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The Finnish Numeral-Noun Construction

0. Introduction

The Numeral-Noun Construction (NNC) is a phenomenon that is characterized by an inherent mismatch of case between a numeral and a nominal complement. Although it tends to be the exception rather than the norm, some of the world's languages do exhibit this phenomenon—perhaps most notably, the Slavic languages. With that said, the NNC also occurs in Finnic (Finnish, Estonian) and Sami languages (Inari Sami). If we take, for example, Finnish, we see that nouns quantified by a numeral will inflect in the partitive case while the numeral seemingly remains uninflected, confer:

(1) a. kolme koira-a
three dog-PART.SG
'three dogs'

b. neljä talo-a
four house-PART.SG
'four houses'

c. viisi henkilö-ä
five person-PART.SG
'five people'

d. yhdeksän kissa-a
nine cat-PART.SG
'nine cats'

There are several potential problems NNCs can pose. Of particular importance for the purposes of this paper is the duality between the numeral's ability seemingly to assign case in non-oblique contexts and agree with nouns in oblique contexts (cf. Section 5.4). As already remarked, similar research has already been done for Slavic (Babby, 1987; Franks, 1994; Pesetsky, 2012; Witkoś et al., 2018). This paper will approach the apparent case mismatch of the NNC via Pesetsky (2013) but expand this theory to account for the grammar of Finnish (and consider extending the analysis to other Finnic languages within which the NNC is employed). The paper will be structured as follows: section 2 will present a concise list of the various uses of the partitive in Finnish; section 3 will present the Slavic data and analyses for

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comparison; section 4 will present a parallel hypothesis from Estonian data; section 5 will present the major hypotheses of this article; and section 6 will conclude the paper.

1. The Finnish Data

In order to understand how the use of the partitive in numerical expressions is licensed, a holistic showcase of its various uses is warranted. This will be a rather brief overview thereof as any longer could take up an entire book chapter (for a more complete treatise of the Finnish partitive, confer Hakulinen et al., 2004). In Finnish, the two most common cases are arguably the nominative and the partitive. There is no accusative case in Finnish with the exception of unique forms of the personal pronouns which have a morphological reflex. As for the status of accusative case in general, it is a matter of debate among Finnish linguists that I will not discuss here. It will suffice to say that both the genitive case and the partitive case can occur on the direct object of a transitive verb and that their occurrence is contingent on the telicity of the clause. It is worth noting now that the partitive in Finnish occurs in both the singular and the plural (unlike other Finno-Ugric languages, such as Inari Sami, which only has one invariable form of the partitive). It takes a few different forms subject to vowel harmony and the shape of the stem: -a/-ä, -ta/-tä, -tta/-ttä. The following is a non-comprehensive list of the some of the partitive's most common uses:

i) The incomplete (atelic) object of transitive verbs (confer Kiparsky, 1998).

a. Matti juo-Ø **maito-a** jokainen päivä.
Matti drink-3SG.NPST milk-PART.SG every.NOM.SG day.NOM.SG
'Matti drinks milk every day.'

b. Johanna maala-a **seinä-ä** Mannerheiminkadu-lla.
Johanna paint-3SG.NPST wall-PART.SG Mannerheim Street-ADESS
'Johanna is painting the wall on Mannerheim street.'

But, confer the telic object which occurs in the genitive case in the indicative mood:

c. Suvi jo-i-Ø maido-n, joka ol-i-Ø pöydä-llä.
Suvi drink-PST-3SG milk-GEN.SG which.NOM be-PST-3SG table-ADESS.SG
'Suvi drank (i.e. finished all) the milk that was on the table.'

ii) The internal argument of the main verb that is embedded under the negative auxiliary en/et/ei/emme/ette/eivät “not”.

a. Johanna e-i malan-nut **seinä-ä** Mannerheiminkadu-lla
Johanna not-3SG paint.PTCP.PST wall-PART.SG Mannerheim Street.ADESS
‘Johanna was not painting (/did not paint) the wall on Mannerheim Street.’

b. Suvi e-i juo-nut **maito-a/*maido-n,** joka
Suvi not-3SG drink-PST.PTCP milk-PART.SG/*milk-GEN.SG which.NOM
ol-i-Ø pöydä-llä.
be-PST-3SG table-ADESS.SG
‘Suvi didn’t drink the milk that was on the table.’

iii) The complement of numerals except yksi “one”.

a. kaksi **karhu-a**
two bear-PART.SG
‘two bears’

b. tuhat sata neljäkymmen-**tä** viisi **perhee-ttä.**
thousand hundred forty five family-PART.SG
‘1,145 families’

iv) The complement of certain verbs.

a. Minä rakasta-n **tä-tä** **kaunis-ta** **maa-ta.**
I.NOM love-1SG.NPST this-PART beautiful-PART.SG country-PART.SG
‘I love this beautiful country.’

b. Sanni pelkä-ä **tuo-ta** **iso-a** **hyönteis-tä.**
Sanni be.afraid-3SG.NPST that-PART big-PART.SG bug-PART.SG
‘Sanni is afraid of that big bug.’

c. Olli vihas-i-Ø **näi-tä** **vanho-j-a** **vene-i-tä.**
Olli hate-PST-3SG those-PART old-PL.PART boat-PL-PART
‘Olli hated those old boats.’

v) The subject of unaccusative verbs and existentials.

a. **Ihmis-i-ä** saapu-i-Ø bile-i-siin.
people-PL-PART arrive-PST-3SG party-PL-ILLAT
‘People arrived at the party.’

b. **Kauni-i-ta kirkka-i-ta outo-j-a valo-j-a**
beautiful-PL-PART bright-PL-PART strange-PL-PART light-PL-PART
ilmesty-i-Ø kaukana.
appear-PST-3SG from afar
'Strange beautiful bright lights appeared from afar.'

vi) The internal argument of passive verbs (cf. Manninen & Nelson, 2004).

a. Me näytetä-än **kaupunk-i-a** matkajo-i-lle.
we.NOM show-PASS city-PL-PART traveler-PL-ALLAT
'We're showing the city to the travelers.'

b. Me katso-ttiin **talo-a.**
we.NOM look-PASS.PST house-PART.SG
'We were looking at the house.'

vii) With the passive participle in order to indicate an action that has occurred before the event of the main verb.

a. Sanni-n tul-tu-**a** Matti huomas-i-Ø lia-n
Sanni-GEN come-PASS.PST.PTCP-PART Matti notice.PST.3SG stain-GEN.SG
seinä-llä.
wall.ADESS.SG
'Matti noticed the stain on the wall once Sanni (had already) arrived.'

b. Me ui-tiin järve-ssä jää-n lähdet-ty-**ä**.
we.NOM swim.PASS.PST lake.INESS.SG ice-GEN.SG go-PASS.PST.PTCP-PART
'We swam in the lake once the ice (had already) melted.'

viii) The complement of most prepositions.

a. Minä voi-n jatku-a ilman **ruoka-a.**
I.NOM can-1SG.NPST continue-INFIN without food-PART.SG
'I can continue without food.'

b. Me ol-i-Ø ment-y ravintola-an ennen
we.NOM be-PST-3SG.AUX go-PASS.PST.PTCP restaurant-ILLAT.SG before
luento-a.
lecture-PART.SG
'We had gone to the restaurant before the lecture.'

As can be seen, the partitive is highly versatile and occurs in a number of different environments. Not only is this the case, but it also occurs in a number of unexpected places (i.e. (i), (iii), (v), (vii)). There are clearly a number of different analyses that can be discussed for the Finnish partitive, but for the purposes of this paper, only (iii) will be discussed in depth. The analysis of the

partitive in general will be extended to some of its other uses such as in object position and with prepositions; however, an accurate discussion of the partitive would necessarily include a holistically thorough treatise of each of its individual uses.

2. The Slavic Numeral-Noun Construction

A very robust and well-analyzed set of data exists in research done on various Slavic languages—more specifically, Polish and Russian. In Polish the numerals 2—4 occur with the nominative plural form of feminine nouns. In Russian, however, the numerals 2—4 occur with the genitive singular for nouns of all genders. In Polish, the lower numerals 2—4 occur with a genitive virile[1] noun in the plural as well as also occurring in the genitive themselves. In both languages, all nouns occurring with 5 and higher numerals occur in the genitive plural. Some examples with the feminine:

(2) a. dwie dziewczyny
two girl.NOM.PL
'two girls'

b. pięć dziewczyn
five girl.GEN.PL
'five girls' [Polish]

c. dve devochki
two girl.GEN.SG
'two girls'

d. pjat' devochek
five girl.GEN.PL
'five girls' [Russian]

With the masculine:

(3) a. dwóch chłopców
two.ACC.PL boy.ACC.PL
'two boys'

b. dwa stoły
two.NOM.PL table.NOM.PL
'two tables' [Polish]

[1] In Slavic languages, 'virility' refers to a noun being masculine and animate. In Russian, all masculine nouns occur in the genitive following the numbers 2—4. In Polish, only masculine virile nouns do so.

c. dva mal'chyka
two boy.GEN.SG
'two boys'
d. dva stola
two table.GEN.SG
'two tables' [Russian]

The data in (2)-(3) showcase the general paradigm in the two languages. Notice that the pattern in (3a) occurs in the accusative and not the genitive. In both Russian and Polish, the genitive and accusative for masculine virile nouns are syncretic and show no difference. Witkoś et al. (2018) argue that masculine virile nouns in Polish occur in the accusative and not the genitive using a battery of tests showcasing that they occur in the structural nominative and accusative case positions.

(4) a. Krystyna zobaczyła dwóch chłopców na
Krystyna see.3SG.PST.FEM two.ACC.PL boy.ACC.PL on
ulicy.
street.LOC.SG
'Krystyna saw two boys on the street.'
b. Dwóch chłopców było w
two.ACC.PL boy.ACC.PL be.3SG.PST.NEUT in
parku.
park.LOC.SG
'Two boys were in the park.'

