Agreement with Asp° and the Independence of Case

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1.   Introduction

This paper focuses on the relation between inner aspect and case. Several authors assume that there is a significant relation between the presence of accusative case on the internal argument and a telic interpretation of a predicate (Borer 1994, 2005, Kiparsky 1998, Kratzer 2004, Ramchand 1997, Ritter and Rosen 1998, 2000 among others), often relegating the assignment of accusative case to Spec,AspP (Borer 1994, 2005 among others). As an example of data often put forth as evidence for such a relation between case and aspect, consider the utterances from Finnish in (1).[1]

(1)   a.   Maija luki   **kirjan**   *tunnin.
            M.   read.PST **book.ACC**   hour.ACC
            'Maija read (all) the book for an hour.'

       b.   Maija luki   **kirjaa**   tunnin.
            M.   read.PST **book.PART**   hour.ACC
            'Maija read the book for an hour.'

Observe that in (1a) the internal argument is in accusative case and the predicate is telic, as evidenced by the incompatibility of the durative phrase (e.g. *tunnin* 'for an hour'). Observe in (1b) that the internal argument is in partitive case and the predicate is atelic, as evidenced by the compatibility of the durative phrase. There seems to be a significant relation between the appearance of accusative case on an internal argument and a telic interpretation of a predicate.

In this paper, I argue that case and aspect are independent syntactic relations. Accusative case is a relation between DP and v° (Chomsky 2001) while aspect is a relation between NP and Asp°.

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[1] Examples in (1) taken from Henämäki (1984).

The paper is organized in the following way: In section 2, I argue for the existence of an aspectual head (AspP) between vP and VP that syntactically instantiates an object-to-event mapping via an Agree relation with an NP; I conclude that aspect is a relation with Asp°. In section 3, I suggest that the feature of an argument that Agrees with Asp° is not a feature of DP, but a feature closer to the NP level; I conclude that aspect is a relation with NP. In section 4, I offer an account of the Finnish data from (1); I argue that partitive case is assigned by a null X°. The presence of this extra structure blocks the Agree relation between the NP in partitive and Asp°, resulting in an atelic interpretation of the predicate. In section 5, I briefly recap the discussion and conclude the paper.

2.   Aspect is a Relation with Asp°

In this section I argue for the existence of an aspectual projection (AspP) between vP and VP (see also Travis 1991). This is illustrated in (2). The aspectual interpretations and distributions of bare plurals (BPs) and mass nouns (MNs) provide evidence for this aspectual projection.

(2)   …vP

     v   **AspP**

          Asp   **VP**

               V   …
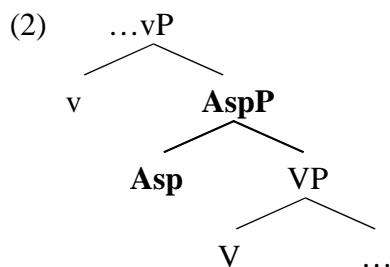
          Contrary to many assumptions (Borer 2005, Dowty 1979, Filip 1999, Pustejovsky 1991, among others), BPs and MNs do not elicit the same aspectual interpretation of a predicate. Observe in (3) that BPs are compatible with a time span adverbial, while MNs are not.

(3)   a.   Darrel ate **cakes**   in three minutes   (for an hour straight).
        b.   #Darrel ate **cake**   in three minutes   (for an hour straight)

          Under an interpretation in which for each cake Darrel ate, he ate it in three minutes for an hour straight, the time span adverbial is compatible with the BP in (3a). No such interpretation is available for the MN in (3b). Time span adverbials are compatible with telic predicates (Dowty 1979 among others); as such, in the presence of a BP, the predicate is interpreted a telic. More specifically, a BP elicits a telic iterative interpretation in which one cake after another is eaten for an hour (3a). No such interpretation is available for a MN (3b); in fact, MNs are not compatible with time span adverbials at all. In contrast to BPs, MNs elicit an atelic interpretation of the predicate. Thus, MNs and BPs have distinct aspectual interpretations. Consider the aspectual distributions of BPs and MNs (4).

(4)   a.   Darrel carried the chair into **bedrooms**   for an hour.
        b.   Darrel carried the chair onto **asphalt**   for an hour.

