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Where anteriority is located in the German and Swedish present perfect¹

1. Introduction

The present perfect is a periphrastic tense consisting of an auxiliary² and a past participle.³ As we can see from (1) and (2), it is used to express anteriority. In (1) and (2) the bear escaped in the past. In this paper, I address the question of where the anteriority component is located in the perfect construction. Is it in the auxiliary, in the past participle or in both?

- (1) Björnen har flytt.⁴
Bear-the has escaped
- (2) Der Bär ist geflohen.
The bear has escaped

The analysis gets complicated by the fact that the past participle occurs in environments where the whole construction does not denote anteriority. For instance, in the German eventive passive in (3), the past participle does not seem to mean pastness.

- (3) Der Bär wird verfolgt.
The bear is hunted
“The bear is being hunted.”

In this paper, I argue that a compositional approach that takes the meaning of each component of the present perfect into account can identify the source of the anteriority meaning. I show that the past participles in (1) to (3) all have a constant uniform meaning that can be modified by the auxiliary of the whole construction. I further claim that the past participle contains the anteriority component.

The paper is organised as follows: Section 2 summarizes the literature. In section 3, I analyse the meanings of the Swedish and German present perfect respectively. In the next sections, I compare the present perfect in Swedish and German to other past participle constructions. Section 6 defines anteriority. In section 7, I present an approach that allows for a uniform meaning of the past participle. Section 8 concludes the paper.

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² I use the term *auxiliary* as a cover term for all occurrences of finite (and non-finite) verbs c-commanding a past participle.

³ The perfect participle is often called “*supinum*” by Swedish grammarians. I use the term past participle for participle occurrences with *ge ... t/en* and *-t* in German and Swedish respectively.

⁴ Most examples (those with a search command or with numbers in brackets) are from PAROLE and COSMAS II. (<http://spraakbanken.gu.se/lb/parole/> and <http://www.ids-mannheim.de/cosmas2/>). I am a native speaker of both German and Swedish. Introspective data was confirmed by other native speakers. The relevant forms are underlined.

2. Former approaches

Several analyses of where to locate anteriority in the perfect have been proposed in the literature and they differ widely. STECHOW (1999) argues that the anteriority is located in the auxiliary. According to MUSAN (2002) it is in the participle, and EHRICH (1992) defends the view that the auxiliary and the participle form a semantic unit whose meaning is anteriority. The first view will be called the *auxiliary hypothesis*, the second the *participle hypothesis* and the third the *auxiliary & participle hypothesis*.

As MUSAN (2002:27) states, support for the *participle hypothesis* comes from NP internal participles denoting anteriority. The only possible reading in (4) is that the jungle has already been cut.

- (4) der abgeholzte Urwald
the cut jungle
 “the cut down jungle”

However, there are problems for this view as there are past participles that do not express anteriority. An example is the eventive passive in (5) where the eventuality denoted by the passive participle obtains at the moment of speech.

- (5) Sie werden beobachtet.
they are observed

Examples like (5) lead STECHOW (1999) to localize the anteriority component in the auxiliary, but this is problematic. First, it is not very intuitive to say that a present tense morpheme expresses anteriority. As a main verb, *hab-* (have) or *sei-* (be) never localises past events if used in the present tense (cf. (6)).

- (6) Er hat ein neues Auto.
He has a new car
 (7) Er hat ein neues Auto gekauft.
He has a new car bought

Second, one would definitely wish to explain why the auxiliary in the stative passive with *hab-* in (8) does not express pastness while it does in the perfect construction. Third, one has to stipulate how the *past to past meaning* is derived in double perfect constructions if the participle cannot be involved. The double present perfect in (9) denotes pastness relative to another past time, more precisely relative to a present perfect. The auxiliary hypothesis is forced to say that an auxiliary participle denotes anteriority while a main verb participle does not. This is not very convincing. Finally, the auxiliary hypothesis runs into problems from a diachronic point of view. It was quite common to leave out the auxiliary in High German in the sixteenth and seventeenth centuries (JOHANNISSON (1960:38)). And in present-day Swedish, it is common to leave out the perfect auxiliary in certain syntactic contexts. This is surprising as the anteriority component is probably the crucial part of the perfect construction. Given these arguments, I reject the auxiliary hypothesis.

- (8) Wieder hat Tony Vaccaro eine Kamera umgehängt, als er im
Again has T. Vaccara a camera slung-over-his-shoulder when he in-
Amerikahaus eine Ausstellung seiner Fotos eröffnet.
the Americahouse an exposition of-his photos opens
 (R99/MÄR.20497 Frankfurter Rundschau, 013.03.1999, S. 23)
 (9) Unterweger war wegen seiner Beteiligung an einem Mädchenmord zu

Unterweger was due-to his involvement in a girl-murder to lebenslanger Haft verurteilt worden. Er wurde im März 1990 nach lifetime arrest condemned been. He got in march 1990 after knapp 16 Jahren Haft auf Bewährung entlassen. Zum Zeitpunkt seiner almost 16 years arrest on probation released. At- the time of-his Enthaftung hatte sich Jack Unterweger längst schon als Literat einen release had himself Jack Unterweger since long as writer a Namen gemacht gehabt.
name made had
 (P92/FEB.04799 Die Presse, 15.02.1992)

“Due to his involvement in the murder of a girl, Unterweger had been condemned to a life in prison. In march 1990. he was released on probation after almost 16 years in jail. By that time, he had already made himself a name as a writer.”

- (10) Konstigt att inte Niten kommer . Tror du att hon (har) försovit sej ?
Strange that not Niten comes. Think you that she (has) overslept reflexive.
 "att" [] {0,2} [msd="V@IUSS"]

“It is strange that Niten hasn’t shown up. Do you think that she has overslept?”

A problem for the *auxiliary & participle hypothesis* is that it cannot be maintained under a strict compositional analysis as it requires both the participle and the auxiliary to contain the anteriority component. This is certainly a possible, but not a wishful position.