Consider the equivalent Russian data:

(5) a. Kristina uvidela dvux mal'chykov na
Kristina see.PST.FEM two.ACC.PL boy.ACC.PL on
ulice.
street.LOC.SG
'Kristina saw two boys on the street.'
b. Dva mal'chyka byli v parke.
two.NOM boy.GEN.SG be.PST.PL in park.LOC.SG
'Two boys were in the park.'

The accusative paradigm in both languages for masculine virile nouns is the same; however, we have a difference in the nominative cases. Where Polish shows case matching between the noun and the numeral—even in the

nominative—Russian does not. In the nominative we see that the numeral remains in the nominative case, but the complement appears in the genitive. In addition, we see that, unlike Polish, the Russian verb shows agreement with the semantic number.

For both Polish and Russian, there were a number of different analyses. One such analysis (Franks, 1994) argues that numerals are the head of a QP in the extended projection of NP. Another line of thinking (Pesetsky, 1982) posits a binominal construction where the numeral is a nominal head and subsequently takes an NP complement in the genitive. These analyses were further complicated by the fact that an analysis which might work for one Slavic language might not work for another[2]. This unfortunately seems to be the case. I will now turn to Pesetsky (2013) in order to account for the Russian data. Pesetsky identifies two major paradigms in Russian:

(6) i. Case and Number Mismatch
eti tri poslednix neverojatnyx
these.NOM three.NOM last.GEN.PL unbelievable.GEN.PL
dnia
day.GEN.SG
'these last three unbelievable days'

ii. Case Matching
etim triom poslednim neverojatnym
these.DAT three.DAT last.DAT.PL unbelievable.DAT.PL
dniam
day.DAT.PL
'to these last three unbelievable days'

Crucially, Pesetsky identifies that for Russian, we see case matching in oblique environments. In addition, in non-oblique environments, the introduction of the numeral causes not only a case mismatch on the nominal complement, but also a number mismatch on any modifiers merged between the numeral and the noun.

The core of Pesetsky's analysis rests on the notion of a "primeval" genitive—essentially, the lexical root of the noun. For Russian, Pesetsky argues that nouns leave the lexicon in the genitive and enter the syntax as such. He argues that this can be substantiated by the fact that modifiers that merge to this noun also appear in the genitive before they enter the syntax, and

[2] For a thorough treatment of Polish Numeral-Noun Constructions, see Witkoś et. al (2018). For an alternative treatment of Russian and of Bulgarian, see Ionin & Matushansky (2018).

not, say, the nominative. This "primeval" genitive leaves the lexicon bearing what looks like genitive morphology, but crucially is argued to be completely "numberless" by Pesetsky[3]. He argues, however, that a complete account of the Russian data cannot be given unless one analyzes Russian as a case stacking language. A case stacking language is one in which a noun can take more than one case ending. Languages differ in how they do this, but Pesetsky argues that Russian is a language where the innermost case endings are deleted because only one case ending is allowed on the surface. Thus, if we take Russian as a such a language, then we have a scenario in which the primeval genitive suffix is deleted in the presence of other case suffixes. In practice this would mean that nouns such as stol 'table' or lampa 'lamp' are underlyingly the following[4]:

(7)	Stem	N_{GEN}	D_{NOM}	Output
	stol	(-a)	-Ø	stol
	lamp	(-y)	-a	lampa

As can be seen, case stacking allows for the correct overwriting of the genitive suffix with whichever suffix is syntactically required by only

[3] The paucals (the numbers 2, 3, and 4, which all assign genitive singular in Russian), are argued to be heads in their own right. This paucal head, i.e. NBR, assigns the noun a number feature. The structure Pesetsky proposes is the following:

(1) [A [Paucal N]]

Here we see that the paucal and the noun merge first, followed by any modifiers. The paucal in these cases, Pesetsky argues, is essentially a free number morpheme as opposed to a bound morpheme that surfaces as a suffix on the noun at PF.

There are two crucial components to Pesetsky's argument:

(a) A noun is [–singular] and is assigned a numerical value *dual*, *trial*, *quadral*.*3*

(b) A noun in Russian can combine with Num (NBR in Pesetsky), in one of two possible ways:

i. Synthetically: N enters the derivation with a feature [+number] because NGEN (the primeval genitive) already bears number, or;
ii. Periphrastically: N enters the derivation [–number] because NGEN does not have number feature and therefore merges immediately with a lexical item that has a feature [+number].

The paucals are the only elements in Russian that can have *dual*, *trial*, or *quadral* number. Since Russian has a morphological plural *-i/-a* (contingent on gender), Pesetsky distinguishes the [–singular] case as the elsewhere case and as the defining feature of "plural" in Russian. That therefore makes singular or lack of number the conditioned cases. Essentially, he posits that Russian nouns are [–singular] unless otherwise specified by the syntax.

[4] The *-Ø* ending is the masculine ending and the *-a* ending is the feminine ending in Russian.

spelling-out the outermost suffix. Pesetsky shows that there is a difference between the paucal numerals (see footnote 3), and the higher numerals, 5 and above. I will look at only the higher numerals in detail because this paradigm is most like the Finnish data (to be discussed in section 5).

The following examples model the paradigms for the higher numerals:

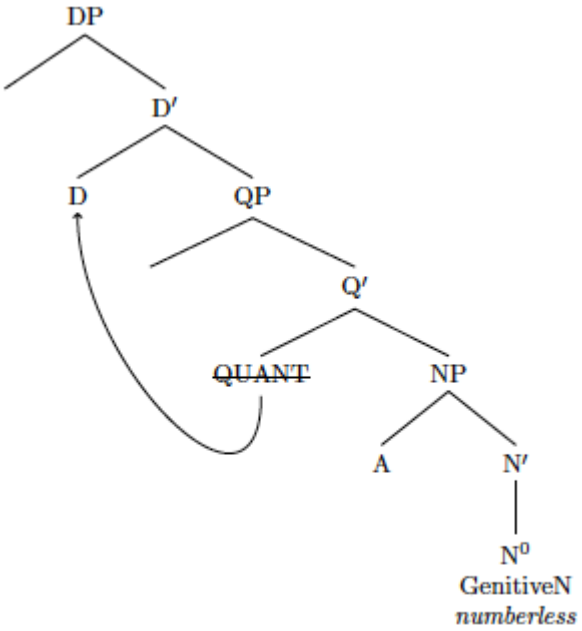
(8) a. pjat' domov
five.NOM house.GEN.PL
'five houses'

b. eti pjat' krasivyx domov
these.NOM five.NOM beautiful.GEN.PL house.GEN.PL
'these five beautiful houses'

c. etim pjati krasivym domam
these.DAT five.DAT beautiful.DAT.PL day.DAT.PL
'to these five beautiful houses'

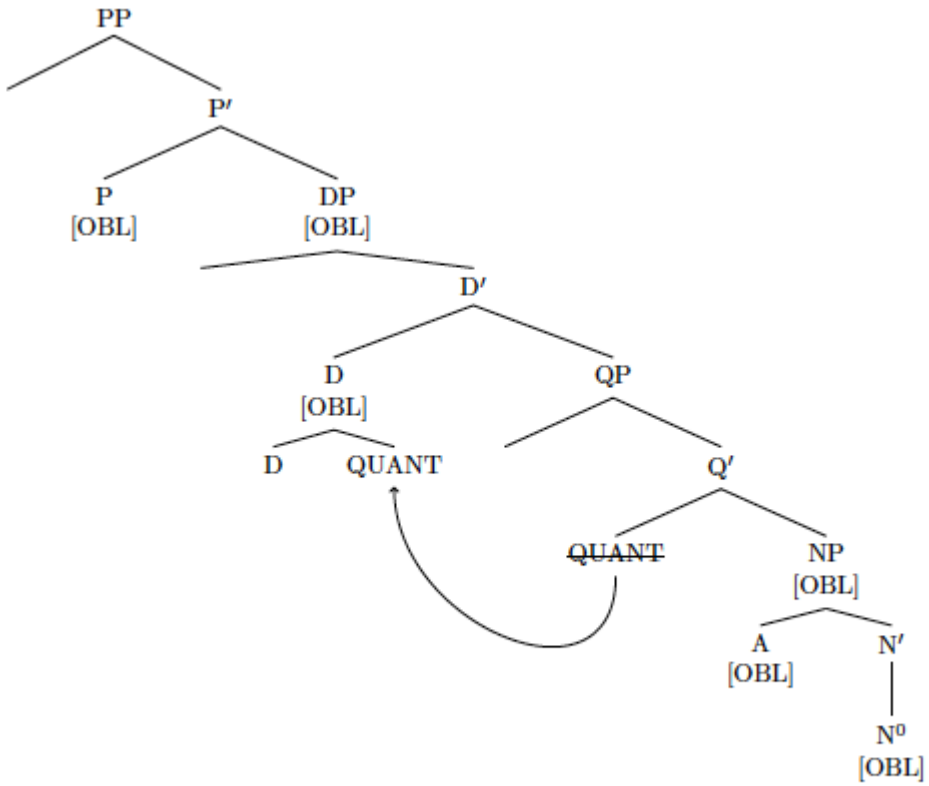
Pesetsky calls data like those in (8) the quantificational construction and highlights that this phenomenon showcases a case mismatch in the nominative, but no number mismatch (since we do see plural on the noun following a number greater than 1—4). In the oblique cases, however, there is case concord. The task then becomes motivating movements that will account for the case mismatch of the nominative and the concord of the oblique cases. The proposed structure is as follows:

(9)



The structure in (9) showcases Pesetsky's proposal for higher numerals in Russian. From the tree, we can see that Pesetsky proposes head movement from the quantifier to D. This complex head thus serves to model the quantified structure of the Russian higher numerals. Crucially, the higher numerals are argued to be overt instances of Q in Russian. Movement into D is necessary to satisfy D's requirement to assign DNOM. Everything within the NP, however, remains as NGEN since DNOM was already assigned to Q and nominative case does not penetrate into NP which is why both genitive and numberless (i.e. plural) morphology are seen in the NP. When DP merges with P, however, we see that oblique morphology overwrites all of the case endings and the outermost POBL suffix appears on all of the elements in the extended DP projection. Pesetsky does not explicitly show the phenomenon, but essentially, the following occurs:

(10)



This analysis seems to be a good account for the data observed in Russian. Bošković (2005, 2008) argues at great length for an analysis in which Slavic languages are in fact NP-languages and lack DP altogether; so, for an analysis within Slavic, there may be an issue here. In the discussion of Finnish, a similar inconclusiveness is observed and one could argue for Finnish as a DP-language or as an NP-language. I will not go into further detail on that matter in this paper. For our present purposes, I will take Finnish to be a DP-language. Turning back to Slavic, the take-home message from Pesetsky is that the higher numerals project their own QPs. This is a stance that, to my knowledge, is not particularly different from previous analyses of Russian (cf. Babby 1987; Franks 1994). For the sake of completeness, Pesetsky also says that the lower numerals, i.e. the paucals, also project a QP between the numeral and the DP; however, the Q head is null in these cases. In both the higher numeral and lower numeral cases, we see complete case concord in oblique environments as the oblique cases overwrite any other case endings already present, i.e. there is case stacking.

