differ with respect to the structural position of the subject. As the following paradigm shows, while subjects of eventive passives can both precede and follow instrumental-PP-modifiers, subjects of *sein*-passives have to precede the modifiers:⁴¹

(70) *Colloquial German*

a. eventive passive:

dass {mit einem Schraubenzieher} die Wohnungstür {mit einem
that with a screwdriver the apartment.door with a
Schraubenzieher} geöffnet wurde
screwdriver opened became
'that the door of the apartment was opened by means of a screw-driver'

b. *sein*-passive:

dass {*mit einem Schraubenzieher} die Wohnungstür {mit einem
that with a screwdriver the apartment.door with a
Schraubenzieher} geöffnet ist
screwdriver opened is
'that the door is opened by means of a screwdriver'

As this section has shown, the eventive nature of eventive passives is uncontroversial and it seems obvious to treat the participle as verbal. In the next subsection, we will, however, provide evidence for the presence of an adjectival head on top of the verbal structure.

5.2 Eventive passives as adjectival structures

While there is thus solid evidence for a large amount of verbal structure in eventive passives, the only evidence we have provided in favor of their adjectiveness so far is the agreement on the participle and the fact that the participle occurs in the same slot as adjectival predicates when *choo* 'come' is used as a copula. More evidence for the presence of an adjectival head comes from word order: To the best of our knowledge, there are no contemporary Alemannic dialects that allow the 12 order in the eventive passive, not even those, including Bernese and the Highest Alemannic ones, that otherwise readily allow the 12 order in the simple perfect (cf. (24a)). Hodler (1969: 472–477) only provides examples with 21 order and, in more complex clusters, with 132, 312 or 321 order, where V2 would be the passive auxiliary and V3 the lexical participle. The same goes for the more recent descriptions by Burri & Imstepf (2002) and Kolmer (2011). The following minimal pair provided by Sandro Bachmann (p.c.) shows that, while the agreement is optional in his variety, it does not affect the word order possibilities:

(71) *Visp (Valais)* (Sandro Bachmann, p.c.)

Ich glöibu, dass der Urs hitu gwäält(-e) chunt/*chunt gwäält(-e).
I believe that the Urs today elected-M.SG comes/comes elected-M.SG
'I believe that Urs will be elected today.'

Remember from (24a) that 12 orders are grammatical and attested with verbal participles. The impossibility of 12 orders (or more complex clusters with V3 as the cluster-final element) strongly suggests that the participle in eventive passives projects an AP on top of

⁴¹ The *sein*-passive is acceptable with the instrumental modifier if the door shows traces of the opening event (e.g., if is scratched etc.).

the verbal structure; since it thus counts as non-verbal, it must occur before the right sentence bracket like other non-verbal material.⁴² While the presence of an adjectival head is thus well-motivated, it remains to be clarified whether this is the same stativizing head that we have postulated for the other constructions with agreeing participles.

We believe that a stative component can even be found in the eventive passive once we turn to non-verbal predication based on *werden/choo* '(be)come', which is formally identical to the auxiliary used in the eventive passive: In non-verbal predications with *bona fide* adjectives, globally eventive readings are possible:

- (72) *Standard German*
- a. Unsere Katze ist krank.
our cat is ill
'Our cat is ill.'
 - b. Unsere Katze wird krank.
our cat becomes ill
'Our cat becomes ill.'

Exchanging *sein* with *werden* leads to an eventive interpretation. We would like to propose that the pair in (73) should be analyzed in analogy to that in (72), i.e., *werden/choo* should be treated as a copula in both non-verbal predication and, crucially, eventive passives (where it is normally treated as an auxiliary).

- (73) *Standard German*
- a. *sein*-passive:
Dieses Foto ist gelöscht.
this photo is deleted
'This picture is deleted.'
 - b. eventive passive:
Dieses Foto wird gelöscht.
this photo becomes deleted
'This picture is being deleted.'