To sum up, we find past participles with and without anteriority meaning. If we want to claim that all occurrences of the past participle have a uniform meaning, the anteriority component can not be located in the participle, it must be in the auxiliary. But the auxiliaries *hab-* (have) and *sei-* (be) are used both in constructions with anteriority meaning, i.e. the perfect, and without anteriority meaning, i.e. the stative passive. Thus, anteriority cannot be located in the auxiliary. But somewhere in the perfect construction there must be an anteriority meaning. We seem to have come to a dead end.

In the next sections, I will try to resolve this dilemma. NP-internal past participles as in (4) point toward the *participle hypothesis*. I therefore propose a variant of the *participle hypothesis*. The anteriority meaning is derived compositionally. It is located in the participle and can be blocked or licensed by the auxiliary in question.

3. The meaning of the present perfect

It is highly debated whether the German present perfect has a single uniform meaning that covers its various uses or if it is ambiguous between (11) and (12) (see for discussion EHRICH (1992), THIEROFF (1992) and MUSAN (2002)). (11) is a perfective present perfect. The present perfect in (12) can replace the preterit.

- (11) Jetzt, wo Sigurd angekommen ist, feiern wir.
Now where Sigurd arrived has celebrate we
 “Now that Sigurd has arrived, we’ll celebrate.”
- (12) Sigurd ist gestern in Tübingen angekommen und gleich wieder
Sigurd has yesterday in Tübingen arrived and at-once again
 abgereist.
left

Temporal uses such as shown in (12) are not possible in Swedish.⁵ Many analyses propose a uniform semantics for the German present perfect covering (11) and (12). This is confirmed by (13) and (14) where we find a difference between the present perfect and the preterit. In (13), the embedded preterit can either have an anterior reading or a simultaneous reading. In the former, eight o'clock passed already, in the latter it is eight o'clock when Fred thinks so. The present perfect in (14) only allows for the first reading. This is somehow unexpected for a polysemous approach. If the present perfect had two independent meanings (a preterit and a perfective one), one could not explain why it cannot always substitute the preterit (or one has to stipulate why substitution is not always possible). I therefore assume a single uniform meaning of the German present perfect.

- (13) Fritz dachte, dass es 8 Uhr war. STECHOW (1999:98)⁶
Fritz thought that it 8 o'clock was
- (14) Fritz dachte, dass es 8 Uhr gewesen ist. STECHOW (1999:98)
Fritz thought that it 8 o'clock been is

Following REICHENBACH (1947), I analyse tenses as relations between three points in time (I treat time spans and time points in the same way). REICHENBACH (1947) distinguishes between an event time (E), a speech time (S) and a reference time (R). (E) is the point in time at which the event takes place, an utterance is made at (S), and (R) is the point in time relative to which (E) is located. The role of (R) becomes obvious when looking at the pluperfect. In (15), the eventuality denoted by the pluperfect occurs before the eventuality of the preterit sentence. (E) of the pluperfect is therefore before (R) set by the auxiliary in the preterit.

- (15) Als er nach Hause kam, hatte sie schon gespült.
When he to home came, had she already done-the-dishes

Several proposals have been made in the literature for how to analyse the German present perfect (cf. EHRICH (1992) for an overview). All I can state here is that they differ widely. For present purposes, a simple REICHENBACHian account will do. The obtained insights of the present paper can easily be transferred to other analyses (cf. ROTHSTEIN (to appear b) for discussion).

In German, the present perfect can be used as a future perfect, expressing that a not yet culminated eventuality happens prior to a future reference time. The most plausible interpretation of the following example is, for instance, that the conference has not already ended but that it will have ended by tomorrow.

- (16) a. Morgen hat die Konferenz bereits aufgehört.
Tomorrow has the conference already ended
 "The conference will have ended by tomorrow."
 b. Konferenzen har redan slutat imorgon
Conference-the has already ended tomorrow

There is however a second important use of the present perfect. This is the u(niversal)-perfect. In the u-perfect, the perfect denotes an event time which starts somewhere in the past and

⁵ For Swedish, there is a debate about the inferential present perfect. In inferential contexts, the present perfect can be used to indicate the author's degree of confidence in his inference. In this use, it is said to replace the preterit. As I show in ROTHSTEIN (in prep.), it has not a preterit reading. It will therefore be neglected here. For the present purposes, this cross linguistic variation does not need to bother us here.

⁶ The same point is made by LATZEL (1977a:141).

which reaches up to the reference time of the auxiliary. The following is an example where the speaker still loves the addressee at the moment of speech.

- (17) a. Ich habe Dich schon immer geliebt.
I have you particle always loved
 b. Jag har alltid älskat dig.
I have always loved you

In other words, the present perfect allows for readings where the event time can touch the reference time of the auxiliary.

To capture the uses in (16) and in (17), I propose to analyse the German and Swedish present perfect as follows (cf. MUSAN (2002) for a quite similar meaning of the German present perfect):

- (18) [[Present perfect]] = $\lambda P \lambda t \exists t' [(t \neg < t_s) \& (t' <| t) \& P(t')]$ ⁷

The present perfect introduces a reference time (R) which cannot be before the moment of speech (S). Its event time can reach up to the reference time and include it (E).

We now turn back to the question of where anteriority is located in the present perfect. This requires a closer look at past participles.⁸

4. German past participles

4.1 Constructions containing a past participle

The literature compares the perfect only to some past participle constructions. These are normally the passives and adjectival uses, but many constructions such as *gehör-* (ought to) + *participle* and *komm-* (come)+ *participle* are missing. The list in (19) is not exhaustive, but it gives a nice picture of the environments in which a past participle can occur.