In the context of Finnish, I will adopt case stacking and the idea of a 'primeval' case from Pesetsky. Instead of primeval genitive, however, I will deem this lexical root as caseless and show in a similar fashion to Pesetsky

that the partitive case in Finnish is the form of the root when it leaves the lexicon. If we pursue this line of thinking we can avoid having to further complicate theoretical issues such as the sequential order of cases. I will discuss these issues and the order of cases in section 5. In the interim, I will turn to a parallel analysis in Norris (2018) that purports to analyze the NNC in Estonian, a language closely related to Finnish.

3. The Numeral as a Noun Argument

In contrast to the analysis of Russian established in the previous section, I will now present the Estonian NNC as is treated in Norris (2018). In his analysis, Norris proposes that numerals in Estonian are in fact nouns and as such, the Estonian NNC is actually a special case of what he calls 'pseudopartitive'. The Estonian pseudopartitve is a construction similar to English constructions of quantity, e.g. a barrel of wine. Estonian works in much the same way, except the second noun—N2 in Norris—appears in the partitive case instead of the genitive. Confer:

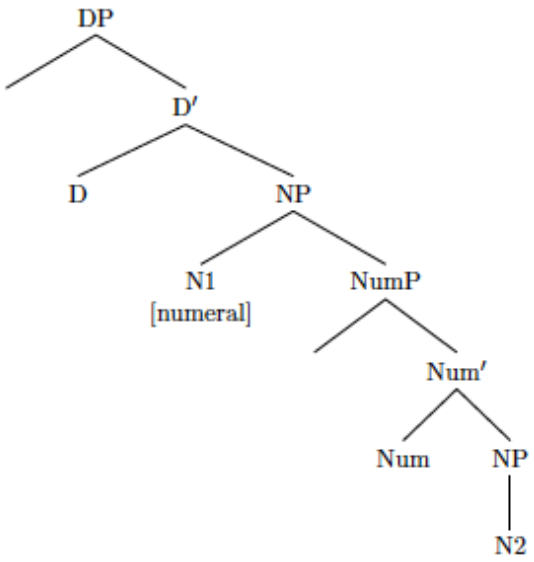
(11) a. hargitäis põhku
pitchforkful.NOM straw.PART
'a pitchforkful of straw'
b. parv pääsukesi
flock.NOM swallow.PART
'a flock of swallows'

Numerals in Estonian function in the exact same way as the N1 in the pseudopartitive does. Due to this fact, the NNC in Estonian is precisely like the pseudopartitive according to Norris. Confer:

(12) a. viis hobust
five.NOM horse.PART
'five horses'
b. seitse maad
seven.NOM country.PART
'seven countries'

The proposed structure for the Estonian NNC according to Norris is thus:

(13)



As can be seen, the NNC in Estonian takes a numeral, N1, and merges it to a NumP which itself has N2 as its complement. Norris argues that for Estonian, a NumP (as opposed to a DP, like for pseudopartitive) is necessary because the projection must be large enough to contain modifiers, nouns, and possessors but small enough so as to exclude demonstratives which are ungrammatical in the complement of the N1. Confer:

(14) a. kolm minu head tuttavat
three my good.PART acquaintance.PART
'three good acquaintances of mine'

b. *viis toda õpilast
five this.PART student.PART
Int: 'five of these students'

This will become important in the discussion of Finnish, as it distinguishes itself from Estonian in this particular case. Because constructions like the one in (14b) are not grammatical, Norris argues that the pseudopartitive is syntactically larger than the NNC. This analysis of the NNC is markedly different from the one discussed for Russian, namely, in the fact that Norris pursues a binominal analysis for numerals instead of the quantifier approach.

In his analysis, Norris identifies two overarching patterns in Estonian, the 'matching' pattern, and the 'partitive' (structural) pattern. The matching pattern includes all cases of case concord where both N1 and N2 share the same case (i.e. the oblique cases, as in Russian). I will begin by first

discussing Norris's proposals for the structural cases then discuss the obliques. The structural cases can be exemplified by the following:

(15) a. **Kolm poiss-i** tule-vad kooli-sse.
three.NOM boy-PART.SG come-3PL.NPST school-ILLAT.SG
'Three boys are coming to school.'

b. Ma näe-n **kolm-e inimes-t** tänava-l.
I.NOM see-1SG.NPST three-PART.SG person-PART.SG street-ADESS.SG
'I see three people on the street.'

We now have an interesting contrast which Norris uses as the evidence for the unmarked case hypothesis. What is interesting is the way in which Norris treats the accusative paradigm. As can be seen, the numeral, like N2, is also in the partitive case. This poses a bit of an issue since Estonian does not have an overt morphological accusative case. Like Finnish (except for the personal pronouns), Estonian uses two cases to mark the 'accusative': the genitive and the partitive. Unlike Finnish, however, Estonian uses aspect markers (much like the Hungarian verbal particles meg 'PERF', el 'away', fel 'up', etc.) to encode information about telicity (that is, Asp0 is realized at PF in telic structures). Confer:

(16) a. Ma loen seda raamatut.
I read.1SG.PRS this.PART book.PART
'I am reading this book.'

b. Ma loen selle raamatu läbi.
I read.1SG.PRS this.GEN book.GEN through
'I will read this book (and finish it).'

Confer with the NNC:

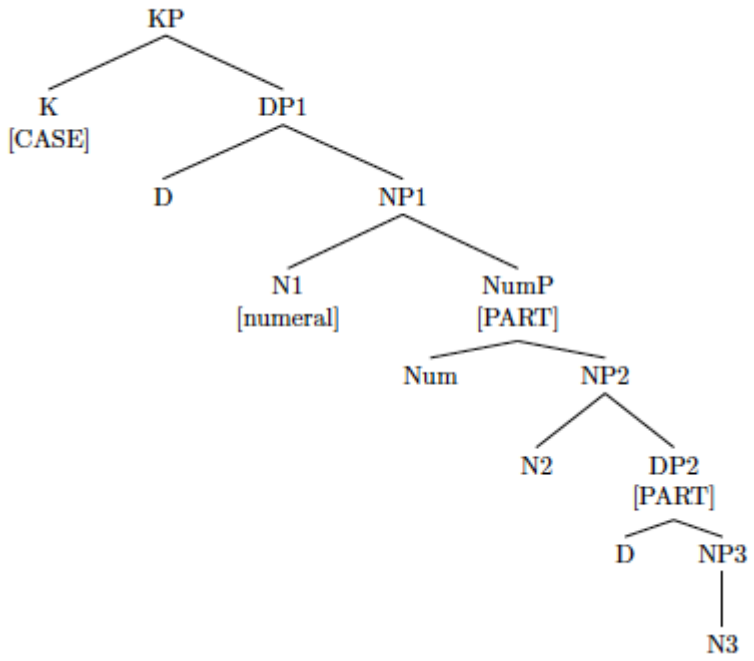
(17) Ma loen nende viie raamatu läbi.
I read.1SG.PRS these.GEN five.GEN book.GEN through
'I will read (and finish) these five books.'

Here we see that even in NNCs, the genitive case will overwrite the partitive in telic environments—that is, we see complete case matching. That leaves the case mismatch in nominative environments and in atelic constructions. Norris goes on to combine the pseudopartitive and the NNC which includes data of the following type:

(18) Ma jõin **kahte liitrit**
I.NOM drink.1SG.PST two.(ACC).PART.SG liter.PART.SG
õunamahla
apple juice.PART.SG
'I was drinking two liters of apple juice.'

The following tree can be used to model the NNC and pseudopartitive in Estonian such as in (18):

(19)



This tree is therefore representative of an NNC with a pseudopartitive in either of the structural positions. Regardless of the position, we see the complement domain of the numeral remains in the partitive regardless of whether or not the numeral also occurs in the partitive or nominative. The reason this occurs, according to Norris, is that the partitive case acts as a "last resort" when another case has failed to be assigned to the noun. K can only be valued once KP merges to the verb. The other nouns in this structure, however, still need to be assigned case as soon as K merges with the structure. Therefore, the other nouns lower in the structure, namely N2 and N3, remain caseless once KP has fully merged. This cannot be so, and as a result, Norris argues partitive case is assigned to save the caseless nouns. Hence, we see partitive in the complement positions of the NPs.