The sentences in (72b) and (73b) are clearly eventive, but that does not preclude that the constituent headed by the participle can denote a state, which is then turned into an event by the addition of *werden/choo*. For non-verbal-predication, this is clearly desirable, since we would want to assign the same meaning to *ill* in both (72a) and (72b). In the same way, the eventive passive can very well be globally eventive, while the complement of *werden/choo* is stative (or, more precisely, contains an eventive VP with a stativizing AP on top).⁴³

⁴² Additional evidence for adjectiveness comes from the observation in Hodler (1969: 476) that in the dialect spoken in the Lötschental, the form of the participle in the eventive passive is different from the form used in the simple eventive perfect and, crucially, clearly reveals its adjectival nature.

⁴³ The idea can be sketched as follows: *become ill* denotes an event of incrementally approaching the state of *being ill*, without however including necessarily the final transition into the state. Similarly, for (73b), we assume that the participle *deleted* denotes the target-state of *delete*, namely, *being deleted*, and that *become deleted* denotes an event of incrementally approaching the state of *being deleted* (this could be formally implemented in the framework of Krifka 1998). As far as we see, this will give us correct truth conditions for telic verbs. For atelic verbs, we would additionally need to make sure that the incremental build-up towards a result-state only includes stages of the core-event, but not the preparatory stages:

- (i) *Standard German*
Das Lied wird (von den Wiener Sängerknaben) gesungen.
the song becomes (by the Vienna S.) sung
'The song is sung (by the Wiener Sängerknaben).'

(i) necessarily means that the event of *singing* is already on-going; it cannot mean that the *Wiener Sängerknaben* are merely preparing to perform the song. Additionally, (i) could also have a future interpretation, but even in that case would there be only reference to the core event, not to the preparatory stages.

At first sight, there seems to be a problem for this view because coordinating a passive participle of an eventive passive with a genuine predicative adjective fails (cf. also Businger 2013: 145):

- (74) *Standard German*
 *Unsere Katze wird kastriert und krank.
 our cat becomes castrated and ill
 lit.: ‘Our cat is being castrated and ill.’

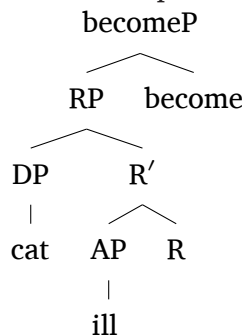
This is in opposition to *sein*-passives, where coordination of a participle with a genuine adjective is unproblematic:

- (75) *Standard German*
 Unsere Katze ist kastriert und krank.
 our cat is castrated and ill
 ‘Our cat is castrated and ill.’

Notice that in (74), it would be perfectly possible to have either two participles of an eventive passive or two genuine adjectives, but the combination of an eventive passive participle with a genuine predicative adjective fails.

The lack of coordinatability follows straightforwardly, however, once we look at the structures of the two constructions: Recall from example (70a) above that in the eventive passive, the subject can remain below instrumental adverbials. This suggests that it remains within VP, while in bona fide non-verbal predication, the subject occupies the specifier of RP, i.e. adjectives are unergative predicates (see, e.g., Baker 2008: 29–30). The contrast is illustrated by the following diagrams:⁴⁴

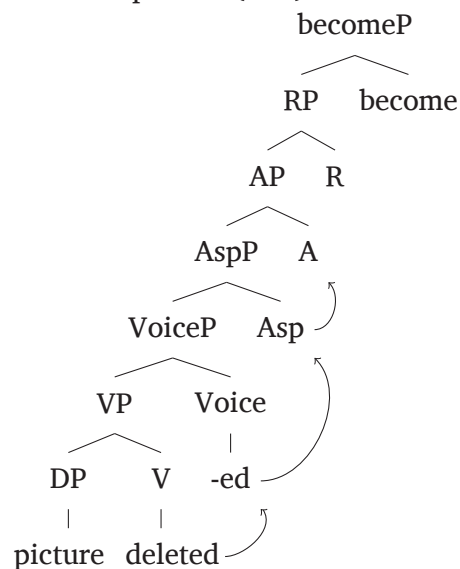
- (76) a. non-verbal predication (72b):