- | | | |
|------|---|---|
| (19) | (a) Ich habe geschlafen.
<i>I have slept</i> | [perfect] ⁹ |
| | (b) Sie ist gelaufen.
<i>She has walked</i> | [perfect] |
| | (c) Sie wird bestraft.
<i>She is punished</i> (eventive) | [eventive passive] |
| | (d) Es ist geschlossen.
<i>It is closed</i> | [stative passive] |
| | (e) Er kommt (an)gelaufen.
<i>He comes walked</i>
"He comes walking." | [<i>komm-</i> + <i>past participle</i>] |
| | (f) Sie erhalten das Geld zurückerstattet.
<i>You get the money returned</i> | (REIS (1985:145))
[modal passive] |
| | (g) Sie bekommen das Geld zurückerstattet.
<i>You get the money returned</i> | (LATZEL (1977b:305))
[modal passive] |
| | (h) Sie kriegen das Geld zurückerstattet.
<i>You get the money returned</i> | (LATZEL (1977b:305))
[modal passive] |

⁷ $t' <| t$ means that t' is before t and can reach up to t and include it. t_s is the moment of speech.

⁸ For the explanation of the crosslinguistic variation of the perfects in Swedish and German, see ROTHSTEIN (in prep.).

⁹ The analysis of the present perfect can easily be transferred to the pluperfect and the future perfect. Therefore, they will not be considered here.

- | | |
|---|--|
| (i) Ich sah ihn gekrönt.
<i>I saw him crowned</i> | (LATZEL (1977b:305))
[seh- + past participle] |
| (j) Ich weiß ihn geborgen.
<i>I know him protected</i>
“I know him safe.” | (LATZEL (1977b:305))
[wiss- + past participle] |
| (k) Ich fühlte mich betrogen.
<i>I felt me betrayed</i>
“I felt betrayed.” | [fühl- + past participle]
(LATZEL (1977b:305)) |
| (l) Er bekannte sich besiegt.
<i>He admitted himself defeated</i> | [sich bekenn- + p. participle]
(LATZEL (1977b:305)) |
| (m) Er schien verletzt.
<i>He seemed hurt</i> | [schein- + past participle]
(LATZEL (1977b:305)) |
| (n) SWR 1 gehört gehört.
<i>SWR 1 must-be listened to</i>
“SWR 1 ought to be listened to” | [gehör- passive] |
| (o) der abgeholzte Urwald
<i>The cut jungle</i> | [NP internal] |

As can clearly be seen, the past participle constructions in (19) differ widely. Some denote anteriority or result states, others have a passive meaning, some contain an auxiliary and others not. A classification becomes necessary.

4.2 Classifying German past participle constructions

I assume two types of past participles: adjectival and verbal past participles. I assume that adjectival participles are derived by conversion from an underlying past participle.¹⁰ Given that adjectives are states (QUIRK et al (1972:265) and HAMANN (1991:658)), I assume that adjectival past participles are stative. The adjectivisation of the past participle probably has impact on the temporal structure of the construction that contains the past participle. The adjectivisation carries a stativizer (see KRATZER (2000)) that changes one temporal part of the eventuality denoted by the past participle into a state. The stativizer can either take the ongoing eventuality itself (cf. (19)i, repeated as (21), (20)) or the culminated event as a complement (see (22)) and according to this it can either denote an ongoing state or a state following from the eventuality. In the latter, the adjectival past participle denotes anteriority as the eventuality has culminated, in the first not. Analysing details of such restrictions is beyond the scope of this paper. A short proposal is given in footnote 27.

- (20) Er blieb ungerührt.
He remained indifferent
- (21) Er sah ihn gekrönt. (LATZEL (1977b:305))
I saw him crowned
- (22) Der Urwald ist abgeholzt.
The jungle is cut

Several tests to distinguish between verbal and adjectival past participles will be applied to the constructions in (19).¹¹ First, it is important to know whether true adjectives (these are

¹⁰ There are two ways to analyse the adjectivisation of participles: either by conversion (OLSEN (1986) or by derivation including a zero morpheme (LIEBER (1980)). For present purposes, it does not matter which of the two analyses is used.

¹¹ A very detailed discussion of which tests can be used to distinguish between German adjectival and verbal past participles is found in RAPP (1996).

adjectives that are not derived from other syntactic categories) can occur in the very same construction. If not, this is an indication (though not a proof!) that the past participle is verbal. Second, verbs do not allow *un-* (un-), but adjectives do (LENZ (1995: 29 – 33)). Prefixation by *un-* therefore allows us to test (at a synchronic level) whether a past participle is adjectival or not. Third, focus particles like *zu* (too) can not specify verbs (REIS (1985:144)). Fourth, comparative adjectival morphology also indicates whether a participle is adjectival or verbal as verbs do not have comparatives.

- | | | |
|------|--|--|
| (23) | (a) Alles ist gut.
<i>Everything is good</i> | (a') Alles wird gut.
<i>Everything gets good</i>
“Everything will be good.” |
| | (b) Karthago ist unbesiegt.
<i>Carthago is undefeated</i> | (b') *Karthago wird unbesiegt.
<i>Carthago gets undefeated</i> |
| | (c) Das Schweinefilet ist ein
<i>The pork-filet is a</i>
bisschen zu durchgebraten.
<i>little-bit too well-done</i> | (c') *Das Schweinefilet wird ein
<i>The pork-filet is a (eventive)</i>
bisschen zu durchgebraten.
<i>little-bit too well-done</i> |
| | “The pork filet has been too well done.” | |
| | (d) Peter ist erschöpfter als Mark.(d') | *Peter wird erschöpfter als Mark.
<i>Peter is exhausted-comparative than Mark</i> |
| | “Peter is more exhausted than Mark.” | |

Applying these tests to the past participle constructions, we get the following result¹². Most of the constructions turn out to contain adjectival past participles. Only five constructions have a verbal one. These are the perfect (present perfect, pluperfect, future perfect, infinite perfect), the eventive passive with *werd-*, modal passives with *gehör-* and *bekomm-/krieg-/erhalt*¹³ and *komm-*. This differs from other analyses (for instance STECHOW (1999), KLEIN (2000), ABRAHAM (2000) and MUSAN (2002)) which – among past participles constructions containing a finite verb – compare only the stative and the eventive passive to the perfect.

