UNIFYING FINNISH ASPECTUAL CASE MARKING*

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1. Introduction

The distribution of object case marking is a long-standing and well-known problem in Finnic linguistics. Direct objects may be marked with either accusative or partitive case, with a general sense of boundedness or quantization associated with accusative case marking,[1] and an unbounded or incomplete meaning associated with partitive case marking. A classic example of this case pattern, shown in (1), comes from Kiparsky (1998).[2]

(1) a. Ammu-i-n *karhu-n*.
shoot-PST-1SG bear-ACC
I shot the bear.

b. Ammu-i-n *karhu-a*.
shoot-PST-1SG bear-PART
I shot at the bear.

In (1a), the bear has been shot (and killed), while in (1b) one or more shots have been fired at the bear, which may or may not have been hit by the bullets; this contrast is conveyed by the case of the object.

While it is not difficult to argue for the broad generalization—partitive case conveys unboundedness while accusative case conveys boundedness—the case marking alternations observed in Finnish can denote these properties in a number of different domains, and a satisfying unified picture of the syntax behind this case marking is still lacking.

In the data in §2, I will show that the choice of object case in Finnish can be associated with boundedness at the level of nominal quantity, situation aspect, viewpoint aspect, and clause polarity; if a clause is unbounded in *any* of these ways (summarized in Table 1), the object will be marked with partitive case, while accusative case only occurs when the clause is bounded at *all four* levels. Past accounts of the phenomenon have generally addressed the correlation between case marking and situation or viewpoint aspect, setting the others

*All data apart from (1) is from the author's own fieldwork. *Kiitoksia paljon* to Kaisa Partanen, my patient and enthusiastic Finnish consultant. Many thanks also go to Elizabeth Cowper for her support and supervision throughout this project, and to Susana Béjar, Bronwyn Bjorkman, Sarah Clarke, and the University of Toronto Syntax research group for their extremely helpful feedback and comments at various stages.

[1]In Finnish, the accusative case is morphologically distinct only for pronouns and the Wh- item "who"; otherwise, it is syncretic with the nominative or genitive case. This has led some (e.g., Kiparsky, 2001; Asudeh, 2003; Huumo, 2010, 2013) to argue that in Finnish the accusative case only exists on pronouns. I will not address this argument here, as what is important with respect to aspect is the opposition of partitive case and non-partitive case. However, it is clear that Finnish has a *syntactic* accusative case that is distinct from both nominative and genitive, regardless of its morphological realization.

[2]I provide a morphological breakdown only in this first example. Due to allomorphy that is not relevant to the arguments, morpheme boundaries will be omitted in the following examples.

Actes du congrès annuel de l'Association canadienne de linguistique 2017.
Proceedings of the 2017 annual conference of the Canadian Linguistic Association.

Level	Bounded (all = accusative)	Unbounded (any = partitive)
Nominal quantity	count	mass
Situation aspect	telic	atelic
Viewpoint aspect	perfective	imperfective
Clause polarity	positive	negative

Table 1: Levels of boundedness / unboundedness in Finnish

aside (e.g., Belletti, 1988; Kratzer, 2004), and even the accounts that do consider all of these factors (e.g., Kiparsky, 1998, 2005) still divide the appearances of the partitive case into distinct categories (nominal, verbal, negation).

In this paper, I argue that object case marking patterns in Finnish are actually a single unified phenomenon, and that the properties of boundedness and unboundedness listed in Table 1 are all encoded by the same feature (labelled [β]), which can be realized at four different syntactic levels and whose interpretation depends on its position. Thus, a [uβ] probe determines the outcome of object case agreement: if any [iβ] is present in the clause, the probe will find its goal, and object marking will be partitive; if no [iβ] is present, object case will be accusative (see §6). Semantically, this [β] corresponds to Krifka's (1998) *cumulativity*.[3]

In the following sections, I explore the boundedness alternations in each of the four domains mentioned above and motivate the locations of [β] in the syntactic structure: §2 for nominal quantity, §3 for situation aspect, §4 for viewpoint aspect, and §5 for clause polarity. In §6 I combine these different parts and discuss the mechanism of case assignment, §7 addresses the role of subjects and nominative case in this process, and §8 concludes.