The BP as a complement of a goal preposition has an aspectual affect on the predicate (4a); it elicits a telic iterative interpretation. That is, Darrel carried the chair into one bedroom, then another, and so on for the duration of an hour. The MN as a complement of a goal preposition does not have an aspectual affect on the predicate (4b); it does not elicit an atelic interpretation. There is only an interpretation in which Darrel carried the chair onto asphalt, then back off, and back on again; this is a telic iterative interpretation. BPs affect the aspectual interpretation of the predicate as complements of a goal preposition; MNs do not. Thus, BPs and MNs have distinct aspectual distributions.

In order to account for the distinct aspectual interpretations and distributions of BPs and MNs, I claim that there is an aspectual head (AspP) between vP and VP with which BPs and MNs establish distinct relations (5).

(5)　　…vP

    v　　**AspP**

      Asp　　VP

        V　　…
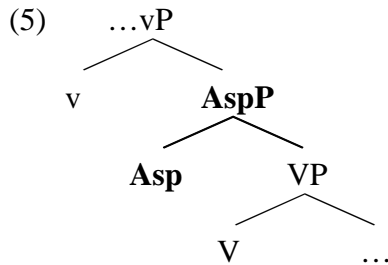
BPs move to Spec, AspP and MNs Agree with Asp°. The most immediate expectation of this proposal is that neither BP nor MN external arguments can affect the aspectual interpretation of the predicate (see Tenny 1987 for the same conclusion), because they are structurally higher than AspP. This expectation is shown to be borne out in (6). Neither BPs nor MNs affect the aspectual interpretation of the predicate.

(6)　　**Bears/wildlife** ate a sheep　　#for an hour.

Let us consider the account of BPs in more detail. I assume that BPs are existential quantifiers and in order to elicit a telic iterative interpretation, they must bind a variable inside a syntactic domain of aspectual interpretation, defined as everything dominated by AspP.[2] Thus, they must originate from a position below AspP and move to a position above AspP. Evidence for the movement of BPs comes from the possible island for BP movement in (7).

(7)　　a.　　#Milo destroyed a row of **houses**　　for an hour.
　　　　b.　　# Milo ate a box of **cookies**　　　　for an hour.

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[2] MacDonald (2006) argues for a domain of aspectual interpretation in which only elements within this domain can contribute to the aspectual interpretation of a predicate. He puts forth as evidence the inability of location prepositions (in contrast to goal prepositions) to affect the telicity of the predicate, the inability of external arguments (as seen above in 6) to affect the telicity of the predicate, and he adopts arguments from Hay, Kennedy, and Levin (1999) that show that the predicate CAUSE that introduces external arguments does not affect the telicity of the predicate either. All of these elements are structurally higher than AspP, and as such are outside the domain of aspectual interpretation.

The BPs in (7) do not elicit a telic iterative interpretation. Thus, (7a) does not mean that Milo destroyed one house, then another and so on for an hour. Likewise, (7b) does not mean that Milo ate one cookie then another and so on for an hour. The lack of telic iterative interpretation can be explained if we assume that the complex NPs in (7) do not allow the BP to move out; as the BP cannot move out it cannot move to Spec,AspP and elicit the telic iterative interpretation. Now consider the account of MNs in more detail.

I assume that the Agree relation with Asp° is the syntactic instantiation of the object-to-event mapping well-known in studies of inner aspect (Verkuyl 1979, Krifka 1989). The object-to-event mapping occurs when a property of the internal argument affects the telicity of the entire predicate. Consider the example in (8).

(8)   a.   Bud drank **a pitcher of beer**   #for ten minutes/in ten minutes.
       b.   Bud drank **beer**   for ten minutes/#in ten minutes.

The noun phrase in (8a) *a pitcher of beer* has a property that elicits a telic interpretation of the predicate, resulting in the incompatibility of the durative phrase and the compatibility of the time span adverbial (e.g. *in ten minutes*). The noun phrase in (8b) *beer* has a property that elicits an atelic interpretation of the predicate, resulting in the compatibility of the durative phrase and the incompatibility of the time span adverbial. This is the object-to-event mapping.