¹² It is probably not necessary to mention that my analysis is somewhat idealised. The classification of participles has puzzled grammarians for a long time (see especially the contributions in BRESSON & DALMAS (1994)). The results for *bleib-*, *sei-* and *bekomm-/erhalt-/krieg-* are based on REIS (1985), LENZ (1996), RAPP (1996).

¹³ As REIS (1985:140) shows there are three different uses of *bekomm-/erhalt-/krieg-* + past participle:

- Wir kriegen die Gläser gewaschen.
We get the glasses washed
- (a) The glasses are in washed condition.
(b) We make it to wash the glasses.
(c) The glasses are washed for us.

Following REIS (1985:143), I speak of *verbal past participle* in *bekomm-/erhalt-/krieg-* + past participle only in case of (b) and (c).

- (24) (a) Ich habe geschlafen. [perfect with *have*]
I have slept
 (b) Ich bin gegangen. [perfect with *be*]
I have left
- (25) Sie wird bestraft.
She is punished (eventive)
- (26) Er kommt gelaufen.
He comes walked
 „He comes walking.”
- (27) SWR 1 gehört gehört.
SWR 1 ought-to listened to
 “SWR 1 ought to be listened to.”
- (28) (a) Sie erhalten das Geld zurückerstattet.
 (b) Sie bekommen das Geld zurückerstattet.
 (c) Sie kriegen das Geld zurückerstattet.
You get the money returned

Only the present perfect denotes anteriority. Pursuing an analysis that assigns the same meaning to all past participles, one could now be tempted to treat the present perfect as an exception that for some reason differs from the other four constructions.

There is synchronic evidence for the assumption that the verbal past participle denotes anteriority. In some eventive passives at least a subinterval of the event time can precede the reference time as in (29). It is definitely not desirable to state that this is due to the meaning of the auxiliary *werd-* as it is also used for the future I in German, a construction that clearly has no pastness meaning.

- (29) Hier wird ein Haus gebaut. [eventive passive]
Here is a house built (eventive)
- (30) Peter wird ein Haus bauen. [future I]
Peter will a house build

Further, in the *komm-* and past participle construction subintervals of the event time also precede the reference time set by the auxiliary (cf. (26)).

Moreover, NP-internal past participles – which we have analysed as adjectival past participles – suggest that anteriority is contained in the past participle as they appear without an auxiliary. (4), repeated as (31), denotes an event time prior to a reference time provided by context. Hence, it seems that the stativizer introduced by the conversion process from V to A stativizes in (31) the anteriority component.

- (31) der abgeholzte Urwald
the cut jungle

There seems also to be diachronic evidence for the opposite view. As MUSAN (2002:29) states our synchronic eventive passive denoted in Old High German a kind of anteriority. (32) means something like “Christ is in the process of becoming someone who is slain”. It denotes a futurate change of the object that gets into the state caused by the eventuality in the main verb. From a diachronic point of view, it is therefore implausible to assume that the perfect participle is the “black sheep” among the verbal participles.

- (32) Arslagan uirdet Christ. (GRØNVIK (1986:24))
Slain becomes Christ

“Christ is now in the process of becoming a person that is slain by x”

The other passives are much younger than the eventive passive. The *bekommen / kriegen / erhalten / gehören* – passives have first emerged in the 16th and 17th centuries (cf. EROMS (1990:93), also KURODA (1999:132)). At that time the past participle of the eventive passive no longer contained any longer an anteriority component, and we can conclude that for reasons of analogy these passives do not express pastness either.

The origin of the *komm-* + past participle construction has puzzled linguists (DAL (1966³), HIRAO (1965), WILLIAMS (1980) and more recently VOGEL (to appear)), but it does not need to bother us here. The construction does not show up before Middle High German (WILLIAMS (1980:378)), at a stage in the history of German where past participles without anteriority meaning already existed.

To conclude, it is plausible to assume that all verbal past participles denote anteriority. For further discussion, I refer the reader to MUSAN (2002:26 – 32). Let us now turn to Swedish.

5. Swedish past participle constructions

(33) to (39) show some Swedish constructions with past participles.¹⁴

- (33) En gång följde han med henne till en frisersalong och såg på när
One time followed he with her to a hairdresser's-shop and watched participle when
 hon fick håret klippt ett par centimeter. ["fick" [] {0,2} [msd="AF0USNIS"]]
she got hair-the cut a couple-of centimeters

“Once, he followed her to a hairdresser’s and watched her as her hair was cut of a couple of centimeters.”

- (34) Han åt kyckling , på det där enkla sättet som är tillåtet just för kyckling.
He ate chicken, in this participle simple way which is allowed just for chicken
 "är" [] {0,2} [msd="AF0NSNIS"]
- (35) Det blir utmärkt, viskade fröken Wiberg. "blir" [] {0,2} [msd="AF0NSNIS"]
It will-be fine whispered Miss Wiberg.
- (36) Anita teg besvärat [msd="AF0NSNIS"]
Anita remained-silent irritated.
- (37) Alla på skolan hade beundrat den , både hans arbetskamrater och lärarna , ja till
Everyone at school-the had admired it both his colleagues and teacher-the participle
 och med studierektor (sic!) hade tittat in , skrattat och berömt den.
even principal had looked in laughed and praised it
 [msd="AF0NSNIS"]

“Everyone at school had admired it, both his colleagues and the teachers, even the principal had looked in, laughed and praised what he had done.”

- (38) De parkerade på vägen och steg in genom grinden med.
They parked on street-they and entered in through garden-gate-the with
snirklat namnchiffer

¹⁴ All examples are from PAROLE.

scrolled nameplatte.
[msd="AFONSNIS"]

- (39) När hon bar upp allting till våningen så tänkte hon att Henrik som
When she carried up everything to apartment-the so thought she that Henrik who
var så generös minsann kunnat hjälpt till
was so generous particle could-PastParticiple helped-PastParticiple particle to
att bära någon gång , hon tyckte att hennes armar räckte ner till golvet
carry one time she found that her arms reached down to ground-the
och axlarna värkte.
and shoulders-the hurt.
["kunnat" [msd="V@IUAS"]]

”When she carried everything to the apartment, she thought that Henrik who was so generous, could have helped her to carry for just once. She found that her arms reached down to the floor and her shoulders hurt.”