2. Nominal quantity

At the nominal level, mass nouns and indefinite plurals are unbounded, while count nouns and definite plurals are quantized. Therefore, partitive case marks mass or indefinite plural objects, while count and definite plural objects receive accusative case. This is illustrated for singular nouns in (2a,b), where the count noun *book* receives accusative case, while the mass noun *butter* receives partitive. If the quantity of the mass noun is delimited by definiteness (*the butter*), as in (2c), the object case will again be accusative.

[3]Krifka (1998): P is cumulative iff $\exists x \exists y[P(x) \wedge P(y) \wedge \neg x = y] \wedge \forall x \forall y[P(x) \wedge P(y) \rightarrow P(x \cup y)]$. That is, Predicate P is cumulative iff it has two distinct elements x and y for which P holds, and P holds for the sum of x and y as well.

(2) a. Ostin *kirjan*.
buy.PST.1SG book.ACC
I bought a / the book.

b. Ostin *voita*.
buy.PST.1SG butter.PART
I bought butter.

c. Ostin (sen) *voin*.
buy.PST.1SG this.ACC butter.ACC
I bought the butter.

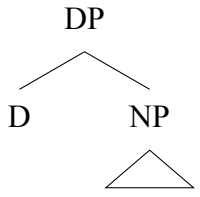
Plurals behave the same way, with definiteness serving to quantize an otherwise unbounded quantity, resulting in accusative case marking. This shown in (3), where *shoes* with partitive case are an unspecified number of shoes, while *shoes* with accusative case must be a pair of shoes.

(3) a. Ostin *uusia kenkiä*.
buy.PST.1SG new.PL.PART shoe.PL.PART
I bought (some) new shoes.

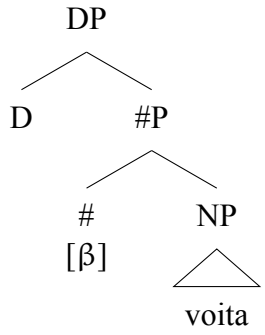
b. Ostin *uudet kengät*.
buy.PST.1SG new.PL.ACC shoe.PL.ACC
I bought (a pair of) new shoes.

I situate the nominal [β] feature on the head of #P, which has been used to encode mass/count distinctions in previous work (e.g., Borer, 2005; Cowper and Hall, 2012). Since the [β] feature encodes unboundedness, I propose that mass nouns and indefinite plurals bear [β] on #°, while count nouns and definite plurals do not.[4] The structure of count and non-count nominals is illustrated in (4).

(4) a. *koira* 'dog.NOM'



b. *voita* 'butter.PART'



The [uβ] probe is located in *v*, alongside the [ACC] case feature; this is based on the strong connection between boundedness and object case. Case assignment is distributed

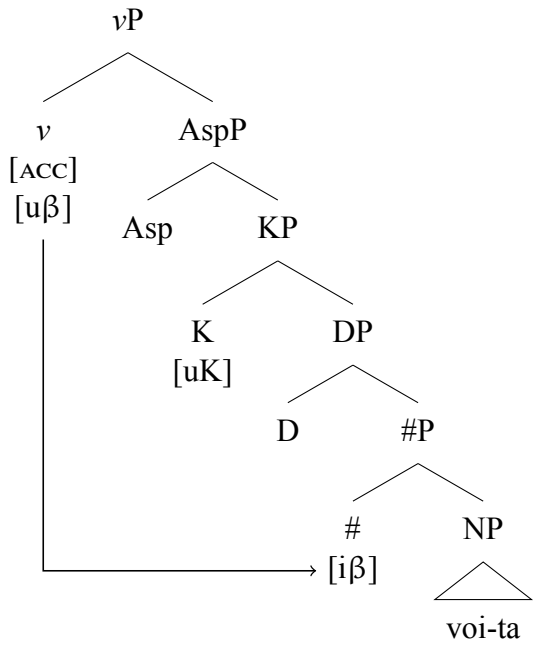
[4]This also appears to be supported by the fact that singular partitive case is required with numerals in Finnish:

(i) a. Näin *tuon koiran*.
see.PST.1SG that.ACC dog.ACC
I saw that dog.

b. Näin *nuo* kaksi *koiraa*.
see.PST.1SG that.PL.ACC two dog.PART
I saw those two dogs.

across both [β] and [ACC]. If the [uβ] probe finds an [iβ], [ACC]+[β] is morphologically realized as partitive case. If the probe does not find its target, [ACC] is realized as accusative case. The operation of the [uβ] probe is shown in (5).