⁴⁴ In the diagrams we have assumed, in line with much of the literature, that the copula *werden* ‘become’ also embeds an RP like other copulas. In the case of German *werden*, however, there may also be reasons to treat it as the head of RP since *werden* imposes certain restrictions on the kinds of predicates it can occur with that can be captured more straightforwardly if *werden* takes the predicate as its complement, see Härtl (2007: 134). The distinction is, however, orthogonal to the point we intend to make here. All that matters for us is that the subject occurs above the AP in non-verbal predication but in the c-command domain of the participle in eventive passives. As in the double perfect, the specifier of R is not overtly filled in the eventive passive. If the two constructions occur in the simple perfect, there will be an Aux-projection on top of the phrase projected by ‘become’.

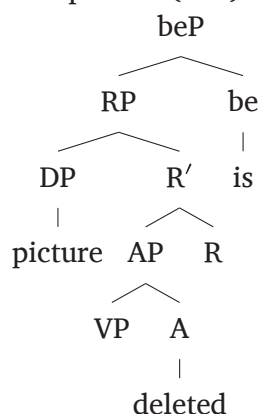
The structure for the eventive passive only contains a Voice head. We remain agnostic as to whether the external argument is existentially bound directly by Voice, by a higher passive head or by the stativizing adjectival head.

b. eventive passive (73b):



The problem with coordination in (74) above is unsurprising given this structural difference: For the subject to have scope over both conjuncts, this would have to involve R'-coordination, but since the subject in the eventive passive occurs in the object position (as with unaccusative subjects, raising of the subject is optional in German), this does not work (reversing the conjuncts therefore does not help either, the sequence Adj + eventive passive also leads to ungrammaticality).

The word order asymmetry between *sein*-passives and eventive passives with respect to instrumental PPs discussed in (70) above shows that *sein*-passives have the same structure as genuine adjectives: The subject originates outside the AP (cf. also Bruening 2014) so that it must precede instrumental-PPs. Their structure is thus roughly as follows (again, we represent the participle as an AP embedding a VP):

(77) *sein*-passive (73a):

Note that all these structures also successfully account for the agreement facts in the Highest Alemannic dialects: Since adjectives can probe both upwards and downwards (see Baker 2008: 44–48, 67–74), the phi-probe on the adjective will always target the subject, whether internal to the AP (as in eventive passives) or external to it (as in *sein*-passives and with genuine adjectives).

To summarize this section, the similarities between eventive and *sein*-passives, viz., the fact that (i) in both constructions the participle occurs after *choo*, (ii) displays agreement

with the subject and (iii) cannot occur cluster-finally can be directly linked to the fact that both are adjectival externally (see also Lundquist 2013 for the proposal that eventive passive participles are adjectival). We have also shown that stative and eventive passives differ significantly both with respect to the possibility of event-modification and the structural position of the subject. While event-related modification is very restricted in the *sein*-passive, it is freely available in eventive passives, suggesting that the participle contains an AspP. The difference in internal structure not only accounts for the semantic differences but may also explain why eventive/verbal passives have a more restricted distribution, e.g. cannot occur after ‘seem’ (see Lundquist 2013, who argues that this is due to the fact that ‘seem’ selects for gradable adjectives, which clashes with the eventive properties of eventive passive participles). The participle in eventive passives is clearly the adjectival participle with the largest amount of verbal structure in German we have studied in this paper.⁴⁵

What is somewhat controversial is our assumption that the adjectival head is the same stativizer in all constructions with agreeing past participles. While the stative component is immediately obvious in the *sein*-passive, the evidence for a semantically stative component in the eventive passive is weaker, although we have argued that such a motivation can be found through comparison with non-verbal predication based on *werden/choo* ‘become’. The fact that the eventive perfect never shows agreement in the dialects under consideration can be linked to the fact that there simply is no adjectival component since the eventive VP occurs in the complement of a perfect auxiliary, which selects VPs and not APs. The fact that in this context the participle is verbal can be seen in the fact that it allows the 12 cluster order in these dialects, as in example (24) above.