As in German, there are some tests to distinguish between verbal and adjectival past participles. These are concurrence with adjectives, prefixation by *o-* (JOSEFSSON (1998:154)), adjectival inflection and the behaviour of past participles in particle verbs (PLATZACK (1980:47)). An early analysis is LINDROTH (1906:21ff).

- (40) a. Getrud tycker att söndagarna är a'. -
Gertrud thinks that Sundays are
tråkiga. Hon vet inte riktigt vad
boring. She knows not exactly what
hon skall göra med dem.
she has-to do with them
["är" [msd="AQP0PN0S"]]
- b. Såna här gräl under pauserna b'. *Han har osovit.
Such particle struggles during breaks- He has unslept
är outhärdliga. ["är" "o.*"]
the are unbearable.
- c. De är slagna. c'. *De har slagna.
They are beaten-adjectival *They have beaten-*
adjectival
- d. Vi går vidare längs stranden , men d'. *De har avstängt
We walk longer along beach-the but *The have off-blocked*
kommer inte så långt innan den är *stranden.*
come not so long before it is *beach-the*
avstängd och vi får gå upp för en
off-blocked and we must go up a
oändlig stentrappa. ["är" "av.*"]
endless stone-set-of-stairs

“We continue to walk along the beach, but we don’t get far before it is blocked off and we have to go up an endless set of stone steps.”

Applying these tests to the constructions in (33) to (39), we get the following result. Only the past participle in perfect constructions is a verbal past participle (cf. PLATZACK (1980) and JOSEFSSON (1998)).¹⁵

In the following, I argue for a compositional approach by treating the different auxiliaries as full lexical verbs. The meaning of the auxiliaries is claimed to license or block the anteriority component. In the next section, I will give an analysis of the meaning of the past participle.

6. What is anteriority?

It is important not to confuse anteriority with pastness. Pastness means that (E) is before (S). Anteriority is defined as (E) before (R). As (R) can follow (S), (E) can also be after (S). This is the case in the future use of the present perfect as in (16), repeated as (41):

- (41) Morgen hat die Konferenz bereits aufgehört.
Tomorrow has the conference already ended

As already stated, there is an important use of the present perfect in both Swedish and German which is called u(niversal)-perfect. In the u-perfect, the perfect denotes an event time which starts somewhere in the past and which reaches up to the reference time of the auxiliary. An example is (17), repeated as (42), where the speaker still loves its addressee at the moment of speech.

- (42) Ich habe Dich schon immer geliebt.
I have you particle always loved

To capture the u-perfect, it is impossible to analyse the past participle as (E) before (R). A past participle meaning is necessary where (E) can reach up to (R) and include it. This is given as follows:

- (43) [[ge ... t/en; t]] = $\lambda t \lambda t' [t' <| t]$ ¹⁶

The past participle introduces an (E) which can reach up to (R) and hold at (R). As we will shortly see, this is the key to the question how anteriority is distributed over past participle constructions.

As all verbal past participles express anteriority, but not all constructions including verbal past participles do, it is plausible to assume that the auxiliary of a given verbal past participle construction licenses or blocks the anteriority meaning. We therefore have to look at the meaning contribution of the auxiliary.

7. The meaning contribution of the auxiliary

The meanings of the auxiliaries differ. Compare for instance uses of the same verbs as main verbs. *Hab-* in (44) expresses possession. *sei-* in (45) assigns a property to its subject. *Werd-* denotes a change of being in (46), *bekomm-* and its variants a change of possession and *komm-* a change of location. *Gehör-* in (48) a necessary change. *Hab-* *sei-* and Swedish *ha-*

¹⁵ It can be asked which status the past participle in (39) has. It is semantically an infinitive which is restructured as a past participle and should be treated separately. See LJUNGGREN (1934), WIKLUND (2001) and ROTHSTEIN (in prep.) for analyses.

¹⁶ As already stated, $t' <| t$ means that t' is before t but can touch it.

differ from *bekomm/krieg/erhalt-*, *werd-*, *komm-* and probably also *gehör-* in that the latter are inchoative.^{17, 18}

- (44) Er hat ein neues Auto.
He has a new car
- (45) Er ist gegenwärtig in Paris.
He is at-the-moment in Paris
- (46) Sie wird krank.
She gets sick
- (47) Du bekommst/kriegst/erhältst noch Geld von mir.
You get/get/get particle money from me
- (48) Der Verbrecher gehört ins Zuchthaus!
The criminal must-be in jail!
"The criminal ought to be put in jail!"
- (49) Er kommt etwas später.
He comes a little bit later
"He will come a little bit later."

The same differences exist for the corresponding auxiliaries.¹⁹ The subject of an eventive passive undergoes a change of being; and the one of the *bekomm-* passive a change of possession. *Gehör-* and verbal past participle suggest a necessary change for the subject. In all three cases, the grammatical subject is not responsible for the change. The *komm-* construction denotes movement.

The picture is less straightforward with the auxiliaries *hab-* and *sei-*. It is not certain whether these verbs have semantic content or not, but it is not implausible to assume that both the main verb and the auxiliary *hab-* denote possession. The auxiliary means that its subject "possesses" the eventuality contained by the auxiliary. Like the main verb *sei-*, the auxiliary *sei-* ascribes to its subject the property denoted by the past participle. Hence, as for the corresponding main verbs, we state that *bekomm/krieg/erhalt-*, *werd-*, *komm-* and probably also *gehör-* are inchoative auxiliaries.²⁰

Third, *komm-*, *werd-*, and *bekomm-* are eventive verbs,²¹ *hab-* and *sei-* not. This is true for both the main verbs and the corresponding auxiliaries. A standard test to distinguish eventive from stative verbs is the *wh-cleft* test as in (50):

- (50) How did he do that? What he did was that he told them how they would be treated and what was going to happen to them and what was expected of them. [google.fr: "What he did was that"]

(50) is maybe not a helpful test for Swedish and German as many speakers regard its German and Swedish translations as marked (myself included). Instead, I use a mini-discourse as an alternative version of (50). The verb of the first sentence and the discourse connectives require the second sentence to be eventive.