(5)



3. Situation aspect

Situation aspect is also called inner aspect, lexical aspect, or *Aktionsart*, and concerns the properties of events: bounded predicates are *telic*, and have an endpoint, while unbounded predicates are *atelic* and do not terminate. The Vendlerian (1957) classes of Accomplishments (durative events, e.g., build) and Achievements (instantaneous events, e.g., find) are telic; although telicity is sometimes described as a lexical property of the verb, I assume here (following Verkuyl, 1993; Rappaport Hovav, 2008; *inter alia*) that it is actually a property of the entire predicate.

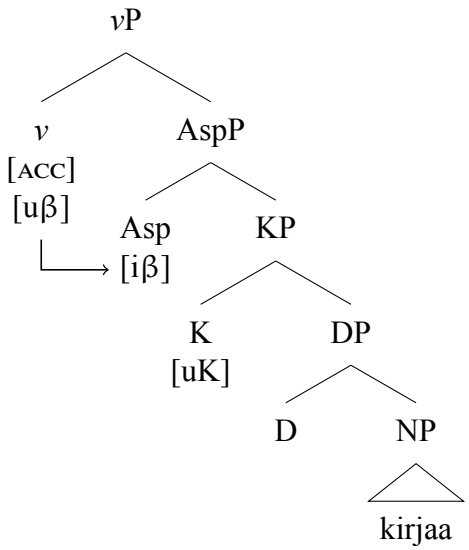
The classic tests for telicity use *for* and *in* adverbials to establish whether an event has an endpoint: telic (bounded) events are only compatible with *in an hour*, while atelic (unbounded) events are only compatible with *for an hour*. In the pair of sentences below, (6a) uses *tunnissa* ("in an hour") and allows accusative case marking, while (6b) uses *tunnin* ("for an hour"), and requires partitive case. The object in these sentences is a singular count noun, which (all else being equal) would be marked with accusative in the examples in §2.

(6) a. Luin *kirjan* / (**kirjaa*) tunnissa.
read.PST.1SG book.ACC book.PART hour.INE
I read the book in an hour [and finished it].

b. Luin (**kirjan*) / *kirjaa* tunnin (ajan).
read.PST.1SG book.ACC book.PART hour.GEN time.GEN
I read the book for an hour [and didn't finish it].

Following the aspectual literature (e.g., Travis, 2010), situation aspect is located in a projection just below *v*P, which I will refer to as AspP: this is the locus of [β] for atelic predicates, as seen in (7). Telic predicates do not have a [β] feature at this location.

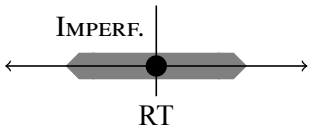
(7)



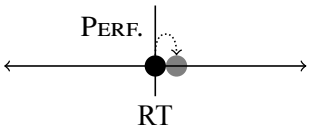
4. Viewpoint aspect

Viewpoint aspect (also called outer aspect, or grammatical aspect) refers to the temporal position of an event with respect to a reference time (RT), and the accessibility of its temporal structure. Imperfective (unbounded) events are viewed from within, with the RT inside the event, while perfective (bounded) events are viewed from outside, and represented as "points" without internal structure; this is schematized in (8), where the black dot represents the reference time and the grey portions represent the event.

(8) a.



b.



Two perfective events are normally interpreted as sequential, and cannot be read as simultaneous without an explicit statement to that effect (Cowper, 1998); (8b) shows a

perfective event being interpreted as following the reference time, as it cannot overlap.

The use of object case to make a viewpoint aspect contrast is shown in (9). In both of these sentences, the reference time is the moment of Pekka's arrival, but the object case is what indicates whether the event of Outi eating an apple is imperfective (in progress) or perfective (sequential to the RT). The perfective clause in (9a) allows for accusative case marking (assuming that Outi finishes eating the apple, making the event telic), while the imperfective clause in (9b) requires partitive case.