Leaving aside the potentially problematic issue of the eventive passive, the link between category and agreement seems very plausible in German varieties: Participles agree in those positions where adjectives generally agree in the language. In Highest Alemannic varieties, this includes both attributive and predicative positions, in other German varieties agreement is restricted to attributive positions. Cross-linguistically, however, there is not always such an obvious link; although stative and eventive passives usually involve participle agreement, agreement is often also found with eventive present perfects, cf., e.g., Standard Italian or French (or, for that matter, varieties where agreement obtains even without any visible movement of the transitive object/the subject, see Belletti 2017). Since eventive perfect participles are not obviously in an adjectival slot, agreement must have a different source (but see Lundquist 2013 for the claim that even these participles are adjectival).

More generally, the facts described in this paper support the idea that verbs vs. adjectives are not completely discrete categories, but that there rather exists a cline between fully adjectival forms and fully verbal forms, where Alemannic past participles cover much of the intermediate ground. One major area this paper focussed on is the accessibility of an event token with respect to higher modifiers. Fully aoristic simple perfects (that is, perfects that are used as a simple past tense, a feature of most German dialects and Colloquial Standard German) allow any kind of verbal modifiers of event tokens, whereas fully adjectival constructions place very stringent constraints on modification.

⁴⁵ Our analysis so far has little to say about why which construction contains which amount of verbal structure. For instance, we have no deep explanation to offer as to why the DCP only contains VoiceP but not AspP. Since the adjectival participle in the eventive passive shows that adjectival participles can contain AspP, nothing in principle seems to rule this out in the DCP. That this problem is probably more general becomes clear once we look at language variation: While it is clear that Greek stative passives contain more verbal structure than German *sein*-passives (recall the introduction), it is much less clear why there should be this difference and whether something interesting can be said about this cross-linguistic variation.

A second dimension along which there may be degrees of adjectivehood or verbality concerns the at-issue content and a possibly present presupposed content. A fully adjectival form (like a morphologically clearly distinct adjective) asserts a state, without presupposing an event leading up to that state. *Sein*-passives make an assertion with respect to a state, while presupposing an event (type), which precedes the asserted state. Most theories of (eventive) perfects assume that they make an assertion with respect to an event (token), while presupposing a state resulting from that event. Finally, a purely verbal form like an aoristic perfect contains no reference whatsoever to a state, but only makes an assertion with respect to an event.

6 Conclusion

We have shown that in Highest Alemannic dialects of German, where predicative adjectives generally agree, past participles can agree as well. These agreeing participles seem to cut across the boundaries of stativity vs. eventivity on the one hand, and adjective vs. verb on the other. We have nevertheless pursued the hypothesis that participles only agree when they are adjectival and that the adjectival head is a stativizer in all constructions with agreeing participles. While uncontroversial with *sein*- and *haben*-passives and resultative perfects, the hypothesis at first sight seems to encounter problems when double perfects and eventive passives are taken into consideration. Nevertheless, we have provided robust syntactic evidence in favor of an adjectival head in both constructions. There is also solid semantic evidence for a stative component in the double perfect, while stativity in the eventive passive can only be motivated more indirectly.

Both constructions make a contribution to the typology of adjectival participles in German and possibly beyond: The adjectival participles in the double perfect and the eventive passive show significantly fewer restrictions on modification than the adjectival/stative passives (in German/English) that are usually discussed in the literature.

Finally, the facts discussed in this paper provide further evidence against a unified category of past participles, extending the familiar distinction between adjectival and verbal uses of the participle. According to our proposal, we obtain different structures for the participle appearing in, in decreasing order of verbality: the eventive perfect, eventive passives, double compound perfects, and stative (i.e., *haben*- and *sein*-) passives.

Abbreviations

ACC = accusative, DAT = dative, GEN = genitive, NOM = nominative, PL = plural, SG = singular, M = masculine, F = feminine, N = neuter, 1/2/3 = first/second/third person, INF = infinitive, COND = conditional, PFV = perfective, PST = past, PTCP = participle, PRT = particle, DCP = double compound perfect, AP = adjectival phrase, CopP = copula phrase, DP = determiner phrase, RP = relator phrase, SC = small clause, VoiceP = voice phrase, VP = verb phrase, LF = Logical Form

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Competing Interests

The authors have no competing interests to declare.

