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Double auxiliaries, anteriority and terminativity

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Abstract In this work I analyze a construction containing an additional past participle auxiliary in Romance and German dialects and show that, although apparently similar, the semantic value of the additional auxiliary is different in the two sets of dialects: in German it is an index of terminativity, in Romance of anteriority. However, an implicational scale ruling the distribution of the additional auxiliary which goes from unergative to passive verbs (going through unaccusative verbs) is valid across all dialects shows that there is a strict relation between the two auxiliaries *have* and *be* which can be captured in terms of incorporation of a preposition/determiner as proposed by Kayne.

Keywords Auxiliary distribution · Past participle syntax · Romance and German dialects

1 Introduction

In this article I will analyse the syntactic properties of a construction known as 'passe surcomposé' / 'passato surcomposto' (henceforth PSC) in the Romance tradition or 'doubled auxiliaries' in the Germanic one. The phenomenon is illustrated in (1)–(2), and is found in several Northern Italian dialects, as well as in some varieties of French (in particular in the Occitan area) as shown in (2)–(3) and it is still reported by descriptive grammars for standard French as well, although construction is nowadays very rarely used, at least in the Parisian area:

(1) Co   go   **bio** magnà,…   Cereda (Central Rural Veneto)
    When (I)   have   had eaten,…
    'When I finished eating'

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(2) Quand j'ai   **eu** fini,…   (French)
     When I have had finished

An apparently identical phenomenon is also found in the Germanic languages
(see Barbiers et al. 2008) in Dutch dialects, as well as in the Southern German area,
in Swiss German and Upper Austrian dialects:

(3) I ha   gässa **cha** und denn bin i hei   gange[2]
     I had   eaten had and then   am I home gone
     'I finished eating and then I went home'

The construction apparently qualifies for the status of a 'Sprachbund' phenom-
enon, namely a phenomenon present in languages of different families which have
been in contact for a long time, as the Romance and Germanic languages. The area
has, however, somewhat uncertain boundaries, as it also includes Dutch dialects, as
recently shown by Barbiers et al. (2008).

I will show that although the PSC looks prima facie rather similar in the NIDs
(Northern Italian Dialects) and in German dialects at first sight, there are interesting
distinctions between the two language groups. The first observation concerns the
distribution of the PSC: while in the Romance dialects the PSC is found mainly in
embedded clauses, in the Germanic area it is also a main-clause phenomenon. I will
claim that this distributional difference can be derived from the different semantic value
and as a consequence a different location of the additional auxiliary in the sentence
structure: while in Romance it expresses an anteriority feature (which generally implies
terminative aspect), in the Germanic area it realizes a terminative aspect. Although
similar, the two values can be distinguished when a closer examination is undertaken.

The two sets of languages also have common properties, more specifically they
all obey an implicational scale which goes from unergative to unaccusative verbs
and at last to passive forms, which means that there are dialects where the PSC is
only admitted with unergatives, dialects where the PSC is found with unergative and
unaccusative but not passive forms, and dialects where the PSC is also possible with
passive forms, but no dialect which admits it, for instance, with unaccusative but not
unergative or passive but not unaccusative and so forth.

This implicational scale is related to the thematic structure of verbs, but also to the
type of auxiliary which realizes passive: German dialects never allow a passive form
with double 'werden' (the passive auxiliary), while NIDs allow for passive with a
doubled form corresponding to 'had'.

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[1] The PSC construction is also found in Dutch dialects as described in Barbiers et al. (2008), who claim
that in the Dutch area there is no semantic distinction between the doubling and the non doubling
construction. An anonymous reviewer notes that the PSC construction is also possible in Afrikaans, with a
terminative value similar to the one described here for German dialects, but with the interesting property
that it is also possible in passive constructions. I will not consider either Dutch (for which the reader is
referred to the detailed description and analysis proposed in Barbiers et al. (2008)) or Afrikaans, for which
I have no systematic data.

[2] When not otherwise noted, the examples are provided in the Swiss German dialect of Rebstein
(St. Gallen).

I will try to make sense of these properties in terms of Kayne's (1993) analysis of aspectual auxiliaries. I will assume that *have* and *be* are the only auxiliaries that can express aspectual features by virtue of their lexical specification and that the relation between them is mediated by a Preposition/Determiner which is incorporated into *be,* yielding the form *have.*

The article is organized as follows: in Section 2 I will illustrate the distribution of the PSC, focussing on the properties common to Romance and Germanic and then discussing the differences.