(9) a. Kun Pekka saapui, Outi söi *omenan*.
When P arrive.PST.3SG O eat.PST.3SG apple.ACC
When Pekka arrived, Outi ate an apple.

b. Kun Pekka saapui, Outi söi *omenaa*.
When P arrive.PST.3SG O eat.PST.3SG apple.PART
When Pekka arrived, Outi was eating an apple.

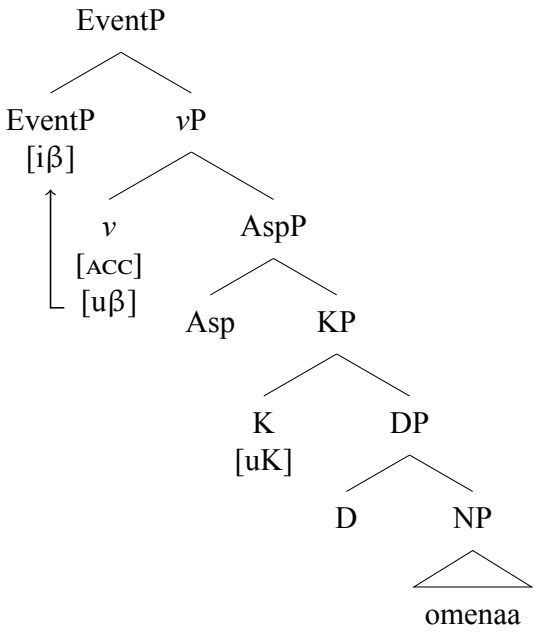
Another consequence of the non-simultaneity of points shown in (8b) is that in the present tense, when the reference time is the utterance time, perfective events get a future interpretation in Finnish. In (10a), the most natural interpretation of the partitive case is that this is an imperfective event in progress. In (10b), accusative case marking means this event *must* be perfective, and therefore is sequential to the utterance time (i.e., in the future).

(10) a. Syön *omenaa*.
eat.1SG apple.PART
I am eating an / the apple.

b. Syön *omenan*.
eat.1SG apple.ACC
I will eat an / the apple.

Viewpoint aspect is situated just outside *v*P (following Travis, 2010; Clarke, 2013; *inter alia*); I label this projection EventP, as shown in (11). The location of [iβ] above the [uβ] probe means that in order for the probe to find its target, it must be able to search *upward* (Zeijlstra, 2012; Wurmbrand, 2012). As there are potential targets both above and below, I argue this must be a cyclic *bidirectional* probe; this is in the spirit of Béjar and Rezac (2009), but with the expansion of the search domain implemented through reversal of probe direction.

(11)



5. Clause polarity

Objects in negative sentences in Finnish obligatorily take partitive case. Although this is not traditionally thought of as unboundedness, an event that does not take place has a certain non-quantized flavour: the non-happening of an event is cumulative (à la Krifka, 1998) in the same way that mass nouns, atelic predicates, and imperfective events are. If [β] marks this property of cumulativity at a certain level of the structure, as proposed at the end of §1, negation may be unified with the other three levels.