References

- Abraham, Werner. 2005. *Deutsche Syntax im Sprachenvergleich: Grundlegung einer typologischen Syntax des Deutschen*. Tübingen: Narr.
- Alexiadou, Artemis, Berit Gehrke & Florian Schäfer. 2014. The argument structure of adjectival participles revisited. *Lingua* 149. 118–138. DOI: <https://doi.org/10.1016/j.lingua.2014.05.018>
- Alexiadou, Artemis & Elena Anagnostopoulou. 2008. Structuring participles. In Charles B. Chang & Hannah J. Haynie (eds.), *Proceedings of the 26th West Coast Conference on Formal Linguistics*, 33–41. Somerville, MA: Cascadilla Proceedings Project.
- Alexiadou, Artemis, Elena Anagnostopoulou & Florian Schäfer. 2015. *External arguments in transitivity alternations: A layering approach* (Oxford Studies in Theoretical Linguistics). Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199571949.001.0001>
- Anagnostopoulou, Elena. 2003. Participles and voice. In Artemis Alexiadou, Monika Rathert & Arnim von Stechow (eds.), *Perfect explorations*, 1–36. Berlin: Mouton de Gruyter. DOI: <https://doi.org/10.1515/9783110902358.1>
- Baechler, Raffaella. 2009. *Morphologischer Wandel im Senslerdeutschen: Kongruenzmarkierung und Plural*. Freiburg im Brsg.: University of Freiburg MA thesis.
- Baker, Mark C. 2008. *The syntax of agreement and concord*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511619830>
- Belletti, Adriana. 2017. (Past) participle agreement. In Martin Everaert & Henk van Riemsdijk (eds.), *The Wiley Blackwell companion to syntax*, second edition. Oxford: Wiley-Blackwell. DOI: <https://doi.org/10.1002/9781118358733.wbsyncom081>
- Bossard, Hans. 1962. *Zuger Mundartbuch: Grammatik und Wörterverzeichnisse: Ein Wegweiser zur guten Mundart*. Zürich: Schweizer Spiegel-Verlag.
- Brandner, Ellen, Martin Salzmann & Gerhard Schaden. 2016. Zur Syntax und Semantik des doppelten Perfekts aus alemannischer Sicht. In Alexandra N. Lenz & Franz Patocka (eds.), *Syntaktische Variation: Areallinguistische Perspektiven*, 13–46. Wien: Vienna University Press. DOI: <https://doi.org/10.14220/9783737004015.13>
- Bruening, Benjamin. 2014. Word formation is syntactic: Adjectival passives in English. *Natural Language and Linguistic Theory* 32. 363–424. DOI: <https://doi.org/10.1007/s11049-014-9227-y>
- Bucheli Berger, Claudia. 2005a. Depictive agreement and the development of a depictive marker in Swiss German dialects. In Nikolaus P. Himmelmann & Eva Schultze-Berndt (eds.), *Secondary predication and adverbial modification*, 141–171. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199272266.003.0004>
- Bucheli Berger, Claudia. 2005b. Passiv im Schweizerdeutschen. *Linguistik online* 24(3/05). 49–77.
- Bucheli Berger, Claudia & Elvira Glaser. 2004. Zur Morphologie des (ko)prädikativen Adjektivs und Partizips II im Alemannischen und Bairischen. In Franz Patocka & Peter