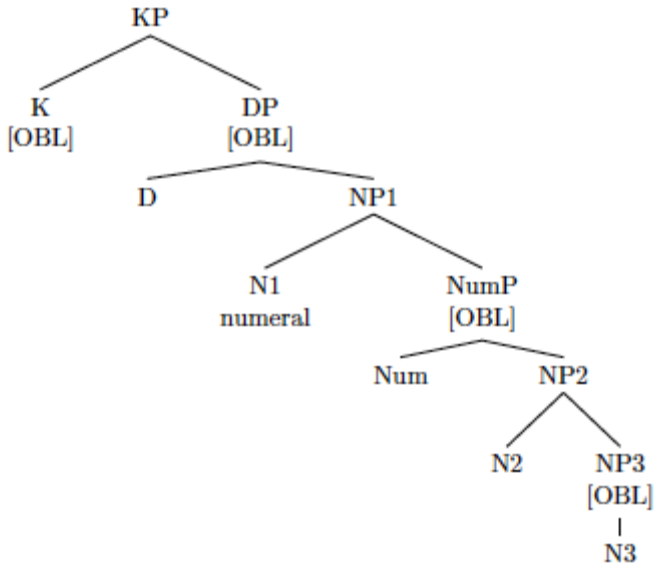
Let us now turn to the oblique cases:

(20) a. Ma lähen koju **kolmega õllega**.
I go.1SG.PRS home three.COM beer.COM
'I'm going home with three beers.'

b. Sa oled olnud **viies ilusas**
You have.2SG.AUX been.PTCP five.INESS beautiful.INESS
maas.
country.INESS
'You have been to five beautiful countries.'

In these cases, Norris discusses case concord which is the mechanism behind all the elements in the extended DP projection receiving the same case ending. In addition to this, Norris argues that the oblique cases are assigned earlier than the structural cases. Norris offers the following structure to account for the oblique cases in Estonian which are contingent on a KP providing the case:

(21)



The oblique case originating in K0 cascades all the way down to N3 according to Norris. It is spread throughout the entire extended projection, resulting in complete case concord throughout the constituent (i.e. the (case) matching pattern).

So, if this is indeed the case for Estonian, what prevents us from assuming that the accusative case isn't simply another instance of case concord since both the numeral and the nominal complement appear in the partitive case?

Since Estonian does not further distinguish any form of morphological accusative, it is not so simple to differentiate. Nonetheless, we still have to account for the fact that the noun appears in the partitive. Norris accounts for this by taking the partitive to be an unmarked case. This means that nominal complements that do not already have case are assigned partitive case a "last resort". While there are merits to this analysis, there are potential pitfalls—especially when broadening the argument to other Finno-Ugric languages[5]. Norris makes the argument that the NNC and the pseudopartitive show examples of unmarked case. This is particularly important for structural case positions, which are the positions in which the NNC and the pseudopartitive are observable in Estonian (elsewhere they show case concord). Furthermore—and a rather important part of the treatment of obliques—Norris argues when oblique case is assigned, partitive is never assigned. That is to say that, in contrast to Pesetsky who argues for case stacking in Russian, Norris argues for no such process in Estonian. Consequently, when an oblique case appears in Estonian, partitive was never deleted, unlike what Pesetsky argues to happen to the genitive in Russian.

We can, however, forego the notion of unmarked case if we pursue an alternative. From Norris, I will adopt the binominal analysis, which can be neatly applied to Finnish. I will also adopt a similar approach to case assignment when dealing with pre- and postpositions. Where I diverge from Norris is in how to deal with the partitive case. As I will discuss in the next section, the partitive case, much like Pesetsky's primeval genitive, is the lexical root of nouns in Finnish (and by extension, Estonian); however, unlike Pesetsky, I will assume, like Norris, that the numerals in Finnish head their own projections and take nominal complements.

4. The Finnish NNC

4.1. Caselessness in the Finnish NNC

We will finally turn our attention to the NNC which is related to, but not exactly like the examples just discussed in section 4. The following examples serve to refresh the reader on the construction in Finnish, both in the nominative and the accusative:

(22) a. Kaksi kissaa istuu aidalla.
two cat.PART.SG sit.3SG.NPST fence.ADESS.SG
'Two cats are sitting on the fence.'

[5] This can be attributed to the fact that not all Finno-Ugric languages have a partitive case.

b. Minä kirjoitin kaksi kirjaa sodasta.
I,NOM write.1SG.PST two book.PART.SG war.ABLAT.SG
'I wrote two books about the war.'

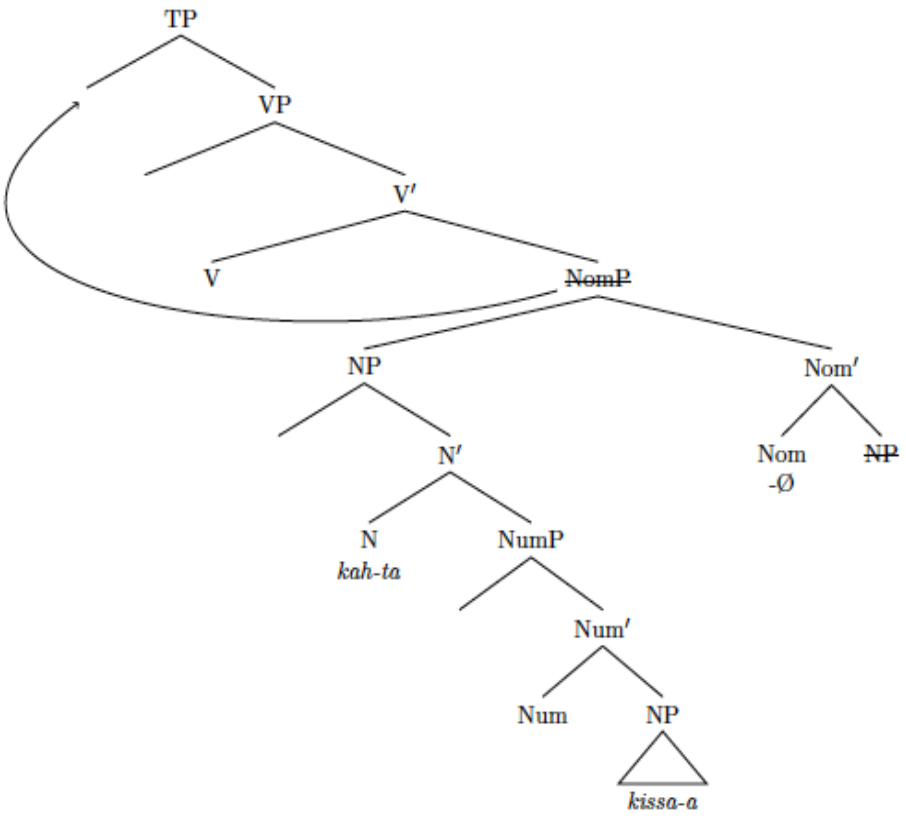
c. Sanni kirjoittaa viittä sivua hänen kirjaa varten.
Sanni write.3SG.NPST five.PART page.PART.SG her book.PART.SG for
'Sanni is writing five pages for her book.'

Addressing the issue of the NNC in the nominative, we have the issue of the case mismatch, much like Estonian. Furthermore, we do not see any other types of case mismatches in the nominative structural case. So, for (22a) *kahden (gen.) kissaa (part.) 'two cats' is incorrect in every environment (compare: kahden (gen.) kissan (gen.)). Instead, we have a curious case of the nominative on the numeral with the partitive on the nominal complement. We can be certain that this is the paradigm as the partitive is also not observed in cases of the following type:

(23) * Kahta kissaa istuu aidalla.
two.PART cat.PART.SG sit.3SG.NPST fence.ADESS.SG
'Two cats are sitting on the fence.'

We must therefore account for this pattern by assuming that, in the Finnish NNC, nominative case is assigned only to the numeral. Conversely, the noun, being inaccessible to operations by being in the complement domain of the numeral, remains caseless. Confer the following, which shows the nominative subject in (22a):

(24)

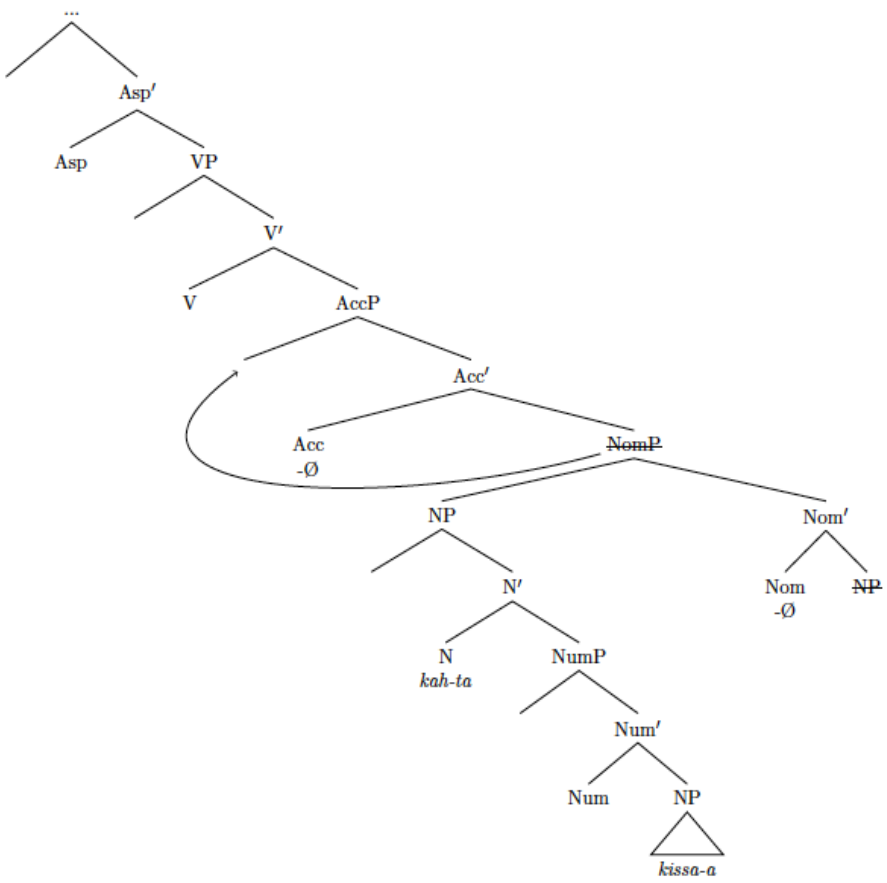


For purposes which will become clear in section 5.3, I will denote the structural cases in a NomP layer and an AccP layer. We see then that the complement of Nom moves into spec, NomP and the nominative case, which is -Ø in Finnish, overwrites the partitive ending. This harkens back to the notion of case stacking which was discussed in section 3. In contrast to Russian, the partitive, not the genitive, is deleted in favor of the outermost ending. Some phonological changes affect the stem as a result of deleting the partitive ending from only the numeral and from there it moves in the usual manner until landing in spec, TP. We get the correct surface form kaksi kissaa 'two cats' as a result (like in (22a)).