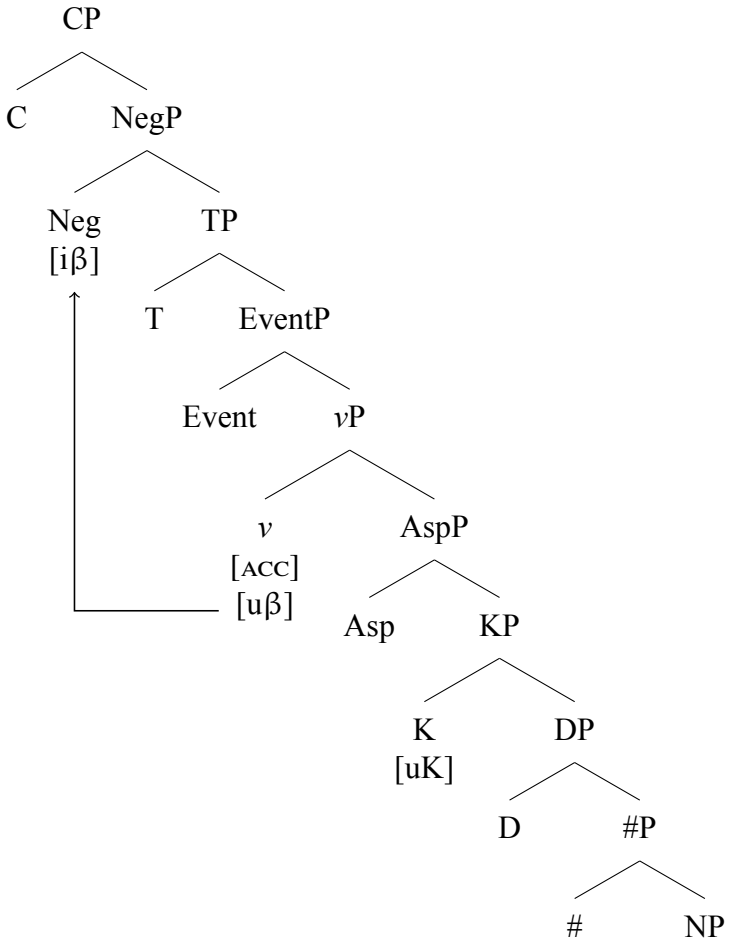
In (12a), we have a perfective telic clause with a quantized object, which receives accusative case. However, if negated as in (12b), partitive case is required on the object. Note that this sentence may also have an imperfective reading, since we cannot tell if there is more than one [β] in the structure.

(12) a. Ostan *kirjan*.
buy.1SG book.ACC
I will buy a / the book.

b. En osta *kirjaa*.
1SG.NEG buy book.PART
I will not buy a / the book.
I am not buying a / the book.

I follow the literature on Finnish negation and situate NegP in between CP and TP (e.g., Holmberg and Nikanne, 2002; Brattico and Huhmarniemi, 2006). Upward agreement is required here again, as shown in (13).

(13)



6. The mechanism of case assignment

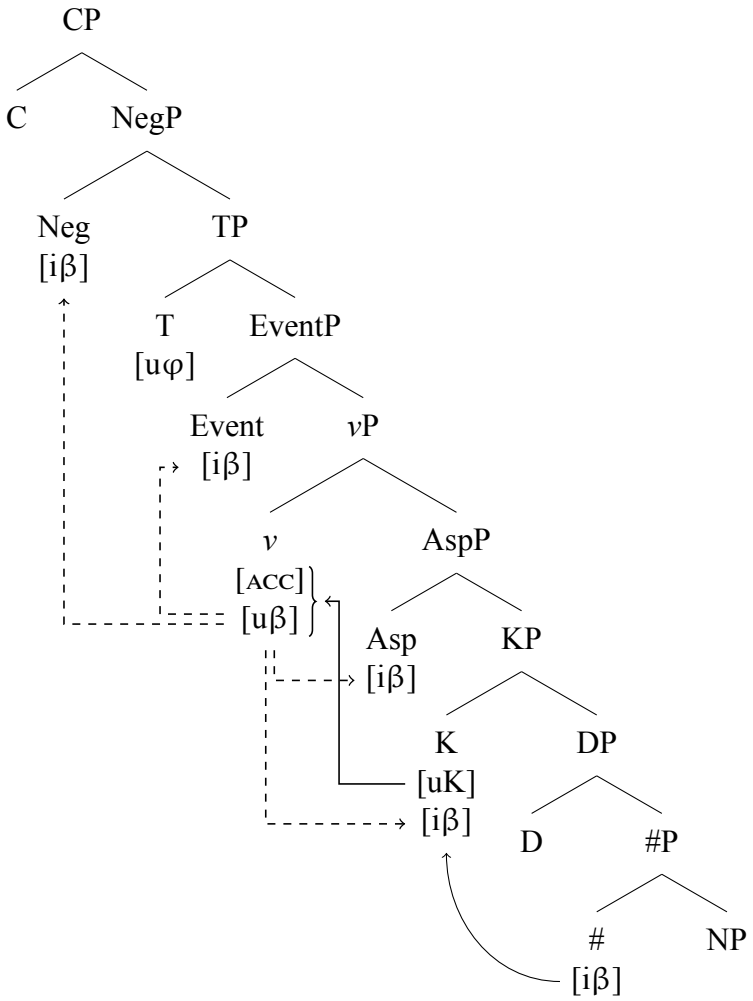
Unboundedness at any or all of the aspectual levels discussed above is represented through the presence of a [β] feature, representing cumulativity at that level; this is illustrated in (14). The presence of any one [β] in the derivation will result in partitive object case, while accusative case surfaces in the absence of all [β]. The [uβ] probe is located in *v*, alongside the [ACC] case feature. The possibility of [iβ] being above or below the probe requires bidirectional probing, first in one direction and then the other.[5]