In Section 3 I propose an analysis for the distinctions between the two language groups and assume Cinque's (1999:106) hierarchy of Aspectual phrases and of the adverbs located in their specifiers in the low portion of the IP, which is briefly sketched here (for empirical evidence in favour of this structure see Cinque 1999: ch. 2).

(4)   [Asp habitual *usually* [Asp repetitive I *again* [Asp frequentative I *often* [Asp celerative I *quickly* [T anterior *already* [Asp terminative *no longer* [Asp continuative *still* [Asp perfect *always* [Asp retrospective *just* [Asp proximative *soon* [Asp durative *briefly* [Asp generic/progressive *characteristically* [Asp prospective *almost* [Asp sg completive I *completely* [Asp pl completive *tutto* [Voice *well* [Asp celerative II *fast, early* [Asp sg completive II *completely* [Asp repetitive II *again* [Asp frequentative II *often*]]]]]]]]]]]]]]]]]]]]

The field of the aspectual projections is extremely rich and therefore it is not surprising that a single language employs different strategies to mark at least a subset of them.

In Section 4 I will briefly sketch what the semantic distinction between the Germanic and Romance PSC is, namely while in German it expresses that the event is completely terminated (in Cinque's term, this corresponds to Terminative aspect) the Romance construction expresses anteriority (T Anterior in (4)). This accounts for the partially different distribution in the two language groups.

Section 5 deals with the choice of the auxiliary. I try to provide a first analysis of the reason why we find only *have* and *be* and why they are distributed as they are. Section 6 concludes the article and draws some lines for further research.

2 The distribution of the additional past participle

In what follows I will illustrate the properties of the PSC construction that are similar in the two language groups and those that are different.

2.1 Common properties

From a morpho-syntactic point of view, the PSC construction has the following properties, which are common to German and Italian dialects:

a)   it requires an additional auxiliary form, which is inflected for the past participle; in German dialects we only have inflection for Aspect (see (6)), in

Italian dialects we have inflection for aspect and object agreement[3] as illustrated in (5), so the additional auxiliary is morphologically a normal past participle:

(5) Col   li   ga bii   finii
     When-he them has had+m.pl.agr finished+m.pl.agr
     'When he finished them'

(6) Er glaubt dass i scho   abgfahra gsii   bi.
     He thinks that I already gone   been   am
     'He thinks that I am already gone.'

b) Only forms for the auxiliaries *be* and *have* can be used as doublers; no other auxiliary is attested either in the Germanic or Romance dialects. In many Romance dialects the form expressing the PSC, although clearly recognizable as belonging to the paradigm of the verb 'have', is different from the normal past participial form of 'have' found in usual present perfect cases (see below), though it remains morphologically recognizable as a past participle.[4]

c) The additional auxiliary, as we will see, always occurs in the usual position of an auxiliary past participle: in the Romance dialects it occurs between the inflected auxiliary form carrying tense and agreement with the subject feature and the main past participle, in German dialects at the end of the clause after the main past participle as all auxiliary forms.

2.2 Distinct properties

Although the phenomenon looks very similar in the two language groups, there are subtler differences that emerge as soon as one starts investigating the semantics of these forms:

a) The phenomenon seems to occur preferably in embedded clauses in the NIDs (although there are dialects in which it is found in main clauses as well, as shown below) and in sentences indicating anteriority with respect to the event of the main clause. It is rather difficult for the speakers to produce PSCs in main clauses, but they are possible and can have one of the two following interpretations: (i) the same reading found in embedded clauses provided there is a context (either expressed or implied) with a reference time with respect to which the anterior tense is computed; (ii) 'episodic interpretation' in these cases the PSC construction indicates the event 'happened once and by chance', a reading that I will define as 'episodic reading':

(7) Co   go **bio** magnà,...   Cereda (VI)
     When (I) have had eaten,...
     'When I finished eating'

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[3] In some dialects the object agreement marker is not present on regular verbs but only on auxiliaries or irregular verbs.

[4] A case of this type is the Veneto dialect of Cereda where the usual form for the past participle of 'have' is *budo/buo*, while the doubling past participle form is *bio (*see Section 5).

(8)   Go **bio** visto el   papa.
       (I) have had seen the   pope
       'It happened to me to see the pope.'

(9)   *E   abù magnà su dut.   Canazei (Rhaetoromance, Fassano Cazet)
       (I) have   had eaten up everything
       'I finished eating everything.'

(10)   L'este   mai abù fata   sta   roba?
       It.have-you ever had done this   thing?
            'Has it ever happened to you to do something like that?'