I refer to the property of an internal argument NP that participates in this object-to-event mapping as a [q] feature ([q] for *quantized* (Krifka 1989) and for *specific quantity of A* (Verkuyl 1979). If the NP that values Asp° is [+q] the predicate can be interpreted as telic.[3] If the NP that values Asp° is [-q] (e.g. a MN), the predicate will be interpreted as atelic. The Agree relation captures a local relation that an NP has with the verb phrase in which the core aspectual interpretation of the predicate is affected. The core aspectual interpretation of a predicate is the basic telic/atelic distinction. This local relation, and its affect on the core interpretation of the predicate, is intuitively parallel to the local relation between a verb and its complement. When the complement of verb varies, the core meaning of the predicate varies as well (Marantz 1984). I conclude, therefore, that Aspect is a relation with Asp°

Assuming this conclusion to be correct, and assuming that accusative case is a relation with v° (Chomsky 2001), it follows straightforwardly that aspect and case are independent syntactic relations. Moreover, we expect the possibility of establishing one of these relations without establishing the other. That is, for example, we expect to observe cases in which there is an object-to-event mapping without the presence of accusative case.[4] Passive constructions meet this expectation (9-10).

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[3] I say *can be interpreted as telic* because of the existence of transitive activity predicates in which the [+/q] feature of the internal argument does not affect the aspectual interpretation of the predicate. These predicates have an underlying set of properties that differ from the predicates in which there is an object-to-event mapping. See MacDonald (2006) for more details on their syntactic differences.

[4] Note that we also expect to observe cases in which there is accusative case without the presence of the object-to-event mapping. Statives meet this expectation: *John owned a stereo/stereo equipment for a week.* MacDonald (2006)

(9)   a.   **A bottle of beer** was drunk   #for an hour.
        b.   **Beer** was drunk   for an hour.
        c.   **Bottles of beer** were drunk   for an hour.

(10)   a.   **A stereo** was destroyed   #for an hour.
        b.   **Stereo equipment** was destroyed   for an hour.
        c.   **Stereos** were destroyed   for an hour.

The derived subject of passives are in nominative case; accusative is not available (9-10). In the (a.) examples, the subjects are [+q]NPs and the predicate is telic. In the (b.) examples the subjects are [-q]NPs and the predicate is atelic. Finally, in the (c.) examples, the subject is a BP and the result is a telic iterative interpretation. Asp° is present in the syntax although accusative case is not available. We find the same pattern with the derived nominative subjects of unaccusatives (11-12).

(11)   a.   **A window** broke   #for an hour.
        b.   **Glass** broke   for an hour.
        c.   **Windows** broke   for an hour.

(12)   a.   **A keg** arrived   #for an hour.
        b.   **Beer** arrived   for an hour.
        c.   **Kegs** arrived   for an hour.

These data suggest that a telic interpretation of a predicate is not dependent on the presence of accusative case. These patterns are unexpected for a language in which a telic interpretation of the predicate is closely related to the appearance of accusative case.

3.   Aspect is a Relation with NP

In this section I discuss the location of the [q] feature responsible for the object-to-event mapping. I argue that this feature is syntactically closer to the NP layer than to the DP layer. If this conclusion is justified, then we see again a way in which case and aspect are independent syntactic relations; for aspect is a relation with NP, while case is a relation with DP (Chomsky 2001). Consider the utterances in (13)

(13)   a.   Fred drank the beer   for an hour.
        b.   June ate the rice   for an hour.

These utterances are typically put forth as examples of telic predicates. However, given the right context, they can be interpreted as atelic predicates. Consider a party in which much beer was present, all from the same brewery and the same batch. The next day the hosts test the beer and are

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argues that stative predicates lack AspP altogether; the lack of AspP does not directly affect the presence of v° or its accusative case assigning properties. See MacDonald (2006) for more evidence in favor of this proposal for statives. See also footnote 8.

concerned with its quality. (13a) can be uttered as an answer to this concern. Note that the predicate in this context is interpreted as atelic, yet there is a definite determiner present.[5] The definite determiner does not determine the [q] feature value of the internal argument. The same effects are present in (13b) in the appropriate context. Observe that these atelic interpretations are more easily accessible in the presence of a demonstrative (14).[6]

(14)   a.   Fred drank that beer   for an hour.
        b.   June ate that rice   for an hour.

The definite determiner does not determine whether the NP valuing Asp° is interpreted as [+q] or [-q]. The locus of this feature seems to be closer to the NP itself. For observe that the NPs in (15) do not very easily allow for an atelic interpretation of the predicate, regardless of the context.