- (51) Im zweiten Spiel verloren die älteren Juniorinnen des VBC Rorschach

¹⁷ I am grateful to Hans Kamp who has made me aware of the importance of inchoativity for present purposes.

¹⁸ The analysis proposed here for *gehör-* is a simplification. *Gehör-* plus past participle denotes a necessary change of state that may start after the moment of speech. It involves a modal component. For present purposes, it is enough to treat it on the same line as the other inchoative auxiliaries.

¹⁹ The same point has been made by KLEIN (2000) among others.

²⁰ For *bekomm/krieg/erhalt-*, *werd-* and *komm-* as inchoative verbs see STEINITZ (1997:111).

²¹ *Eventive* is used in opposition to *stative*.

In-the second game lost the older juniors-female of-the VBC Rorschach gegen ein dynamisch aufspielendes Gonten klar mit 0:3. Das jüngste against a dynamically playing Gonten clearly with 0:3. The youngest Mädchenteam hatte es mit einer Mannschaft aus Romanshorn zu tun. girls'-team had it with a team from Romanshorn to do. Knapp gewannen sie den dritten und vierten Satz. Es ging ins Tie- Barely won they the third and fourth set. It went to Tie-Break. Und dann geschah das Unfassbare: Ein Mädchen verletzte sich, break. And then happened the unbelievable: a girl injured reflexive musste ausgewechselt werden. had-to substituted be. A97/NOV.44715 St. Galler Tagblatt, 27.11.1997.

“The older juniors of the VBC Rohrbach team lost the second game clearly 0:3 against Gonten who played dynamically. The youngest girls’ team was dealing with a team from Romanshorn. They just about won the third and fourth set. It came to a tie-break. And then the unbelievable happened: a girl got injured and had to be substituted.”

I claim that the eventive or stative component also exists in the auxiliary use and the whole construction must hence be either eventive or stative. This assumption is borne out:

- (52) Was dann geschah, wurde von der Überwachungskamera des
What then happened was by the surveillance camera of the
 Einkaufszentrums aufgezeichnet.
shopping-center recorded.
 N93/NOV.39761 Salzburger Nachrichten, 03.11.1993

As the mini discourse shows, the passive with *werd-*, the modal passives with *bekomm-/krieg-/erhalt-* and *komm-* are eventive verbal past participles constructions.

Can we apply the mini discourses in (51) and (52) to the perfect? (53) is not possible but this does not obligatorily show that the perfect is stative (cf. ROTHSTEIN (2004)). The unacceptability of (53) is rather due to the fact that the perfect denotes anteriority. In (53), it denotes a past event relative to the preceding tense. Anteriority is clearly not eventive. We have to look for another test.

- (53) *Und dann geschah das Unfassbare: Ein Mädchen hatte ein Tor geschossen.
And than happened the unbelievable. A girl had a goal made

As PARSONS (1990:36)) states, it is possible to ask “how long” with states and activities, but not with achievements and accomplishments. The achievement sentence in (54) is not possible in the preterit, but with the present perfect as in (55) it is.

- (54) *Wie lange entdeckte Hans die Formel schon? [MUSAN (2002:33)]
How long discovered Hans the formula already
 (55) Wie lange hat Hans die Formel schon entdeckt?
How long has Hans the formula already discovered

As the eventuality in (54) has already culminated, the present perfect cannot be analysed as an eventive construction. MUSAN (2002:33) concludes therefore that the present perfect is always stative (cf. also KATZ (2003) and ROTHSTEIN (2004)).

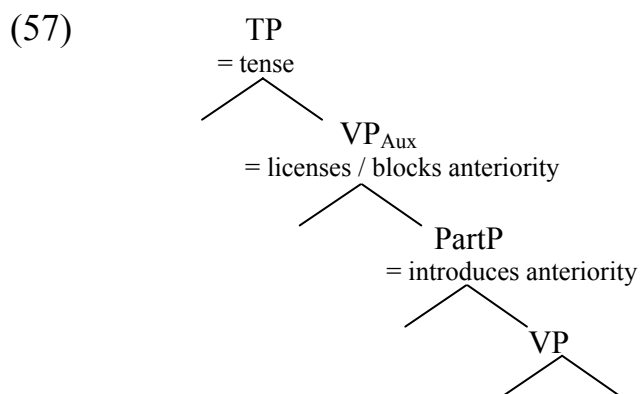
As a preliminary conclusion, *komm-*, *werd-*, *bekomm-* and probably also *gehör-* plus past participle constructions are inchoative. They are eventive in the sense that the change of state takes place at the reference time of the auxiliary. The perfect is a stative construction whose auxiliaries are not inchoative.

Inchoative verbs are change of state verbs, they denote a change from a point in time (A) to another point in time (B). (cf. STEINITZ (1977)). In other words, (A) is the starting point of the eventuality these verbs denote, and (B) is its endpoint. The inchoative verbs require that (B) is not before (R). We represent this as follows:

$$(56) \quad [[\text{werd-}/\text{komm-}/\text{bekomm- and geh\"or}_{\text{Aux}}]]^{22} = \lambda t \lambda t' [t' (t''', t'') \& (t'' \rightarrow < t) \& (t''' \leq t)]^{23, 24}$$

It now becomes clear why the eventive inchoative constructions do not denote anteriority. Given the requirement of inchoative verbs that (B) can not precede (R), (E) must hold at (R) which is compatible (as we have seen in section 6) with the past participle meaning in (43). The past participle allows (E) to reach up to (R)). Hence, the inchoative passive auxiliary requires (E) to hold at (R). (A) can be at (R) or precede it.²⁵ This depends on the given main verb and the context.