If the [uβ] probe finds an [iβ], the combination of [ACC] and valued [β] is realized

[5]The case agreement mechanism could be logically implemented in reverse, with [β] representing boundedness, and an [iβ] necessary at each of the four levels in order for accusative marking to occur; this model would make partitive the default object case, and accusative more marked, which appears to more closely reflect the surface patterns. However, it would also require some form of Multiple Agree, and the probe would need to be able to count the number of targets it finds (up to 4!); alternately, agreement would need to occur with four different types of [β] feature, one for each level. The model adopted here follows a simpler mechanism, and retains both a default structural accusative case and a unified [β] feature.

morphologically as partitive case. If the probe finds no [iβ], the failure of β-agreement is non-fatal (Preminger, 2014): [ACC] alone will be realized as accusative case. The case probe in KP probes upward to *v*, as seen in (14), to receive the appropriate object case.

(14)



However, as KP is also a phase, [uβ] cannot actually probe down to #P. The representations in (5) was thus actually a simplification: the nominal [iβ] must raise to be visible at the phase edge KP, where the probe is able to reach it. If the probe doesn't find a target at KP or in Asp, its location in *v* (the edge of the next phase) allows it to then probe upwards into the next phase. The highest possible [iβ], in Neg, is still within the second phase and thus is accessible to the probe.

7. Nominative case & subjects

Subjects are always nominative in Finnish, regardless of nominal quantity, as shown in (15). In (15a), with a quantized subject (*the milk*, definite), subject and adjective are both

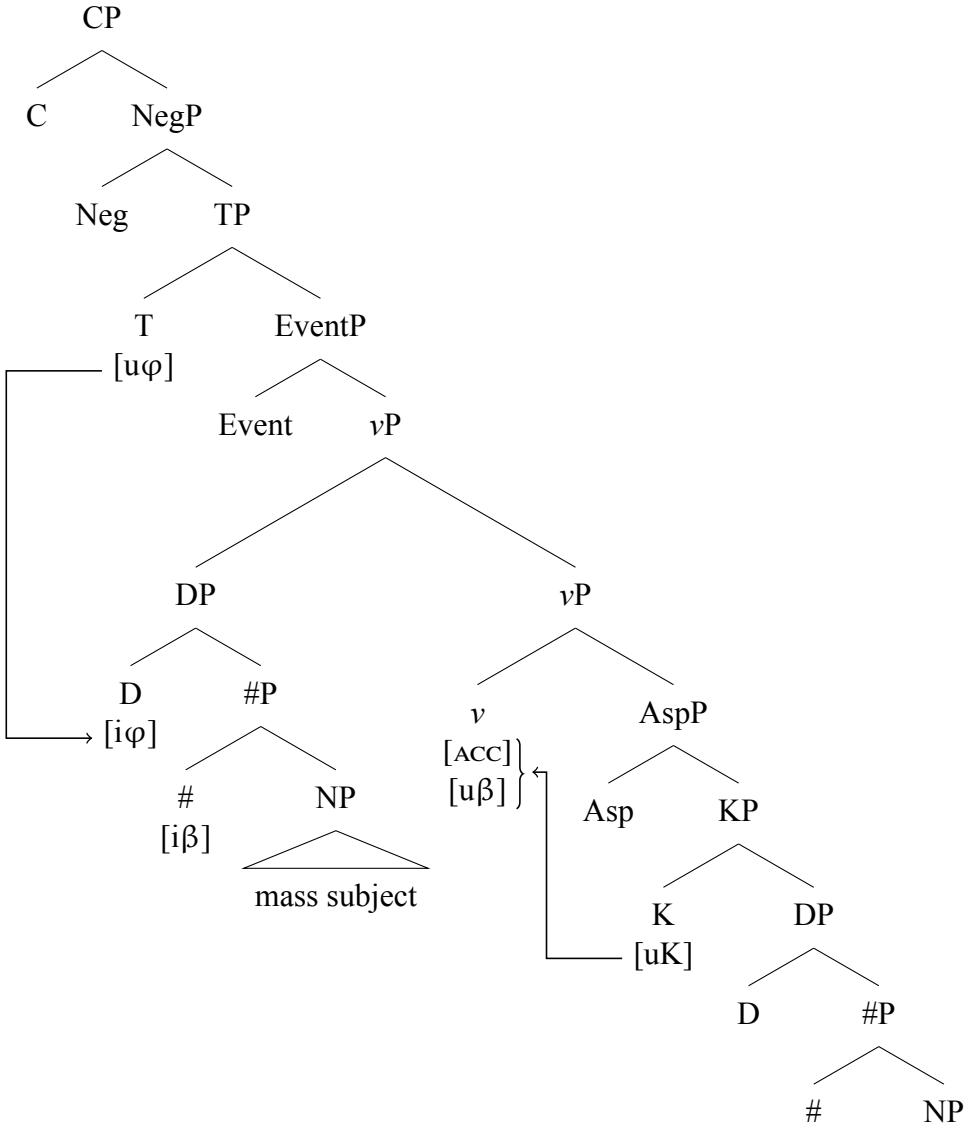
in nominative case. In (15b), with a non-quantized subject (*milk*, indefinite mass), the adjective is in partitive case, reflecting the unboundedness of the noun, but the noun itself still takes nominative case.