   This type of interpretation is not found in the German examples; a sentence like
(8) is accepted by German speakers but not with an episodic reading, rather with that
interpretation that occurs also in embedded clauses, namely that the event is
completed:

(11)   I ha   dr Papst gseh cha.
       I have the   Pope   seen had
       'I saw the Pope.'

   Informants simply describe the value of the construction as something completed,
which is also at least marginally possible in the Rhaetoromance dialects[5]:

(12)   L'a   abù comanà massa. (of a person who died, now she has finished giving orders)
       She has had ordered too.much
       'In her life, she ordered everybody too much.'

       b)   In the German dialects the PSC is not possible in passives. Among my
             informants no one accepted sentences like:

(13)   *Kennedy ist getötet   (gehabt/gewesen/(ge)worden) worden.
        Kennedy is murdered (had/ been/   become)   become
       'Kennedy was murdered.'

   Among Italian varieties, some do not accept a passive sentence at all, like most
Friulian dialects (see Benincà (1989)):

(14)   *O sei vut   stat laudat.
        I am had been praised
       'I have finished being praised.'

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[5] My informants of the Veneto dialects do not recognize the value in main clauses, they seem to tolerate
only the episodic reading.

Other dialects tolerate passive constructions:

(15) Co   so **bio** sta ciamà, …   Cereda (VI)
        When (I) am had been called
      'When I have been called, …'

As for unaccusative verbs, they are not always allowed in German, but when they are, the doubler is always a form of 'been'. This is not the case in Romance, where there are dialects which have a form corresponding to 'had' or to 'been':

(16) Ischt er scho   cho   gsii?
        Is   he already come been?
      'Is he already here?'

(17) Er glaubte, dass ich schon   weg gewesen bin, als er gekommen ist.
        He thought that I   already away been   was, as he come   is
      'He thought that I had already gone, when he came.'

(18) O   sin **budis**   partidis   Clauzetto
        We are had+m.pl.agr gone+m.pl.agr
      'We were gone'[6]

(19) O   sin **stadis**   partidis   Carnia
        We are been+m.pl.agr gone+m.pl.agr
      'We are gone'

The Friulian dialect spoken in Clauzetto uses for the PSC the past participle of the auxiliary 'have', while the Carnia dialect uses a form of 'be'.

Interestingly, Benincà (1989) notices that the very same Friulian dialects have the PSC auxiliary 'had' for passives and 'been' for unaccusatives, which shows that the distinction cannot be directly captured in terms of a distinction in the thematic grid, with 'been' marking non-agentive subjects. Benincà does not provide any examples for this phenomenon, but the same effect is found in the Rhaetoromance dialect of Canezei (which is considered to be very close to Friulian in terms of grammatical features):

(20) Kan   ke   l'è   **stat** ruat   Canezei
        When   that he is been   arrived
      'When he had arrived'

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[6] Here I translate the reading as a resultative in English, which is however not exactly the same type of aspectual value.

(21) Kan ke l'**abù** stat fat su, l 'è encie sutà ju   Canezei
      When that it has been done, it is also dropped
      'When it has been finished gathering, it has also been dropped'

In the two examples, the additional auxiliary (highlighted in bold) is *been* in the case of the unaccusative and *had* in the case of a passive, which also contains a lower *been* form encoding the voice feature. Apparently there are no dialects where two forms for *been* can be put one after the other.

c) A more general problem has to do with the type of tense and aspectual system in the two language groups. In the majority of the NIDs which allow for the PSC, there are no tense limitations and all compound tenses are attested: present perfect, past perfect and future perfect in the conditional and subjunctive compound forms as well.[7]

(22) Kan ke i   aea abù restelà   su dut,   i si n zia te stua.
      When that they had had gathered up everything, they went home
      'When they had finished gathering everything up, they went home.'

(23) kwan k   o aj   bu:t parla:t, o laj   víe.
      When that I have had talked I went away
      'When I had finished talking, I went away.'

(24) kwan ku tu varas   bu:t fini:t   di zuja, o larin   a caze.
      When that you will.have had finished playing we will.go home
      'When you have finished playing, we will go home.'

(25) Se l'essa abù fenì   de soprescer per temp, assane   podù si n zir al cinema.
      If he had had finished ironing in time, had.we could go   to the cinema
      'If he were done with ironing in time, we could go to the cinema.'

However, most of the NIDs have lost the simple past form ('passato remoto') and its compound form ('trapassato remoto') indicating an action located before the action in the simple past, which I will label anterior past. They only use a form morphologically similar to the present perfect to indicate a simple past and the past perfect to indicate anteriority.