(15)   a.   John destroyed the city   # for a day.
        b.   Dick built the doghouse   # for an hour.
        c.   Slim wrote the letter   #for an hour.

If in fact, the determiner were responsible for the [+/-q] feature of an argument, we would expect that all NPs could be equally interpreted as [+q] or [-q]. But this does not seem to be the case. The DP layer does not determine the [q] feature of the internal argument. The [q] feature that enters into the object-to-event mapping of the predicate is syntactically closer to the NP layer. If this conclusion is justified, then it suggests that aspect is a relation with NP, not with DP. Taking this conclusion together with the conclusion above from section 2, I conclude that aspect is a syntactic relation between Asp° and NP, while accusative case is a syntactic relation between v° and DP. Case and aspect are independent syntactic relations. Let us consider the consequences of this conclusion for a language like Finnish.

4.   Case and Aspect in Finnish

Let us reconsider the Finnish data from (1), repeated below as (16) for convenience, which have been put forth as evidence for a significant relation between the telic interpretation of a predicate and the appearance of accusative case (Borer 2005, Kiparsky 1998).[7]

(16)   a.   Maija luki   kirjan   *tunnin.
                M.   read.PST book.ACC   hour.ACC
                'Maija read (all) the book for an hour.'

        b.   Maija luki   kirjaa   tunnin.
                M.   read.PST book.PART   hour.ACC
                'Maija read the book for an hour.'

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[5] Jackendoff (1996) notices similar facts for English as does Nishida (1994) for Spanish.

[6] Schmitt (1996) observes this for relative clauses.

[7] Note that Kiparsky (1998) assumes a significant relation between accusative case and boundedness, where boundedness, he claims, is different from telicity.

If there were a significant relation between case and aspect in Finnish, we would not expect Finnish passives and unaccusatives to show the same patterns as English passives and unaccusatives.[8] That is, we do not expect to find nominative subjects of passives and unaccusatives in Finnish that are interpreted as telic. Nevertheless, this is precisely what we find (17-18).

(17)   a.   Hän luki   **kirjan**.[9]
              s/he read.PST **book.ACC**
              'S/he read the book (and finished it).'

       b.   **Kirja**   luettiin.
              book.NOM was-read
              'The book was read (and finished).'

(18)   a.   Vieraat   saapuivat.[10]
              guests-nom. arrived
              'The guests arrived.'

       b.   Karhu-t   kuol-i-vat.
              bear-PlNom die-Pst-3Pl
              'The bears died.'

The data in (17-18) strongly suggest that case and aspect are independent syntactic relations in Finnish. I propose the structure in (19) for the *telic-accusative* utterances in Finnish.
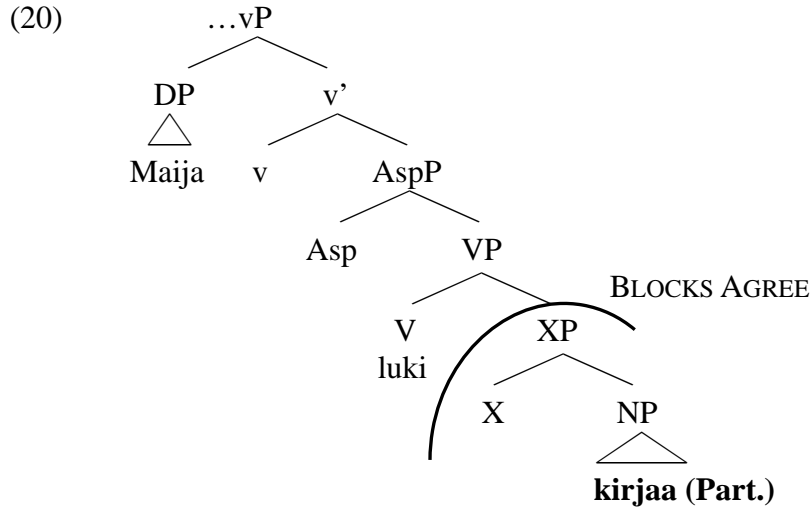
(19)   a.
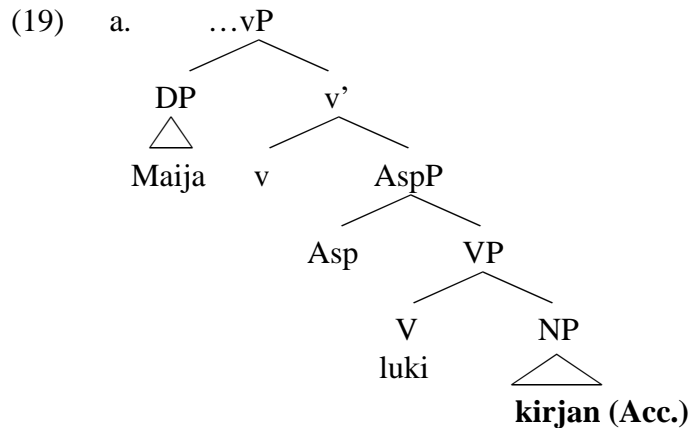
I assume that accusative case is assigned via Agree with v° (Chomsky 2001). In the structure in (19) the internal argument can freely Agree with v°. Given the structural proximity of v° to Asp°,