Pursuing this course of action, we get nominative case as expected and the domain of the numeral simply remains caseless. In addition, I will argue that the nominative in Finnish is sometimes syncretic with the accusative case (in the imperative and in the so-called 'active'-passive). I will not, however, go into detail on this for our present purposes as it would complicate the case syncretism of the accusative. In contrast to analyses done for languages like Polish which do assume accusative subjects, I do not assume that the root

noun undergoes any special case assignment. By assuming that the root noun remains caseless, we avoid having to account for creating a scenario in which we have to assign case to an otherwise inaccessible domain. If we pursue a similar course of action for the accusative object, there is a difference in what is being moved:

(25)

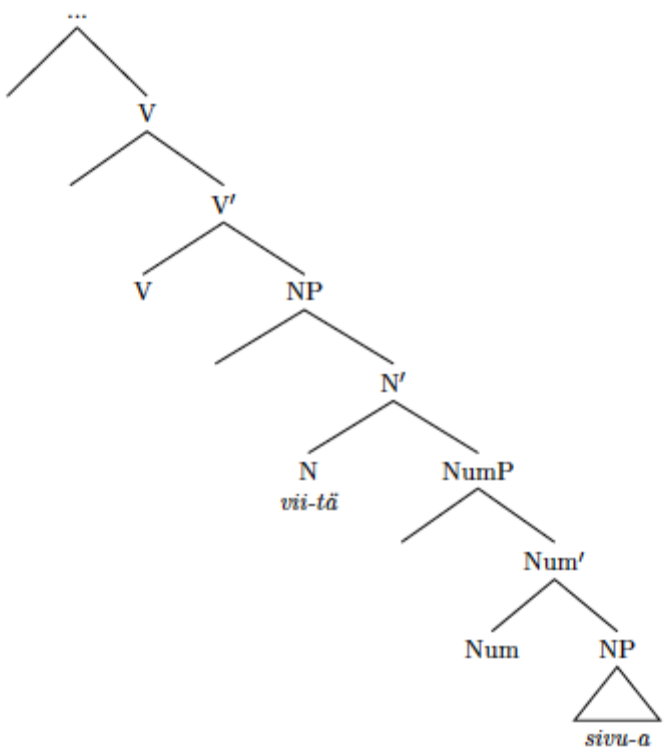


In this tree we move the entire complex NP into spec, NomP where the numeral can copy nominative morphology. It is then moved into spec, AccP, where another instance of case stacking is observed. In this instance, however, the morphological endings are the same. An obvious question arises: what conditions the use of the genitive ending accusative or the zero-ending accusative? I propose that when NumP and AspP[6] are projected, then the -Ø

[6] More explicitly, AspP is projected in telic sentences. When it is not projected, then we have atelic readings by default.

accusative (i.e. the case syncretic ending with the nominative) must be used[7]. It must move into AccP because AspP attracts AccP into its specifier, but the morphology remains nominative due to case stacking and the case syncretism between the accusative and nominative in these cases. The tree, then, for the final instance of the partitive, atelic object will be similar to the tree in (24), except that the binominal expression may undergo movement without ever being assigned case. That way, we see the partitive, caseless paradigm in the absence of AspP. Confer:

(26)



We see that the NP complement is simply stays in the complement domain without ever merging with any case projection. If we pursue this course, no

[7] This may also account for the fact that in the plural, we see that the nominative case is syncretic with the accusative. In these cases, we never see a genitive plural telic object.

(i) Minä syötin hevoset/*hevosien.
I feed.1SG.PST horse.NOM.PL/GEN.PL
'I fed the horses.'

In this case we have a morphological Num being expressed at PF, which means that there may indeed be a correlation between when Num is expressed versus when it isn't. In a similar vein, this can be further extended to numerals, which also project Num.

other morphological suffix ever overwrites the partitive ending and therefore we end up with the caseless paradigm in atelic constructions.

4.2. The Norris Hypothesis in Finnish

I will begin this section by reproducing the Finnish NNC:

(27) a. kolme poika-a
three boy-PART.SG
'three boys'
b. yhdeksän arvo-a
nine number-PART.SG
'nine numbers'

As can be seen, we have the same paradigm as in Estonian for the instances of the nominative. Confer the following:

(28) a. Kolm poiss-i tule-vad kooli-sse.
three boy-PART.SG come-3PL.NPST school-ILLAT.SG
'Three boys are coming to school.'
b. Kuus hobus-t on-Ø karjamaa-l.
six horse-PART.SG be.3PL.NPST pasture-ADESS.SG
'Six horses are in the pasture.' [Estonian]

c. Kolme poika-a tule-e koulu-un.
three boy-PART.SG come-3SG.NPST school-ILLAT.SG
'Three boys are coming to school.'
d. Kuusi hevos-ta on-Ø laidunne-lla.
six horse-PART.SG be-3SG.NPST pasture-ADESS.SG
'Six horses are in the pasture.' [Finnish]

Third person singular agreement on the verb is the norm for most of the cases in Finnish—in contrast to the plural agreement seen on the verb in Estonian—however, in Finnish it is not obligatory and indeed third person plural is possible when a [+DEF] feature is present in the DP:

(29) Kolme poika-a tule-vat koulu-un.
three boy-PART.SG come-3PL.NPST school-ILLAT.SG.
'The three boys are coming to school.'

More importantly, however, Estonian and Finnish are consequently in accord in their representation of the NNC subject. In Finnish there is no

difference between the nominative and accusative morphologically (at least not overtly) for these numeral phrases. In Estonian, the nominative case on a numeral phrase is the only case that shows a morphological mismatch. In the accusative as shown in the previous section, and unlike Finnish, we see that the internal argument of a transitive verb is assigned morphological partitive case or genitive case, in contrast to Finnish:

(30) Ma näe-n kolm-e inimes-t
I.NOM see-1SG.NPST three-PART.SG person-PART.SG
tänava-l.
street-ADESS.SG
'I see three people on the street.' [Estonian]

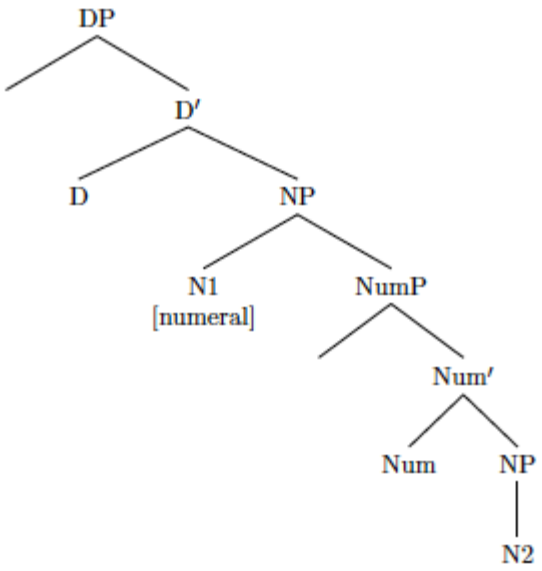
(31) Minä näe-n kolme henkilö-ä kadu-lla.
I.NOM see-1SG.NPST three person-PART.SG street-ADESS.SG
'I see three people on the street.' [Finnish]

These minimal pairs showcase a difference between Finnish and Estonian. We have an issue in the morphological representation of the internal argument of the transitive verb in Finnish. Unlike Estonian, which clearly shows morphological changes in the accusative position, Finnish does not. What Norris discusses as far as the structural cases are concerned is actually more pertinent to Finnish which shows no morphological distinction between the two. That is, the examples in (27) are entirely ambiguous as to whether or not they are nominative or accusative, that is, these cases are syncretic in specific environments[8].

I will return to this ambiguity in the next subsection. I will first begin by applying Norris's analysis to Finnish and will reintroduce Norris's proposed structure for the NNC in Estonian:

[8] I should mention that they are ambiguous in the accusative only if they are telic objects. It is possible for the numeral to also appear in the partitive if the argument of the verb is atelic. As far as I know, it is more common to use the telic object with accusative NNCs in Finnish.

(32)



Recall that Norris takes an interesting position in which he chooses to treat the complement of the numeral to be NumP. His reasoning for this is the fact that the complement must be large enough to include adjectives and genitive possessors, yet small enough to exclude demonstratives. This analysis is fair for Estonian, but in Finnish we encounter a problem, namely, Finnish does indeed allow demonstratives (or determiner-like elements like se 'it, this' and ne 'they, those') in the complement position. Consider the following data:

(33) a. kolme näi-tä koira-a
three.NOM these-PART dog-PART.SG
'these three dogs'[9]

b. nämä kolme koira-a
these.NOM three.NOM dog-PART.SG
'these three dogs'

(34) a. kolme Sannin kissa-a
three.NOM Sanni.GEN cat-PART.SG
'Sanni's three cats'

b. Sannin kolme kissa-a
Sanni.GEN three.NOM cat-PART.SG
'Sanni's three cats'

[9] According to my native speaker consultant, this can only mean '*these three dogs*' and not '*three of these dogs*'. We can therefore discount the presence of a PP in these projections.