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[7] Being an additional past participle, it is expected that the construction is only possible with compound tenses, so the impossibility with imperative forms, which cannot be compounded, is also expected:

(i)***Abù** verda de l'er   abù fenì   per insnet.
   Had look   to it have had finished for tonight
   'Look, you must have it done by tonight.'

But some very conservative dialects like Friulian still preserve both the simple and the anterior past. Benincà (1989) notices that, although the PSC is possible with all other tenses, it is not compatible with the anterior past:[8]

(26) O **ai**   vut fevelat.
       I have had talked
       'I have finished talking.'

(27) O **vevi** vut fevelat.
       I had had talked
       'I had finished talking.' (iterative)

(28) O **varai**   vut fevelat.
       I will-have had talked
       'I will have finished talking.'

(29) *O **vei** vut fevelat.
        I had had talked
        'I had finished talking.' (once)

At least some German dialects also seem to have tense restrictions, as the PSC is possible with the present perfect and the compound (anterior) future but not with the past perfect:

(30) Er hät's erledigt cha.
       He has it finished had
       'He finished it.'

(31) *Er hätte's erledigt cha.
        He had it   finished had
        'He had finished it.'

Other German varieties do not display this distinction; for instance, Upper Austrian dialects also tolerate sentences like (31). As I do not know whether this distinction is due to a task effect or not and what its real distribution is, for the moment I will leave this difference between German dialects aside.

The PSC phenomenon is interesting from a semantic and a syntactic point of view. From the semantic point of view the question of the precise meaning of the PSC arises: in which way is it different from a normal present perfect lacking the additional auxiliary? Apparently, although the construction is similar, it is not

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[8] Note that the glosses of (27) and (29) are the same, but the aspectual distinction is not present in the Germanic languages.

identical in meaning, because in Romance it seems to be able to convey a meaning of 'happening by chance' when the PSC is not anterior to the tense of the main clause, a meaning which is completely absent in the German domain.

The fact that the anterior past cannot be expressed by the PSC in Friulian should provide us with a hint concerning the semantic import of the construction.

The other set of phenomena to explain is related to the impossibility of the passive in German and to the choice of the auxiliary. Why is it the case that in some Romance dialects unaccusative verbs select the auxiliary *have* and in others the auxiliary *be*, while the passive is systematically doubled by *had*, when it is? Before answering these questions, I will first show that the construction is indeed to be considered as mono-clausal in the same sense in which all compound tenses are.

3 Monoclausality of the PSC

A number of tests show that cases of PSC are mono-clausal constructions, supporting Cinque's (1999, 2004) proposal that aspectual auxiliaries (and modals) are functional heads which are directly inserted into the functional projection corresponding to the semantic value they express and never project their own VP taking an embedded clause as a complement.

First of all, the double auxiliary is located in a projection on its own, as it can be split from the main verb in cases of VP topicalization, so it cannot be part of the verbal head:

(32) Laorà   go bio stamatina,   no ciacolà.
      Worked (I) have had this.morning, not chatted
      'I have finished working this morning, not chatting.'

Moreover, it can also be split from the inflected auxiliary sitting at its left in cases of subject clitic inversion:

(33) Cossa ga-lo   bio fato?
      What has-he   had done?
      'What has he finished doing?'

Given that the additional auxiliary can be split both from the main verb and from the inflected auxiliary it must head its own projection, so the PSC auxiliary has not incorporated either in the main verb or into the inflected auxiliary. Notice, however, that these structures are not bi-clausal, since in that case we would predict that it is possible to double adverbs as well, as is normally the case in bi-clausal constructions. In the following example the adverb *pi* 'anymore' has been doubled, but the sentence is ungrammatical:

(34) *Co no i ga pi   bio pi   dito, ...   Cereda
      When not they have anymore had anymore said
      'When they stopped talking, ...'

Moreover, the additional auxiliary cannot have a clause of its own, as it has a fixed position with respect to low adverbs like *sempre* 'always', *pi* 'anymore' and *mica*, a presuppositional negative marker located in the area of the past participle (see Cinque 1999 for a hierarchy of adverbs located in the Specifier positions of Aspectual heads). Although the argument against bi-clausality holds in all dialects, i.e., there is no dialect where it is possible to repeat any of the adverbs located in the lower space as defined by Cinque (1999), dialects vary with respect to the relative position of the PSC auxiliary and the adverb 'anymore', as some dialects require the PSC auxiliary to be located after the adverb, others before the adverb:

(35)   a.   No i   ga   **pi   bio** dito gninte.   Cereda
               Not they have more had told nothing
               'They have stopped saying anything.'

        b.   ?? No i   ga   **bio pi**   dito gninte.
                Not they have had   more told nothing
                'They have stopped saying anything.'