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[8] Likewise we would not expect the presence of accusative case and an atelic interpretation of a predicate. However, we do find precisely this with stative predicates in Finnish. See Kiparsky (1998) for the relevant examples.

[9] Examples in (17) taken from Pereltsvaig (2000).

[10] Example in (18a) taken from Henämäki (1984). Example in (18b) taken from Kiparsky (1998).

there is no syntactic reason why the internal argument cannot Agree with Asp° as well. Thus, I assume that when accusative case appears on the internal argument, the internal argument NP can Agree with Asp° and does so, valuing it such that the predicate is interpreted as telic. The structure I propose for the *atelic-partitive* constructions of Finnish is given in (20).[11]

(20)

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            ...vP
          /      \
        DP        v'
        /\       /   \
      Maija    v      AspP
                     /    \
                  Asp      VP
                          /   \
                         V     XP    BLOCKS AGREE
                        luki  /  \
                             X    NP
                                  /\
                              kirjaa (Part.)
```

I assume that the argument in partitive is the complement of a null X° that is in turn a complement of the verb. I assume that this null X° is responsible for partitive case on *kirjaa*. With respect to aspect, I assume that the null XP blocks Agree with Asp°. Minimally, the NP *kirjaa* does not Agree with v°, otherwise it would surface with accusative case; thus, it is likely that it cannot Agree with Asp° either. I assume that the extra structure blocks these Agree relations. Consider utterances in English that have a similar structural configuration with the same aspectual result (21).[12]

(21) a. John complained to his boss   for an hour.
       b. Fred talked to his buddy   for an hour.

The NPs *boss* and *buddy* are [+q] NPs; regardless, the predicates are interpreted as atelic. This is especially telling considering that the presence of a goal preposition typically results in a telic interpretation of the predicate in which it surfaces (see Borer 2005, Dowty 1979, MacDonald 2006, Pustejovsky 1991 among others); thus only an iterative interpretation is available in (22) in the presence of the goal phrase.[13]

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[11] Schmitt (1996) makes a similar proposal, assuming that X° here is P°, although she still assumes a significant relation between case and aspect.

[12] Thanks to Bill McClure for pointing these data out to me and for a discussion of them as well.

[13] It should be noted that when the internal argument in utterances like (22) is a [-q]NP (i.e. a MN), the interpretation of the predicate is atelic. There is more occurring in the presence of a [-q]NP internal argument that can be discussed in the present paper without going far beyond its scope. The point is that the utterances in (22) can only be interpreted as telic if the goal phrase is present. If the goal phrase is not present, these utterances will not be interpreted as telic.
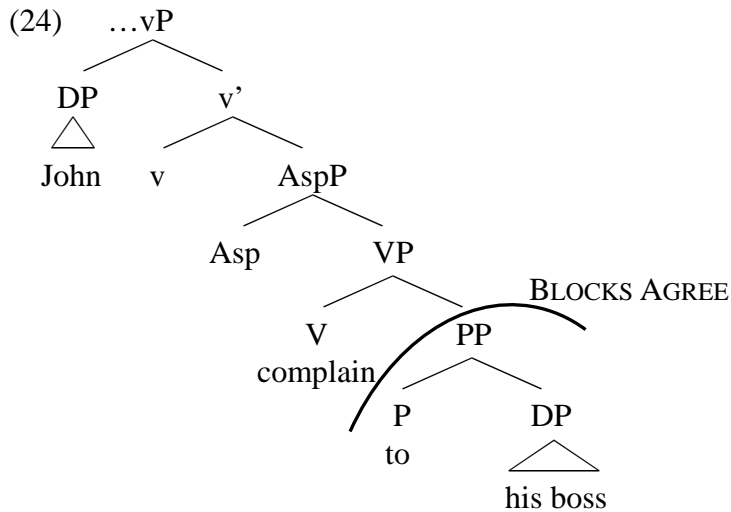
(22)   a.   John drove the car to the garage   for an hour.
       b.   Fred carried the bag to the store   for an hour.

Observe another fact about the data in (21); they cannot take internal arguments, regardless of the presence of the goal phrase. This is illustrated in (23).

(23)   a.   John complained (*his pay) to his boss.
       b.   Fred talked (*the story) to his buddy.

I assume that the overt prepositional phrase has the same blocking effect as the null XP in the Finnish partitive constructions and I propose the structure in (24) to account for the utterances in (21) for English.

(24)   …vP

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           …vP
          /    \
        DP      v'
        /\     /  \
      John    v    AspP
             /    \
           Asp     VP
                  /   \          BLOCKS AGREE
                 V      PP
              complain  /  \
                       P    DP
                       to   /\
                          his boss
```