- Wiesinger (eds.), *Morphologie und Syntax deutscher Dialekte und historische Dialektologie des Deutschen*, 189–226. Wien: Edition Praesens.
- Burri, Gabriela & Deniese Imstepf. 2002. Kontrastive Grammatik Berndeutsch/- Standarddeutsch: Einige ausgewählte Aspekte. *Linguistik online* 12(3/02). 19–36.
- Businger, Martin. 2011. “Haben” als Vollverb: Eine dekompositionale Analyse. Berlin: de Gruyter. DOI: <https://doi.org/10.1515/9783110252644>
- Businger, Martin. 2013. Haben-statives in German: A syntactic analysis. In Artemis Alexiadou & Florian Schäfer (eds.), *Non-canonical passives*, 141–161. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/la.205.07bus>
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. New York: Oxford University Press.
- Clauss, Walter. 1929. *Die Mundart von Uri: Laut- und Flexionslehre*. Frauenfeld: Huber & Co.
- Cruse, D. Alan. 2000. *Meaning in language: An introduction to semantics and pragmatics*. Oxford: Oxford University Press.
- Dauwalder, Hans. 1992. *Haslitiitsch: Wie mma s seid und cha schriben: Eine haslideutsche Kurzgrammatik*. Meiringen: Verlag Gemeinnütziger Verein.
- den Dikken, Marcel. 2006. *Relators and linkers: The syntax of predication, predicate inversion, and copulas*. Cambridge, MA: MIT Press. DOI: <https://doi.org/10.7551/mitpress/5873.001.0001>
- Egger, Marlise. 1993. Dialektveränderung im Sensebezirk untersucht an sprachlichen Besonderheiten des Senslerdialekts. In Helen Christen (ed.), *Variationslinguistik und Dialektologie: Ergebnisse aus studienabschliessenden Arbeiten an der Universität Freiburg/Schweiz* (Germanistica Friburgensia), 34–44. Freiburg: Universitätsverlag.
- Ernst, Thomas Boyden. 2002. *The syntax of adjuncts*. Cambridge: Cambridge University Press. DOI: <https://doi.org/10.1017/CBO9780511486258>
- Fleischer, Jürg. 2007. Zur Herkunft des flektierten prädikativen Adjektivs im Höchstalemannischen. *Zeitschrift für Dialektologie und Linguistik* 74(2/3). 196–240. www.jstor.org/stable/40505312.
- Freeze, Ray. 1992. Existentials and other locatives. *Language* 68(3). 553–595. DOI: <https://doi.org/10.2307/415794>
- Frey, Werner & Karin Pittner. 1998. Zur Positionierung der Adverbiale im deutschen Mittelfeld. *Linguistische Berichte* 176. 489–534.
- Fuchs, Gabriela. 1993. Das prädikative Adjektiv und Partizip im Walliserdeutschen. In Helen Christen (ed.), *Variationslinguistik und Dialektologie: Ergebnisse aus studienabschliessenden Arbeiten an der Universität Freiburg/Schweiz* (Germanistica Friburgensia), 65–79. Freiburg: Universitätsverlag.
- Gehrke, Berit. 2012. Passive states. In Violeta Demonte & Louise McNally (eds.), *Telicity, change, and state*, 185–211. Oxford: Oxford University Press. DOI: <https://doi.org/10.1093/acprof:oso/9780199693498.003.0008>
- Gehrke, Berit. 2015. Adjectival participles, event kind modification and pseudo-incorporation. *Natural Language and Linguistic Theory* 33(3). 745–790. DOI: <https://doi.org/10.1007/s11049-015-9295-7>
- Gehrke, Berit. 2017. *The empirical foundation of event kinds and related issues*. Paris: University Paris Diderot Habilitation Dissertation.
- Gese, Helga. 2013. Another passive that isn’t one: On the semantics of German *haben*-passives. In Artemis Alexiadou & Florian Schäfer (eds.), *Noncanonical passives*, 163–183. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/la.205.08ges>
- Gese, Helga, Britta Stolterfoht & Claudia Maienborn. 2009. Context effects in the formation of adjectival resultatives. In Susanne Winkler & Sam Featherston (eds.), *The fruits*