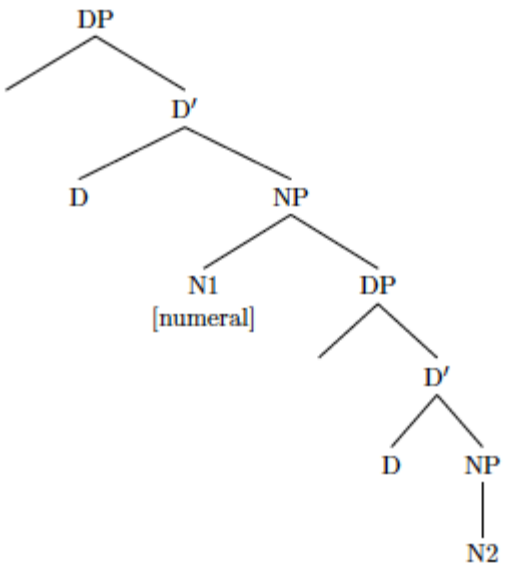
With more complex structures:

(35) a. Sannin kolme noi-ta ärsyttävä-ä
Sanni.GEN three those-PART annoying-PART.SG
kissa-a
cat-PART.SG
'those three annoying cats of Sanni's'

b. Sannin nuo kolme ärsyttävä-ä
Sanni.GEN those.NOM three annoying-PART.SG
kissa-a
cat-PART.SG
'those three annoying cats of Sanni's'

Clearly, we are unable to postulate the same structure in (32) for Finnish—the complement of the numeral is larger than that of the complement in Estonian. It may be plausible to postulate the pseudopartitive structure which essentially is a purely binominal structure:

(36)



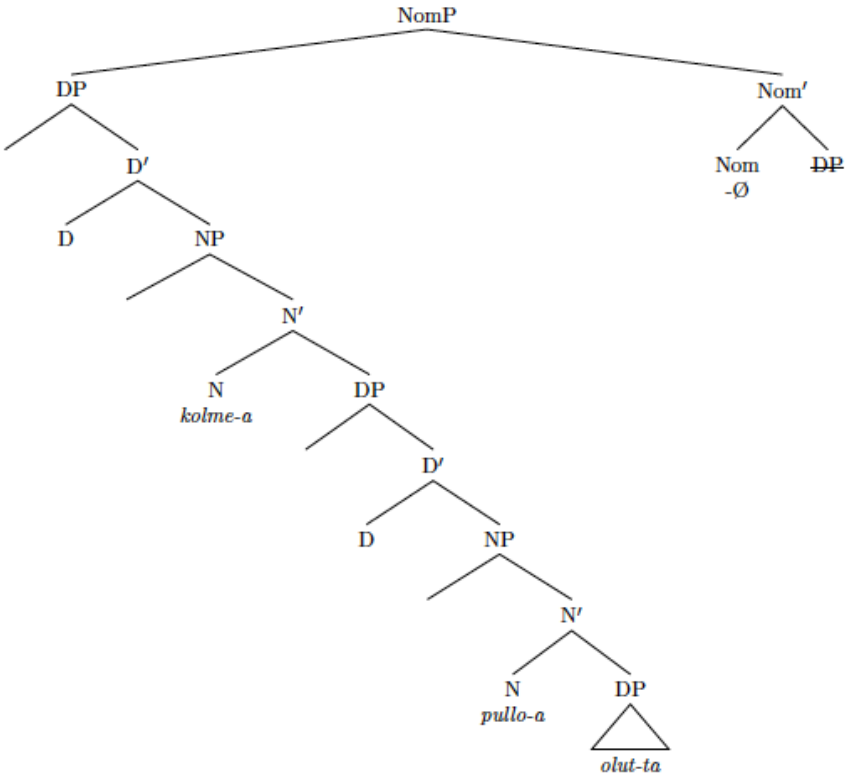
This structure—the exact structure Norris (2018) proposes for the pseudopartitive—is essentially the same as (32), with the exception that, instead of a NumP complement, the numeral necessarily takes a DP complement in order to accommodate the complexity of the potential structure. What would be left to ascertain would of course be the reason for

the case mismatch. But if we continue assuming that the Finnish noun is caseless unless otherwise merged to a case projection, then we do not run into a problem. Take the following:

(37) kolme pulloa olutta
three bottle.PART.SG beer.PART.SG
'three bottles of beer'

This phrase can now be modelled thusly under a theory of caselessness:

(38)



The tree in (38) showcases a situation in which the appropriate structural case is assigned to the numeral in accordance with the syntax—that is, moving the DP into spec, NomP allows the -Ø ending to appear morphologically on the highest element, here, kolmea 'three'. This therefore causes the overwriting of the partitive -a which gives us the phrase in (36). More importantly for the extrapolation, it shows a multinominal structure which is subject to recurrent cases of partitive case. That said, an analysis for Finnish will use NumP before the numeral-noun and simply merge it to DP in order to account for the

potential size of the complement. Furthermore, this same process occurred when the noun pulloa 'bottle' merged with the noun olutta 'beer' which executed the exact same procedure, just without the NumP. What we can see from the presented data is that we can account for the paradigms by simply saying that nouns come out of the lexicon with primeval partitive and remain as such in Finnish. Case is consequently determined by the syntax outside of the lexicon, and if no case overwrites the partitive, then the noun remains as such. We can therefore maintain a very straightforward story to account for the seemingly aberrant data.

4.3. A Brief Nanosyntactic Take

Departing from Norris, I will return to the analysis in section 3 and offer a different approach to the case mismatch observed for Finnish (and Estonian). In this analysis, the goal is to attempt to reconcile standing analyses for Slavic languages with those for Finnic languages. I propose to use a similar approach to the analysis conducted for Russian in section 3; however, this may prove to be complicated as placing the partitive case into an overarching theory of case is no simple matter. Arguably one of the most persistent issues is the sheer versatility of the partitive case itself. Recall the plethora of environments in which the partitive case may appear from section 2. This is further complicated by the fact that the partitive case can, for all intents and purposes, behave as a structural case.

One such theory of case is that of the Case Contiguity. The Case Contiguity is a proposed syntactic hierarchy of cases that showcases not only how they are related to one another, but even how they may be built upon one another.

(39) Nom<Acc<Gen<Dat<Instr<Com

The Case Contiguity as discussed in Caha (2009) provides a potential solution to the placement of partitive within the hierarchy. Caha observes that only contiguous cases can be syncretic, i.e. those that are in a local relationship with each other. This means that the nominative and accusative might be syncretic in a language (e.g. in Slavic languages), that the genitive and the dative may be syncretic (e.g. Modern Greek) and so on and so forth as you go up the case hierarchy. It is important to explicate here that non-contiguous cases cannot be syncretic. This effectively means that, for example, the nominative and the genitive cannot be syncretic, unless the accusative is also syncretic with both cases. In other words, if all three cases are spelled-out in the same manner, then these three cases are said to be syncretic and adjacent

in the hierarchy. If, however, the accusative case were to show a non-syncretic spell-out, then the genitive and the nominative can never show case syncretism.

If this is indeed a correct hierarchy of case, where then does the partitive case fit? This is not a question readily answered if we consider the notion that feature inventories are universal cross-linguistically, meaning that, if one language has a particular functional head and therefore projection, then so too does every other language (Caha, 2020). If this is the case, then positing a partitive case projection would require a necessary change in the hierarchy. If this is the course of action then we would need to decide whether it occurs in between nominative and accusative, before nominative, after accusative or somewhere else entirely. If, however, this is not the case, then what is partitive case? Caha (2009) proposes the following hierarchy:

(40) Nom<Acc<Gen<**Part**<Dat<Instr<Com

Caha places the partitive above the genitive case for two reasons: i) using Estonian, Caha shows that the partitive case is morphologically built upon the genitive case which means that it must occur higher than the genitive case in the hierarchy (i.e. it is an analytic case), and ii) case syncretism is observed between the accusative and genitive. Due to this, he argues that partitive must go above genitive. For Estonian, however, this is a problem because Caha argues that the partitive is built upon the genitive. Some examples from Estonian:

(41) a. Ma joon kohvi.
I drink.1SG.NPST coffee.PART
'I am drinking coffee.'

b. Ma loen raamatut.
I read.1SG.NPST book.PART
'I am reading a/the book.'

c. Kohvi on laual.
coffee.PART be.3SG.NPST table.ADESS
'There is (some) coffee on the table.'

d. Leiba on külmutuskapis.
bread.PART be.3SG.NPST refrigerator.INESS
'There is (some) bread in the refrigerator.'

At first glance, this seems to fall in line with a theory in which the partitive case occurs higher than the genitive and the nominative in the case hierarchy. This would be good because higher cases should theoretically overwrite lower

ones. Unfortunately, this is not the case in Estonian. The genitive may overwrite the partitive case in accusative environments. Confer:

(42) a. Ma joon selle kohvi ära.
I drink.1SG.NPST this.GEN coffee.GEN away
'I will drink this coffee (completely).'
b. Ma loen raamatu läbi.
I read.1SG.NPST book.GEN through
'I will read the book (completely).'

In (42) the primeval partitive has been overwritten by the genitive and as expected, the nominative can also overwrite the partitive (and in fact usually does):

(43) a. Kohv on laual.
coffee.NOM be.3SG.NPST table.ADESS
'The coffee is on the table.'
b. Leib on külmutuskapis.
bread.NOM be.3SG.NPST refreigerator.INESS
'The bread is in the refrigerator.'