Let us now look at the semantic and syntactic implementation. Following POLLOCK (1989), I assume a TP in the extended functional projection of the verb. The finite verb, the auxiliary, is assigned tense in TP. The verbal past participle constructions are analysed compositionally: each part of it contributes to the meaning of the whole construction. I assume a biphasic structure for the present perfect that treats both the auxiliary and the participle as lexical verbs (cf. ALEXIADOU (1997) and many others). I claim that (57) is also the underlying syntactic structure of the other verbal past participle constructions:



(57) treats the auxiliary as a full lexical verb that takes a *participle phrase* as argument. In the lower VP, the main verb and its argument structure are located. The past participle form *ge ... t/en* is introduced in PartP. It expresses the anteriority component. The auxiliaries licenses or

²² Note that the situation might be different for *gehör-*. It probably must be analysed as requiring an inchoative eventuality to happen.

²³ $t' (t''', t'')$ means that t' is a time interval whose starting and endpoints are t''' and t'' respectively. Hence, (56) means that the endpoint of the complement of the inchoative auxiliaries cannot be before the reference time provided by tense. The starting point might be before the reference time or at the reference time. This depends on the context and the verb in the complement.

²⁴ A related problem is the occurrence of *werden* in the future I. In these uses, the eventuality denoted by the main verb takes place after the moment of speech. It remains to be seen whether it is possible to give a uniform meaning for *werden*.

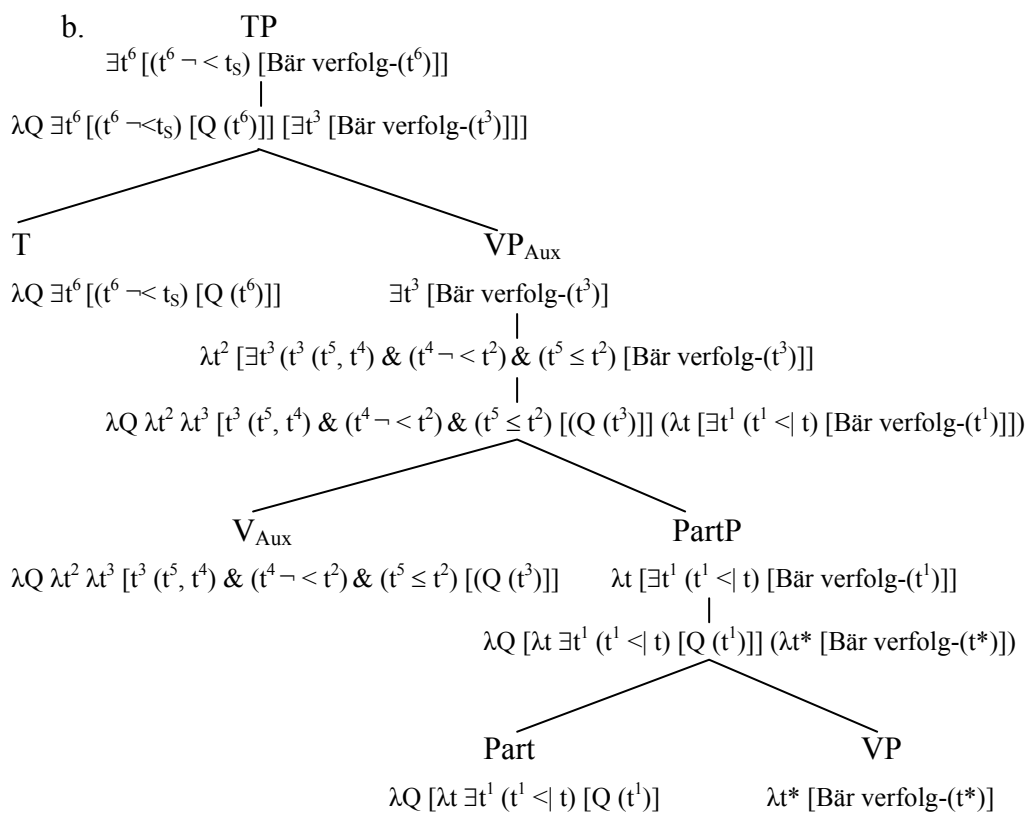
²⁵ Irene Rapp (p.c.) told me that this could be the reason why *werden* preferably selects durative complements.

blocks the anteriority component due to its lexical meaning. The tense of the auxiliary is inferred in TP.

I further assume a syntax-semantics interface much in the spirit of STECHOW (1993 and subsequent work). Under this approach, the syntactic tree makes the semantic interpretation transparent using for instance c-command for scope interpretations. The syntactic entities (heads, complements ...) are in the positions where they are base-generated. For present purposes I limit myself to the analysis of temporal meanings.

Each head introduces temporal arguments. The temporal arguments of complements are incorporated in the temporal meaning of their head (cf. MUSAN (2002:18) for temporal projection rules). We arrive at the following meaning for the eventive passive.