(36)   a.   Kanke l'a   **abü piü**   tout jü   chela medejina,
               When he has had no.more taken down that   medicine,
               l'è   stat   miec.   Canezei
               he is been better
               'When he stopped taking that medicine, he recovered.'

        b.   *Kanke l'a   **piü   abü** tout jü   chela medejina,
                When he has no.more had   taken down that   medicine,
                l'è   stat   miec.   Canezei
                he is been better
                'When he stopped taking that medicine, he recovered.'

One could hypothesize that if the additional auxiliary occurs to the right of the adverb *pi*, corresponding to the specifier of Terminative aspect, and the right of the adverb *already*, corresponding to Anterior Tense, it must be located in a head lower than that.

(37)   [Asp habitual usually [Asp repetitive I again [Asp frequentative I often [Asp celerative I quickly [T anterior already [Asp terminativeP **[SpecAsp terminative pi/ no longer] [Asp terminative°]** [Asp continuative still [Asp perfect always [Asp retrospective just [Asp proximative soon [Asp durative briefly [Asp generic/progressive characteristically [Asp prospective almost [Asp sg completive I completely [Asp pl completive tutto [Voice well [Asp celerative II fast, early [Asp sg completive II completely [Asp repetitive II again [Asp frequentative II often]]]]]]]]]]]]]]]]]]]]]

This would mean that the position where the PSC auxiliary is located varies in the two dialects exemplified above, being T anterior in Canezei and Terminative in Cereda. However, there is a second explanation for this asymmetry: in some dialects the adverb corresponding to 'anymore' is a weak element, which needs to be located in front of the past participle, while in others it is not. This is shown by the fact that this adverb cannot be used alone as an answer to a question (while other lower adverbs can), cannot be moved into a Focus position in the CP layer, while lower adverbs usually can, and cannot be coordinated (with *or*).[9] Therefore, I assume that the dialect of Canezei really shows where the PSC auxiliary is located, while in Cereda an additional factor prevents us from using this adverb as a test, though the argument against bi-clausality of the PSC construction still holds.

The additional auxiliary of the PSC is rigidly ordered with respect to the passive auxiliary *sta* as well and agrees in number and gender with the raised DP. If the structure were bi-clausal the rigid ordering of the auxiliaries would remain a mystery, as once again the two auxiliaries could occupy functional projections of different clauses and therefore have in principle both orders. Moreover, if the passive auxiliary is located in the head of Voice, this provides us with the lower limit of the PSC.

(38) Co   me sorela la   ze **bia**   **sta** ciamà
      When my sister she is   had+f.sg.agr been called
      'When my sister finished being called'

(39) *Co   me sorella la   ze **sta**   **bia**   ciamà
       When my sister she is been   had+f.sg.agr called
      'When my sister finished being called'

In Poletto (2007) I proposed that the additional auxiliary should be located in the head of Terminative Aspect in the NIDs. In other words, according to that analysis, the additional auxiliary is nothing else than a different way of checking an aspectual projection simply by merging an independent morpheme in the head of the AspP,[10] which in this case is not a particle or an affix but an auxiliary verb in the past participle form.

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[9] I report here some examples of these tests:
(i)   a.   Za   che te ghe si,   magnalo.
              Already that you are there, eat it
              'As you are already doing it, eat it up.'

      b.   *Pi   che magnarlo, el lo varda.
              More than eat it,   he it looks
              'Rather than eating it, he looks at it.'

(ii.) a.   *Pi   o manco
              More or less

[10] Notice furthermore that the fact that the additional auxiliary carries an agreement marker as well could be interpreted as a clue that it moves to some AgrP projection. I will leave the question open here.

Although this explains the position of the auxiliary with respect to lower adverbs, it does not explain why it is preferred in embedded domains in the NIDs and why this is not so in the German dialects. Moreover, the 'episodic' reading the auxiliary has in main clauses in the NIDs also remains rather mysterious.

Hence, all we can say is that, in accordance with the standard assumption, compound tenses are mono-clausal constructions, even when an additional aspectual auxiliary is inserted in the structure to mark a specific semantic value.

4 Possible values for the PSC: anteriority versus terminativity

In order to determine what the exact semantic import of the PSC is, I will capitalize on the two major distinctions between German and Italian dialects. In the German dialects, given that the interpretation is that the event completed, I simply assume that the PSC as a whole has terminative value. The values covered by the simple past in the Germanic domain are probably wider than terminativity (there are cases in which the simple past is translated into Italian with an imperfect form, not with a simple past). However, the PSC seems to cover at least one of them (for a detailed discussion of the values that the simple past can assume in various languages see Giorgi and Pianesi 1991; 1997), the one corresponding to an event absolutely completed at speech time.