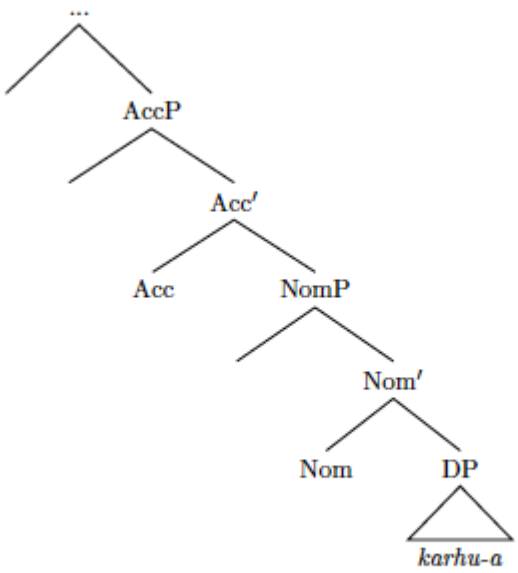
We now run into a problem, namely, we see that the genitive and the nominative are capable of overwriting the partitive in the exact same environments. Semantic notions aside, this is theoretically not possible in the case hierarchy. Not only is this the case, but this is entirely unexpected because, as Caha argues, the partitive is morphologically built upon the genitive which must mean that it is larger than the genitive (and by proxy, the nominative). However, as we can see in (42), the genitive case can overwrite the partitive—an "illegal" move by all accounts. We are then left with a case in which we expect the genitive to be smaller than the partitive, but in practice it behaves as though it is larger than the partitive. Not only is this the case, but it is often the case in Estonian that postpositions will overwrite the partitive in favor of the genitive. Confer:

(44) a. Leib on laua peal.
bread.NOM be.3SG.NPST table.GEN on
'The bread is on the table.'
b. Pilt on raamatu all.
picture.NOM be.3SG.NPST book.GEN under
'The picture is under the book.'

If the partitive and the genitive might be syncretic as Caha proposes in (40), the we should not expect this to occur; however, as we clearly see, the genitive does indeed overwrite the partitive case in many contexts. We can therefore conclude that (40) cannot be the correct hierarchy. This mounting evidence clearly indicates that partitive case cannot be larger than genitive as Caha proposes in (40). This unfortunate detail poses an issue in that it forces us to decide whether or not the partitive is really a 'case', or whether it could be a special allomorph of the accusative or nominative.

To get past this, I will argue a position in which the partitive case is not a "real" case. I will contend instead that the partitive case is in fact the lexical root of the noun in Finnish and that movement into specific projections causes the root ending to be overwritten. If this is indeed to be the case, then we can discount the partitive as an actual case and instead analyze it as simply the shape of the root. I therefore propose the following tree:

(45)



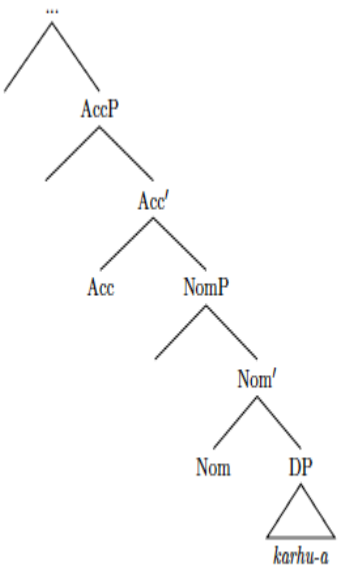
My conjecture is, then, that the root of the Finnish noun is actually the "partitive" form so that the lexicon indexes karhua 'bear' and not karhu 'bear' (nominative). If this correct, then we can forego the entire notion of having to make adjustments to the Case Contiguity. This opens up a number of new analyses. If this hypothesis is correct, then we will have to account for how structural case is properly assigned in Finnish.

Beginning with the simple cases of the structural paradigms (I will move on to the NNC in the next subsection), let us consider the following examples from Finnish:

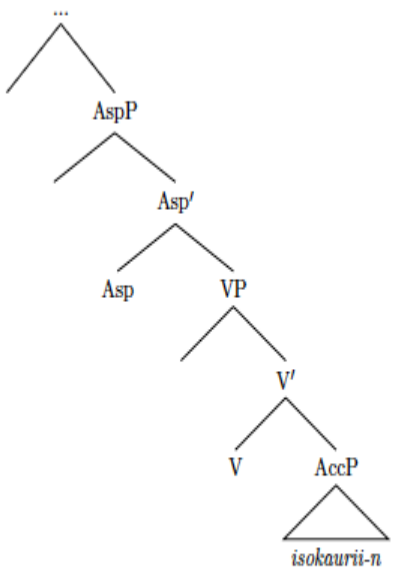
(46) a. Pekka ampui isokauriin.
Pekka shoot.3SG.PST red deer.GEN.SG
'Pekka shot (and killed) the red deer.'
b. Pekka ampui isokaurista.
Pekka hoot.3SG.PST red deer.PART.SG
'Pekka shot (and wounded) the red deer.'

Taking these examples into account we must devise a means by which the proper case is assigned. For (46a), I propose the following model ((47a) represents the movements at the lower end of a larger tree, (47b) represents the movements at the upper end of that tree):

(47) a.

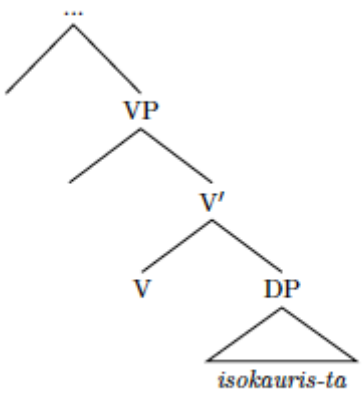


b.



Further changes to the stem notwithstanding, the trees in (47) shows that the telic object lands in spec, AccP in order to get the accusative case suffix (which, again, is syncretic with the genitive in Finnish). Recall that due to the case stacking phenomenon, the partitive and nominative suffixes are overwritten in favor of the outermost suffix, which is the accusative in this instance. From there it can move into the proper structural position in the syntax. I have also projected AspP in order to account for the telicity of the clause. I will posit that AspP probes for accusative case and therefore is the cause of the case alternation. The partitive, atelic object undergoes a similar, yet slightly different process. Confer:

(48)



The major difference in this proposed structure for the atelic object, or rather, the caseless object, is that AspP is necessarily not projected. In addition, there are no case projections at all because the noun remains partitive, or rather, caseless. Therefore, the syntax does not need to project the unnecessary case projections for this DP (it will, however, do so for the sentential subject). In this manner, the noun does not move into a case projection that would otherwise overwrite the caseless ending, i.e. the partitive suffix. The partitive in this analysis is therefore not a real case and is used when the syntax does not require a proper lexical or structural case on the noun. In the accusative case, the presence of AspP will determine the assignment of accusative on the object, thereby overwriting the lexical root suffix (-A, -tA, -ttA)[10].

Adopting the structure in (48) is not farfetched if we take into account the phenomenon of differential object marking (DOM). DOM languages are those in which a distinction is made between how objects are case marked. Bárány (2015) provides the following definition for differential object marking:

(49) *Differential Object Marking*: A proper subset of direct objects in a language is marked differently from the complementary subset of direct objects. The marked subset of direct objects is generally more definite, more animate, or more topical than the complementary subset. [p. 3]

How languages choose to distinguish these different subsets of course differs. Bárány shows that Hungarian chooses to distinguish this difference not on the morphology of the direct object, but on the morphology of the verb, that is, the so-called "subject" conjugation versus the "object" conjugation. Hungarian

[10] The capital A is meant to showcase that the vowel *-a* is subject to vowel harmony.

verbs show a different conjugation depending on the definiteness of the object. Generally speaking, the subject conjugation shows agreement with indefinite objects, and the object agreement shows agreement with definite objects. Confer:

(50) a. Az égen **látok** egy sereg fecskét.
the sky.SPRESS see.1SG.SBJ a flock swallow.ACC
'I see a flock of swallows in the sky.'
b. Az égen **látom** a sereg fecskét.
the sky.SPRESS see.1SG.OBJ the flock swallow.ACC
'I see the flock of swallows in the sky.'

The examples in (50) clearly show that there is a marked morphological difference in the way that definiteness affects the morphology of the verb. Languages that exhibit this kind of marking are argued to adhere to particular hierarchies that determine how precisely it is marked in the syntax. Bárány cites several possible hierarchies:

(51) a. 1>2>3
b. Personal Pronouns > Proper Names > definite NP > specific indefinite NP > non-specific indefinite NP
c. 1, 2 > Human > Non-human animate > Inanimate

Now, Hungarian is not the only language where differential object marking is observed. Indeed, Mongolian showcases differential object marking for animate objects. Confer data from Sanders & Bat-Ireedüi (2015):

(52) a. Bi **chamaj-g** üdzne.
I you-ACC see.NPST
'I see you.'
b. Ta **ger** üdzne üü?
You yurt see.NPST INT
'Do you see a yurt?'

As we can see, there is a marked difference in Mongolian between object marking where the accusative case ending is used in some cases, but not in others. We seemingly have a contradiction between (52a) and (52b) where both accusative and bare nouns are grammatically correct[11]. That said, in (52b) we see that since a specific indefinite interpretation is available in these

[11] This is not the case for people and deities who must occur with the accusative case suffix.

clauses, everything above it in the hierarchy is expected to occur with a marked accusative and the one element below it, i.e. non-specific indefinite NPs, do not.

A language within the Finno-Ugric family, Udmurt, also shows this phenomenon of differential object marking[12]. Consider the following data from Tánczos (2016):

(53) a. Mon (so(ze)) *kniga/kniga-jez utchaj otyn.
I that.ACC book.(ACC)/book-ACC search.PST.1SG there
'I searched for the book there.'

b. Mon kniga/*kniga-jez utchas'ko gubios
I book.ACC/book-ACC search.NPST.1SG mushroom.PL
s'arys'.
about
'I am searching for a book about mushrooms.'