- (58) a. Der Bär wird verfolgt.
The bear is hunted (eventive)

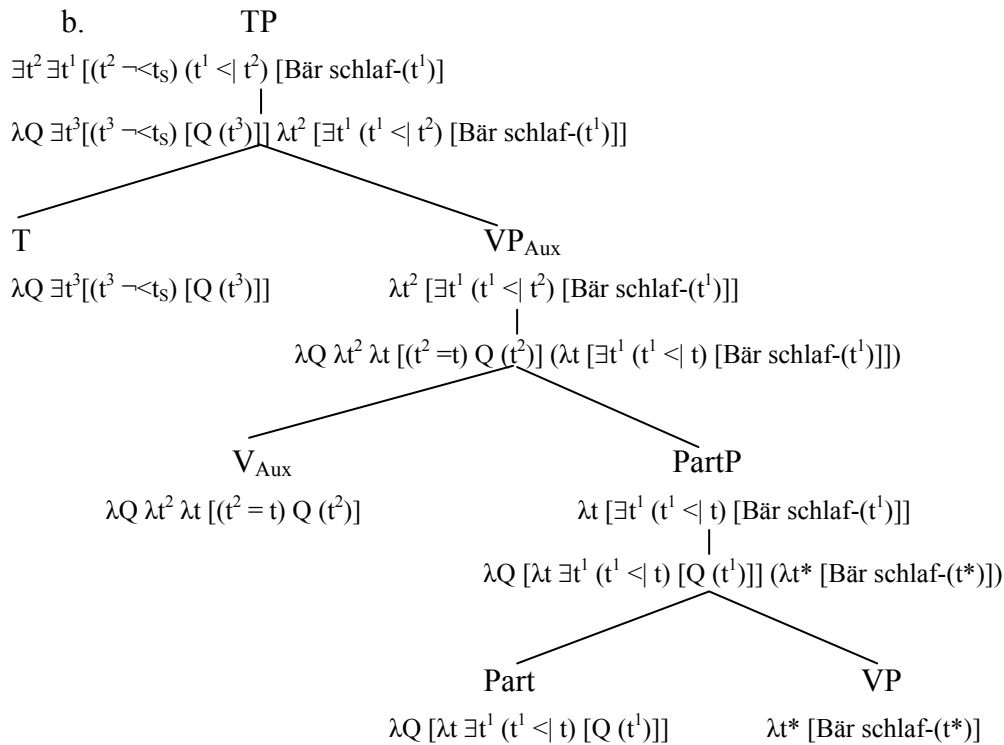


Let us now turn to the stative constructions. Clearly, there is no requirement for *hab-/sei-/ha-* that the (E) denoted by the past participle must hold at (R) introduced by the auxiliary as the constructions are not eventive. Moreover, the auxiliary contains no change of state component. Hence, there is a restriction that the reference time introduced by the past participle holds at the “reference time” introduced by auxiliary. We arrive at the following temporal meaning of the perfect auxiliaries:

- (59) [[ha-/sei- and hab-_{Aux}]] = $\lambda t \lambda t' [t = t']$

(59) interacts with the past participle as follows:

- (60) a. Der Bär hat geschlafen.
The bear has slept



As there is no requirement for the auxiliary that any subinterval of (E) must hold at (R), the verbal past participle keeps its meaning as in (43) and the present perfect denotes anteriority.²⁶
²⁷

²⁶ But why do perfect auxiliaries not always make use of the fact that (E) can hold at (R)? As IATRIDOU et al (2001) have shown, the u-perfect is only possible under a certain modification by adverbials such as *schon immer* (always) (cf. SCHIPPORREIT (1971) for German). This is plausible since a present perfect whose (E) holds at (R) without adverbial modification would compete with the present tense that denotes event times that hold at the moment of speech.

²⁷ A sketch of a possible analysis of the adjectival past participle is now also possible. The adjectivisation carries a stativizer (KRATZER (2000)) that converts the eventuality denoted by the past participle into a state. According to this assumption, the stativizer can either take (E) or a point in time later than (E) as a complement. In the first case, the event has not culminated, in the second it has. If the stativiser modifies (E), the adjectival past participle does not denote no anteriority. If it specifies a point later than (E), the participle expresses pastness. Thus, we get the options STATE (E) and [STATE (t) & (E < t)]. In the latter, the adjectival past participle denotes anteriority (probably a kind of resultant or target state in the sense of PARSONS (1990)) as the eventuality has culminated, in the former not. It is obvious that there are restrictions for STATE. In those constructions containing an auxiliary, the auxiliary either requires STATE (E) or [STATE (t) & (E < t)]. Compare for instance (1) and (2).

- (1) Er blieb unbeeindruckt.
He remained unimpressed
- (2) Der Urwald ist abgeholzt.
The jungle is cut

Bleib- requires an ongoing state, *hat-* licenses the PTS interval and STATE (t) & (E < t). The exact details of the restrictions when the stativiser takes the culminated eventuality or the event itself as a complement, are beyond the scope of this article, but the analysis defended here provides ground for further research. I would also like to stress that the possible correlation between *adjectivisation* and *stativisation* awaits further research.

8. Conclusion

In this paper, I proposed to locate the anteriority meaning of the perfect in the past participle and not in the auxiliary. As there are past participles with and without anteriority meaning, it became necessary to compare the perfect to other constructions containing a past participle. Two different types of past participle constructions were assumed: Adjectival and verbal participles were distinguished by prefixation, distribution and argument structure. Adjectival participles are formed by conversion *from V to A* and have stative meaning, therefore they were not compared to the Perfect constructions that are built from a verbal past participle.

Among the remaining verbal past participle constructions were the perfect, *komm-/werd-/gehör-* and *bekomm-*. These verbal past participle constructions have different temporal meanings. The passives do not express anteriority, but the perfect does. Considering both diachronic and synchronic data, it is plausible to assume that the participle denotes anteriority. Due to the existence of the u-perfect, it was argued that the anteriority meaning of the (verbal) past participle is event time that can reach up to the reference time of the auxiliary and even hold at it.

Pursuing a compositional analysis of the perfect, it was argued that the auxiliary contributes to the meaning of the whole construction. The meaning contributions of the parts of the perfect lead directly to anteriority. Inchoative auxiliaries block the anteriority meaning as they require the event time to hold at the reference time. These are *werd-*, *bekomm-* and variants, *komm-* and *gehör-*. *Sei-* and *hab-* allow anteriority as they are stative verbs.

Although the present account explains a number of phenomena, it leaves many questions unanswered. In particular, the correlation of adjectivisation and the temporal meaning of past participles await further research. Another important point is to know whether a single uniform past participle meaning is also possible for the passive meaning.

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