- of *empirical linguistics, volume 2: Product* (Studies in Generative Grammar 102), 125–155. Berlin: Mouton de Gruyter. DOI: <https://doi.org/10.1515/9783110216158.125>
- Gese, Helga, Claudia Maienborn & Britta Stolterfoht. 2011. Adjectival conversion of unaccusatives in German. *Journal of Germanic Linguistics* 23(2). 101–140. DOI: <https://doi.org/10.1017/S1470542711000067>
- Glaser, Elvira. In preparation. *Syntaktischer Atlas der deutschen Schweiz (SADS)*. Universität Zürich.
- Härtil, Holden. 2007. Lexikalische Blockierung und die grammatischen Folgen bei Kopula-Konstruktionen mit *werden*. In Ljudmila Geist & Björn Rothstein (eds.), *Kopulaverben und Kopulasätze: Intersprachliche und intrasprachliche Aspekte*, 117–139. Tübingen: Max Niemeyer Verlag.
- Henzen, Walter. 1927. *Die deutsche Freiburger Mundart im Sense- und südöstlichen Seebezirk*. Frauenfeld: Huber.
- Hodler, Werner. 1969. *Berndeutsche Syntax*. Bern: Francke.
- Hotzenköcherle, Rudolf. 1934. *Die Mundart von Mutten: Laut- und Flexionslehre*. Frauenfeld: Huber.
- Katz, Graham. 2003. On the stativity of the English perfect. In Artemis Alexiadou, Monika Rathert & Arnim von Stechow (eds.), *Perfect explorations*, 205–234. Berlin: Mouton de Gruyter. DOI: <https://doi.org/10.1515/9783110902358.205>
- Koenenman, Olaf, Marika Lekakou & Sjef Barbiers. 2011. Perfect doubling. *Linguistic Variation* 11. 35–75. DOI: <https://doi.org/10.1075/lv.11.1.02koe>
- Kolmer, Agnes. 2011. Zur Verbabfolge im Nebensatz: Ergebnisse einer Untersuchung zum Berndeutschen und Mittelbairischen. In Elvira Glaser, Jürgen Erich Schmidt & Natascha Frey (eds.), *Dynamik des Dialekts – Wandel und Variation: Akten des 3. Kongresses der Internationalen Gesellschaft für Dialektologie des Deutschen (IGDD)* (Zeitschrift für Dialektologie und Linguistik – Beihefte), 147–158. Stuttgart: Franz Steiner Verlag.
- Kratzer, Angelika. 2000. Building statives. In Lisa J. Conathan, Jeff Good, Darya Kavistkaya, Alyssa B. Wulf & Alan C. L. Yu (eds.), *Proceedings of the Twenty-Sixth Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on Aspect*, 385–399. Berkeley: Berkeley Linguistics Society, Inc. DOI: <https://doi.org/10.3765/bls.v26i1.1131>
- Krifka, Manfred. 1998. The origins of telicity. In Susan D. Rothstein (ed.), *Events and grammar*, 197–235. Dordrecht: Kluwer. DOI: https://doi.org/10.1007/978-94-011-3969-4_9
- Larsson, Ida. 2009. *Participles in time: The development of the perfect tense in Swedish*. Göteborg: Göteborgs Universitet dissertation.
- Legendre, Géraldine. 2017. Auxiliaries. In Andreas Dufter & Elisabeth Stark (eds.), *Manual of Romance morphosyntax and syntax*, 272–298. Berlin/Boston: De Gruyter. DOI: <https://doi.org/10.1515/9783110377088-007>
- Levinson, Lisa. 2011. Possessive with in Germanic: *have* and the role of P. *Syntax* 14(4). 355–393. DOI: <https://doi.org/10.1111/j.1467-9612.2011.00159.x>
- Litvinov, Viktor P. & Vladimir I. Radcenko. 1998. *Doppelte Perfektbildungen in der deutschen Literatursprache*. Tübingen: Stauffenburg-Verlag.
- Lundquist, Björn. 2013. The category of participles. In Gianina Iordachioaia, Isabelle Roy & Kaori Takamine (eds.), *Categorization and category change*, 11–32. Newcastle: Cambridge Scholars Publishing.
- Maienborn, Claudia. 2007. Das Zustandspassiv: Grammatische Einordnung – Bildungsbeschränkung – Interpretationsspielraum. *Zeitschrift für germanistische Linguistik* 35(1–2). 83–114. DOI: <https://doi.org/10.1515/ZGL.2007.005>