As for Romance, the value encoded by the PSC is probably anteriority, not terminativity. Although the two values can sometimes be very close, and some sentences might even be ambiguous, the distinction is rather clear when it comes to the difference between main and embedded clauses: anteriority requires another independent point in time (which is not speech time) with respect to which the clause is located in the past. Therefore it is more natural in embedded contexts, with the independent point provided by the main clause. The idea that in Romance the PSC expresses anteriority also accounts for its distribution in the Friulian area, where the construction is compatible with all tenses, except for the anterior past.[11] This is so because the two forms compete for the same position.

The episodic reading reported by informants in main clauses can be seen as a 'by-product' of anteriority: we can assume that in embedded clauses the PSC always has a point in time to which anterior tense can refer back, while this is not always the case in main clauses, whose tense is not necessarily bound by an upper tense. When no upper tense binds [T anterior], the PSC does not have a point in time to which it can relate, therefore it is interpreted as a different type of aspect, which must be located immediately higher than T anterior. To render this idea more precise one could assume that the episodic reading is encoded in an Aspectual projection located immediately higher than anteriority. In Cinque's (1999) hierarchy, a projection corresponding to the value has not been identified yet, because Italian does not have an adverb corresponding to it. However, there is probably a verbal head

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[11] My claim here is limited to the Friulian area, because this is the only dialect subgroup which has maintained the simple past form and its compound form. It is impossible to test the analysis for other dialects because they have lost these verbal forms in the course of the last five centuries. Therefore, although I predict that this should also be valid for all the other Romance dialects displaying the PSC, there is no evidence in favour of this.

corresponding to it, namely the verb *capitare*, corresponding to English 'happen', which also displays an interesting raising construction in clauses like "I happen to know him". If the PSC auxiliary cannot express anteriority, due to the lack of a binder for the Anterior value, it is moved immediately higher than T Anterior and instantiates the episodic reading. If this hypothesis is correct, we would expect to find the episodic reading only in those languages where the PSC already encodes anteriority, but not with those where the additional auxiliary only encodes a value located lower in the structure and therefore stops in a much lower projection.

5 Selecting the auxiliary

The comparison between German and Italian dialects suggests the hypothesis that the additional auxiliary can be located in different aspectual positions in the low IP area. This still does not solve the problems related to the choice of the auxiliary. They can be summarized as follows:

(i)   Why is the PSC always blocked in German passives but not in Italian passives?
(ii) Why can the auxiliary 'been' be used for unaccusative verbs but not for passives in some Italian dialects?
(iii) Why is 'been' the only possible auxiliary of unaccusative verbs in German dialects?

These questions are obviously intertwined; let us start by examining the German passive. The first observation that comes to mind is that the auxiliary of the German passive is *werden* 'become', which is not an aspectual auxiliary in general, but an auxiliary specialized for Voice. As an anonymous reviewer pointed out to me, the auxiliary *werden* can also have different values, when it is used for the future or meaning 'become'.[12] In any case, it is never a pure aspectual form of the type *have* and *be* are in the Germanic and Romance languages. The first hypothesis that comes to mind is that there might be a relation between the choice of this auxiliary and the impossibility of doubling. As E. Brandner (p.c.) notes, doubling with a different type of passive, namely the one with the colloquial verb *kriegen* 'get', has a different status:

(40)   ?Nachdem er das Fahrrad gestohlen gekriegt gehabt hat,…
         After   he the bike   stolen   got   had   has,…
         'After he had his bike stolen, …'

Generally informants find this sentence marginal, but admit that it improves with respect to the doubling of the 'werden' passive (whatever additional auxiliary is used). Notice, however, that in this case the PSC auxiliary is again a form of *have*. An anonymous reviewer noticed that Afrikaans allows for the passive construction, but as

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[12] What I mean here when I refer to an aspectual auxiliary is an auxiliary which encodes only aspectual distinctions, not one encoding other features in addition. The two forms *have* and *be* are according to Kayne (1993) two forms of the same verb, one with an incorporated preposition, the other without it. There can probably be only one such functional verb, while *werden* is not purely functional.

far as I can see, this language just uses a form for *been* associated to a form corresponding to *was* as an auxiliary for the passive, not a form analogous to German *werden*; this is then expected under the present view. As for the reason why an auxiliary such as *werden* should not allow for doubling, we can make several hypotheses.