The parallel syntactic configuration resulting in the same aspectual effect lends support to the proposal that the overt PP in English and the null XP in Finnish blocks Agree with Asp°. The result of this blocking is that there is no NP to Agree with Asp°. If no NP Agrees with Asp°, I assume that Asp° receives a default value and the predicate is interpreted as atelic. Observe that when there is no internal argument present in English, the predicate is interpreted as atelic (25).[14]

(25)   a.   John ate   for an hour.
       b.   John danced   for an hour.

Given these patterns, I conclude that the extra structure in Finnish is responsible for the atelic interpretation of the predicate. I also assume that this extra structure is the source of partitive case as well. This entails that partitive case in Finnish is not structural (cf. Borer 2005). What we expect, then is that an NP that is in partitive can remain in partitive even after movement. Passive-active

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[14] The lack of an internal argument with a resulting atelic interpretation of the predicate is widely observed cross-linguistically (see Borer 2005, Filip 1999, Verkuyl 1979 among others).

pairs and unaccusatives show that this expectation is met. They are illustrated in (24-25) respectively.

(24)   a.   Hän luki   **kirjaa**.[15]
                 s/he read.PST **book.PART**
                 'S/he read the book (for a while).'

        b.   **Kirjaa**   luettiin.
                 book.PART was-read
                 'The book was read (for a while).'

(25)   a.   **Vieraita**   saapuivat.[16]
                 guests-part. arrived
                 'Guests arrived.'

        b.   **Karrhu-j-a** kuol-I
                 bear-PlPart die-pst-3Sg
                 'Bears died.'

       The derived subjects of passives and unaccusatives in Finnish can remain in partitive. This suggests that partitive is a non-structural case and lends further support to the structure in (20) proposed to account for the Finnish partitive construction.

5.   Recap and Conclusions

In this paper I have argued that case and aspect are independent syntactic relations. Case is a relation between DP and v° (Chomsky 2001) and aspect is a relation between NP and Asp°. This conclusion does not entail that there is no relation at all between case and aspect. For if we assume that the presence of accusative case indicates a specific syntactic position in the verb phrase, then the presence of accusative case on a particular argument can indicate which argument is in this syntactic position. Given that the argument in this syntactic position enters into the object-to-event mapping with the predicate, accusative case can indirectly be related to the aspectual interpretation of the predicate. However, this case-aspect relation is at best indirect, for, as we saw above, the object-to-event mapping can still be present even though accusative case is not. Thus while there is an indirect relation between the presence of accusative case and the argument that participates in the object-to-event mapping, case and aspect are still independent syntactic relations.

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[15] Example in (24) taken from Pereltsvaig (2000).
[16] Example in (25a) taken from Henämäki (1984). Example in (25b) taken from Kiparsky (1998).

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