- Maienborn, Claudia. 2009. Building event-based ad hoc properties: On the interpretation of adjectival passives. In Arndt Riestler & Torgrim Solstad (eds.), *Proceedings of Sinn und Bedeutung 13*, 35–49. Stuttgart: Online Publikationsverbund der Universität Stuttgart (OPUS).
- Maienborn, Claudia, Helga Gese & Britta Stolterfoht. 2016. Adverbial modifiers in adjectival passives. *Journal of Semantics* 33. 299–358. DOI: <https://doi.org/10.1093/jos/ffv004>
- McCoard, Robert W. 1978. *The English perfect: Tense-choice and pragmatic inferences*. Amsterdam: North Holland.
- McIntyre, Andrew. 2013. Adjectival passives and adjectival participles in English. In Artemis Alexiadou & Florian Schäfer (eds.), *Non-canonical passives*, 21–41. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1007/s11049-015-9285-9>
- McIntyre, Andrew. 2015. Event modifiers in (German) adjectival participles: Remarks on Gehrke (2015). *Natural Language and Linguistic Theory* 33(3). 939–953. DOI: <https://doi.org/10.1007/s11049-015-9285-9>
- Parsons, Terence. 1990. *Events in the semantics of English: A study in subatomic semantics*. Cambridge: MIT Press.
- Portner, Paul. 2011. Perfect and progressive. In Claudia Maienborn, Klaus von Stechow & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning* 1. 1217–1261. Berlin: Mouton de Gruyter.
- Rapp, Irene. 1996. Zustand? Passiv? — Überlegungen zum sogenannten “Zustandspassiv”. *Zeitschrift für Sprachwissenschaft* 15(2). 231–265. DOI: <https://doi.org/10.1515/zfsw.1996.15.2.231>
- Rapp, Irene. 2000. The attributive past participle: Structure and temporal interpretation. In Caroline Féry & Wolfgang Sternefeld (eds.), *Audiatur vox sapientiae: A festschrift for Arnim von Stechow*, 392–409. Berlin: Akademie-Verlag. DOI: <https://doi.org/10.1515/zfsw.1996.15.2.231>
- Rödel, Michael. 2007. *Doppelte Perfektbildungen und die Organisation von Tempus im Deutschen*. Tübingen: Stauffenburg.
- Rothstein, Björn. 2008. *The perfect time Span: On the present perfect in German, Swedish and English*. Amsterdam: John Benjamins. DOI: <https://doi.org/10.1075/la.125>
- Salzmann, Martin. 2019. Displaced morphology in German verb clusters. An argument for post-syntactic morphology. *The Journal of Comparative Germanic Linguistics* 22. 1–53. DOI: <https://doi.org/10.1007/s10828-019-09103-y>
- Schaden, Gerhard. 2007. *La sémantique du parfait: Étude des “temps composés” dans un choix de langues germaniques et romanes*. Paris: University Paris 8 dissertation.
- Smith, Carlota S. 1991. *The parameter of aspect*. Dordrecht: Kluwer. DOI: <https://doi.org/10.1007/978-94-015-7911-7>
- Squartini, Mario. 1999. On the semantics of the pluperfect: Evidence from Germanic and Romance. *Linguistic Typology* 3. 51–89. DOI: <https://doi.org/10.1515/lity.1999.3.1.51>
- Stucki, Karl. 1917. *Die Mundart von Jaun im Kanton Freiburg: Lautlehre und Flexion*. Frauenfeld: Huber.
- Szadowsky, Manfred. 1936. Zur Hochalemannischen Syntax. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 60. 445–458. DOI: <https://doi.org/10.1515/bgsl.1936.1936.60.445>
- Thieroff, Rolf. 1994. Das Tempussystem des Deutschen. In Rolf Thieroff & Joachim Ballweg (eds.), *Tense systems in European languages*, 119–134. Tübingen: Niemeyer. DOI: <https://doi.org/10.1515/9783110958911>
- Wipf, Elisa. 1910. *Die Mundart von Visperterminen im Wallis*. Frauenfeld: Huber & Co.

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