There are two problems here; one is why we cannot double *werden* with itself, the other is why we cannot use the auxiliary *been* for the PSC, which *werden* selects when it is a main verb. As for the reason why *werden* cannot double itself, we can say that this is so because *werden* is not an aspectual auxiliary, and the PSC requires an auxiliary whose features match aspect.

The generalization seems to be the following:

(41)   Only forms of the two aspectual auxiliaries *have* and *be* can be used for the
       PSC construction.

If the PSC is a construction in which an aspectual feature is realized, the fact that only those auxiliaries which already realize aspectual features in the language can be used, is straightforwardly explained. In other words, the reason why *have* and *be* are the only verbs found in the PSC is lexical in nature: they are the only (light) verbs which are endowed with aspectual features in their lexical specification.

However, *werden* could be doubled by *been* like unaccusative verbs. One might hypothesize that the auxiliary *werden* might move higher than a form of 'been' thus covering the merge position of the doubling auxiliary. Note however that in the Italian dialects also the auxiliary *been* is never used for passives; in this case there would be two identical past participial forms 'been' in the clause one after the other. Those dialects which admit the PSC with a passive only use forms of 'had', as in fact also the German *kriegen* 'get' passive does.

The second generalization is then:

(42)   No doubling of the past participle 'been' form is possible either in Romance
       or in German dialects (*been been).[13]

In order to explain this fact, I will adopt the idea put forth by Kayne (1993) that the two auxiliaries *have* and *be* are in the following relation: *have* is the form that *be* takes when an additional element (either a P° or a D°) has incorporated into the verb.

Kayne's analysis of the relation between *have* and *be* can straightforwardly capture why *been* cannot be doubled while *had* can. Suppose there cannot be two auxiliaries with exactly the same feature specifications inside a clause, as there cannot be two modals with exactly the same value inside the same clause, then there cannot be two forms for *been* in the same clause. The reason why the form *had* can be used is that in the dialects where the PSC is allowed in passives, the auxiliary can incorporate a P/D, the incorporation of a locative preposition (as originally proposed by Kayne 1993) transforms the form *be* into *have*.

This also explains why several Italian dialects have developed a special form of the past participle dedicated to the PSC which can be used with all verb types,

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[13] Recall that the passive already has an auxiliary 'been' realized in Romance.

unergatives, unaccusatives and passives: in all cases this form is clearly still recognizable as related to *have*, never to *been*. So for instance in the Cereda dialect considered above, the usual form of the past participle for the verb 'have' is *buo*, while the PSC past participle is *bio* and it is also used with unaccusatives and passives. This means that some dialects have developed a special form which encodes only the value expressed by the PSC through a process of grammaticalization of the verbal head (see Roberts and Roussou 2003 for further examples of grammaticalization of verbs). At this point I think it is premature to assume that the special form *bio* is created by incorporating a different preposition with respect to usual past participles, as this is not supported by either syntactic or etymological evidence. I will leave this to future research, as it requires a much deeper understanding of the type of element incorporated into the auxiliary, which is beyond the scope of this article.

A well-known fact about aspectual constructions can be easily integrated into this picture: a lot of languages (among them German and Italian dialects) make use of prepositions to express aspectual values. Without entering a detailed discussion on prepositions as aspectual markers, which would lead us astray from the PSC construction, I will just point out that phrasal verbs (both present in German and Northern Italian dialects) are formed precisely by a verb and a preposition, which is often analyzed as connected to aspectual distinctions between the verb with and without the prepositional element:[14]

(43)   El ga   magnà fora la   torta.
       He has eaten   out the cake
       'He ate up the cake.'

(44)   Er hat den Wein ausgetrunken.
       He has the   wine out.drunk
       'He drank the wine up.'

(45)   El   ga magnà la torta.
       He has eaten   the cake
       'He ate the cake.'

(46)   Er hat den Wein getrunken.
       He has the   wine drunk
       'He drank the wine.'

The distinction between (43), (45) and the one between (44), (46) are distinctions precisely in terms of terminativity, as the sentences with the preposition mean that the whole of the cake/wine has been eaten/drunk, while the sentences without the preposition just mean he ate/drank some of the cake/wine.

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[14] As for the behaviour of prepositions in the Northern Italian dialects, see Benincà and Poletto (2006), they are essentially of two classes; some are defectives in various respects, others are not.

Moreover, other aspectual constructions like continuous forms are expressed both in German and in Italian dialects by a preposition:

(47)   Er ist am/beim[15] Arbeiten.
        He is at/by.DET to.work
        'He is working.'

(48)   El ze drio   lavorar.
        He is behind to.work
        'He is working.'