(15) a. Maito on *valkoinen*.
milk.NOM is white.NOM
The milk is white.

b. Maito on *valkoista*.
milk.NOM is white.PART
Milk is white.

Since nominal [β] is located in the head of #P, a mass subject will still have a [β] inside the DP. However, this does not result in a partitive subject, or in partitive object case. I argue that this comes about because nominative case in Finnish is actually the absence of Case, and nominative-marked elements are structurally lacking a KP, as in (16).

(16)



The absence of a KP layer on the external argument means both that Case cannot cannot be morphologically realized on the subject, which will always appear "nominative", and that the [iβ] in # will not raise and thus will not be visible to the upward [uβ] probe in *v*.

This is not a novel proposal: Bittner and Hale (1996) only posit KP for 'marked' cases, and analyze nominatives as caseless; McFadden (2014) also assumes nominative involves absence of the Case head; Miljan (2008) and Miljan and Cann (2013) analyze Estonian nominative as the absence of case as well.

Additional supporting evidence for this analysis comes from φ-agreement, which can only occur with a nominative argument: as the KP layer is a phase boundary, its absence means the [uφ] probe is able to agree with the subject's [φ] features, as seen in (16). Partitive- or oblique-marked nominals (which require a KP layer) may be raised in Finnish, such that they may appear to be subjects at first glance, but they cannot Agree with the verb; in these instances, the verb receives default 3SG marking, as shown in the sentences in (17).

(17) a. Noista lapsista *tulee* pian kuuluisia.
those.ELA child.PL.PART come.3SG soon famous.PL.PART
Those children are going to become famous soon.
(lit. Out of those children (there) comes soon famous [ones].)

b. Koreissa *on* pentuja.
basket.PL.INE be.3SG puppy.PL.PART
There are puppies in the baskets.

8. Conclusion

This paper unifies the various appearances of the partitive case in Finnish under a consistent and structurally-motivated system of aspectual representation. This unification of the different factors underlying object case assignment not only provides a parsimonious analysis of Finnish case marking that only relies on a single feature, but it also provides the first complete account of the object case data. This analysis also proposes and provides evidence for a cyclic bidirectional model of Agree. Finally, the presence of the same abstract feature [β] (representing cumulativity) at four different levels further informs recent discussion about the effect of structural position on featural interpretation (Ritter and Wiltschko, 2014; Cowper and Hall, 2012).

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