Therefore, Kayne's (1993) analysis of aspectual auxiliaries as incorporating a P/D category is well founded at least for the dialects under consideration, given that in some constructions the preposition is directly visible.[16] Moreover, the fact that different types of aspectual distinctions can be encoded by different prepositions strengthens the idea that the past participle *had* can have different aspectual values according to the P/D incorporated into it, while *been* is never ambiguous, not incorporating anything. So, there can be more than one *had*, but only one *been*.

Italian dialects which have developed a special form for the PSC past participle (always deriving from *had*) are probably more advanced than German dialects on the grammaticalization process of the additional auxiliary marking a precise aspectual value.

We now have all the ingredients to explain the distribution of the PSC in the two language groups.

In the case of transitive verbs, the additional auxiliary always incorporates a P/D. Italian dialects which display a form of *had* for unaccusative verbs have incorporated a preposition into the verb, i.e., the auxiliary has raised higher to a position from where the preposition can be incorporated, while Italian dialects where unaccusative verbs take the PSC auxiliary *been* do not move it so high as to incorporate the P/D (null) element.

The distinction between dialects where the PSC auxiliary for unaccusatives is *been* and those where it is *had* probably depends:

(i)   on whether a specialized auxiliary form for the PSC is present in the language, in which case this is the form always used for all PSC cases;
(ii) on whether the form has raised so high to incorporate a P/D.

German unaccusative past participles never move so high that they can incorporate the P/D element and thus are realized as *had*. This is related to an independent difference between Italian and German varieties in terms of past participle movement.

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[15] This type of construction is quite widespread in several German dialects (and leaks into the spoken standard language as well). Bettina Gruber (p.c.) notices that the Austrian form uses the preposition *bei* 'by' while the form used in Rheinland is instead *am* 'at the'.

[16] Notice that in continuous aspect the auxiliary takes the *be* form, not the *have* form, as the preposition has not incorporated.

Cinque (1999) already shows that different Italian dialects have different movement possibilities, some stopping lower than Perfect Aspect (where the adverb *always* is realized), others moving higher than T Anterior (where the adverb *already* is realized). In the Northern Italian domain, only those dialects in which it is possible to move the PSC past participle so high that it can incorporate the P/D also have a PSC auxiliary in passive clauses, as *been* cannot be inserted twice in the derivation (see (42)).[17]

To sum up, the implicational hierarchy starting with unergative verbs, then unaccusatives, and at last passive constructions is related to the following features:

(i) past participle movement;
(ii) subsequent possibility to incorporate P/D and be realized as *had* instead of *been* (only possible in Romance, because in Germanic the past participle does not raise that high);
(iii) reanalysis of the additional auxiliary as a PSC marker (with creation of a specialized morphology) which is used in all contexts.

There are a number of predictions this analysis makes. I try to render explicit at least some of them:

(i) The analysis predicts that no German dialect has developed a special form for the PSC construction, as this is never possible in passive clauses.
(ii) Those dialects in which the additional auxiliary is morphologically different from the usual past participle always allow for the PSC in passive contexts.
(iii) There exists no dialect where a form of *been* is used instead of *had* with unergative verbs.
(iv) There exists no dialect which uses another auxiliary which is neither have nor *be* to mark the PSC construction.

6 Conclusion

In this work I have examined the PSC construction and tried to make sense of the distribution of the additional auxiliary in terms of realization of aspectual features. The distribution of *have* and *be* is related to the movement possibilities of the past participle and of incorporation of a P/D element. The structure does not seem to have

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[17] Cinque (1999) notices that in passive clauses the past participle of the lexical verb can be located lower than in active clauses and provides the following examples to prove his point:

(i)   Hanno accolto bene il   suo spettacolo solo loro.
       Have accepted well the his play   only they
       'They are the only ones who accepted his play.'

(ii)   *Hanno bene accolto il   suo spettacolo solo loro.
       Have   well accepted the his play   only they
       'They are the only ones who accepted his play.'

(iii) Questo genere di spettacoli è sempre stato bene accolto   da tutti.
       This   type   of plays   is always been well accepted by everybody
       'This type of play has always been accepted by everybody.'

 This shows that passive main past participles are indeed more limited in their movement possibilities than active past participles, even in languages where no PSC occurs, so this is an independent property of passive past participles.

the properties of doubling (at least of DP or *wh*-doubling) but depends on the
necessity of realizing an additional aspectual feature. German and Italian dialects are
partially different in how the features are realized but both are restricted by general
constraints. The analysis makes a number of predictions that have not been checked
yet and that await the test of new empirical work.

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