These data from Udmurt are interesting for a number of reasons. Firstly, it clearly shows a case of differential object marking in much the same way as we saw for Mongolian. We can assume that since the definite NP is marked with an accusative ending everything below it does not. Surely enough, in (53b), the non-specific indefinite NP does not mark a morphological accusative and remains caseless[13]. Secondly, and more interestingly as we circle back around to Finnish, there seems to be a correlation in the fact that morphology has changed on the object, which seems to change the telicity of the clause in Udmurt as well. Much like we have been establishing for Finnish thus far, the unmarked object in Udmurt (those without the –(j)ez suffix) seemingly occurs with an indefinite, atelic object according to the data in (53)[14]. Those with the –(j)ez suffix occur in definite, telic environments. Confer the Finnish equivalents of (53):

(54) a. Minä etsin (tuon) kirjan siellä.
I search.1SG.PST that.GEN book.GEN there
'I searched for (and found) that book there.'

---

[12] Finnish is of course also a DOM language. I, however, propose that Finnish only marks its telic objects and does not mark its atelic objects, i.e. they are caseless.

[13] Tánczos cites that it is non-specific objects that are not marked in the accusative. Presumably, specific indefinites of the Mongolian type are also marked with the *–(j)ez* suffix.

[14] I propose a relation between object marking and telicity in Udmurt solely based on the examples in (54). Further analysis on Udmurt would be necessary in order to fully substantiate that assumption, however.

b. Minä etsin kirjaa sienistä.
I search.1SG.PST book.PART.SG mushroom.ELAT.PL
'I was looking for a book about mushrooms.'

We see between (53) and (54) that there is a direct parallel between DOM in Finnish and Udmurt. This, therefore, leads us to conclude that, in Finnish, the use of the partitive object is another extant case of DOM which is attested in other Finno-Ugric languages and those of other language families, like Mongolic. Finnish differentially marks its telic objects with genitive morphology and leaves its atelic objects as caseless. Thus, we can come to the conclusion that Finnish showcases a pattern where there is case syncretism between the accusative and genitive and with no overt, morphologically distinct accusative case[15]. The data from Udmurt therefore provide compelling evidence that a similar phenomenon is also at work in Finnish.

4.4. Case Matching in the NNC

A holistic analysis of the Finnish NNC is not complete without discussing the paradigm in the oblique cases. Unlike what Norris (2017) discusses, Finnish does have some rather aberrant data that distinguish it from Estonian. I will begin by discussing the instance of case concord where we see Norris's "case matching" paradigm. In this regard, Finnish is much like Estonian. Confer:

(55) a. Me ajettiin Tampereeseen **kolmella**
we drive.PASS.PST Tampere.ILLAT three.ADESS
isolla autolla.
big.ADESS.SG car.ADESS.SG
'We drove to Tampere with three big cars.'

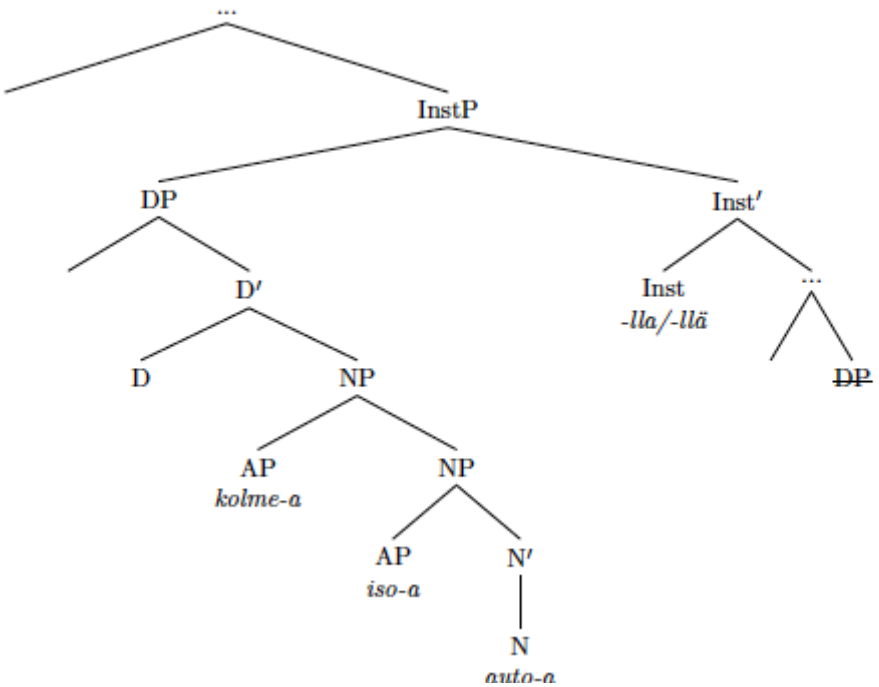
b. Me on oltu **viidessä kauniissa**
we have.3SG be.PASS.PST five.INESS beautiful.INESS.SG
maassa.
country.INESS.SG
'We have been to five beautiful countries.'

We are left with accounting for the data. One method is to take the Norris account and likewise propose an oblique case phrase that merges with the DP. Another course of action is to reevaluate the numerals entirely. It is possible that the numerals we see here are not nouns, but rather adjectives. We can argue that in oblique environments, the numerals behave as yksi 'one' does, that is, adjectivally. We may substantiate in part by the fact that numerals fully

[15] Except for the object pronouns which mark accusative case with *-t*.

decline and show full agreement with nouns in these contexts, as any other adjective would. I will adopt the Case Contiguity because many of the local cases in Finnish share functions with cases like the dative, instrumental, etc., even though it does not have these cases proper. We can see an instance of this in (55a) where the adessive is used as the instrumental case in Finnish. So, if we assume that in oblique environments numerals behave adjectivally and consequently do not block case assignment on N, we can posit the following structure for (55a):

(56)



If we take the structure in (56) we see that the oblique case is assigned to the entire DP. The case ending is therefore copied onto every element within the DP. This analysis is not without its faults, however. It forces us to assume that numerals are being duplicated in the lexicon and that is not lexically efficient.

This leaves us, however, with the cases of prepositions and postpositions which do not assign case. Rather, the NP complement to pre- and postpositions is in the partitive case, which I have defined as caseless. Therefore, we can merely assume that the noun remains caseless when merged to these elements. This is not uncommon within the Finno-Ugric language family. The following data serve to refresh the reader of the structure in Finnish and comparison to another Finno-Ugric language with caseless nouns in these environments:

(57) a. Minä seisoin **vasten seinää**.
I stand.1SG.PST against wall.PART.SG
'I stood against the wall.'

b. Minä kipusin vuorta **ylös ilman**
I climb.1SG.PST mountain.PART.SG up without
sinua.
you.PART
'I climbed up the mountain without you.' [Finnish]

c. Álltam a **fal mellett**.
stand.1SG.PST.SBJ the wall next to
'I stood next to the wall.'

d. Az előtt a ház előtt van öt ember.
that in front of the house in front of be.3SG.PRS five person
'There are five people in front of that house.' [Hungarian]

If we are going to compare caselessness in Hungarian and Finnish, we need to demonstrate that what are seeing in (59c-d) is indeed caseless (i.e. not nominative). The literature on this particular point seems to be at an impasse with respect to the case on the nominal complement. There are those who would argue that it is in fact the nominative case (Marácz, 1986), and there are those who would argue for a caseless paradigm (Asbury, 2008; Kiss, 2002). There are several motivations for a caseless postpositional argument. One of the reasons is the fact that agreement markers may appear on a special class of postpositions. These include postpositions of the type előtt 'in front of', miatt 'because of', alatt 'above', etc (the so-called 'dressed' postpositions). These involve agreement on the postposition with pronouns. In contrast, Hungarian also contains a second class of postpositions, known in the literature as the 'naked' prepositions (Kenesei, 1992). This group of postpositions distinguish themselves from the 'dressed' postpositions in that they do not 'inflect' but rather they assign case to their arguments. Postpositions of this type include át 'across, through'; nézve 'with respect to', képest 'compared to', kezdve 'starting from', etc. Confer the following examples of each type of postposition:

(58) a. az idő miatt
the weather because of
'because of the weather'

b. felhők alatt
clouds above
'above clouds' ['dressed']

c. a híd-on át
the bridge-SPRESS across
'across the bridge'

d. Mari-hoz képest
Mari-ILLAT compared to
'compared to Mari' ['naked']

The question is, then, once again: how do we know that the 'dressed' postpositions occur with caseless arguments, and not the nominative case? An important fact of Hungarian grammar involves the difference between the behavior of articles and demonstratives. Hungarian is of course a language in which case concord is not observed between the article and the noun, but it is observed between the demonstrative and the noun. Confer:

(59) a. a házat
the house.ACC
'the house'

b. * azt házat
the.ACC house.ACC
'the house'

but:

(60) a. azt a házat
that.ACC the house.ACC
'that house'

b. * az a házat
that.NOM the house.ACC
'that house'

Now, if we add postpositions to the equation, we see some rather intriguing results:

(61) a. azon a folyón túl
that.SPRESS the river.SPRESS beyond
'beyond that river'

b. * az a folyón túl
that the river.SPRESS beyond
'beyond that river'

We can see in (63) that the demonstrative must agree in case with the noun in cases of the 'naked' postpositions. Now compare with the 'dressed' prepositions":

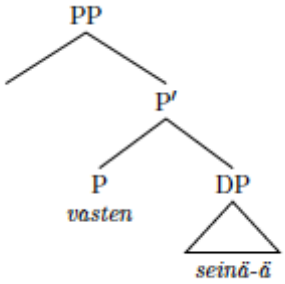
(62) a. a mögött a ház mögött
that behind the house behind
'behind that house'
b. * az a ház mögött
that the house behind
'behind that house'

A comparison of the data in (61) and (62) shows that the two classes of postpositions do indeed affect their arguments quite differently. In contrast to the 'naked' postpositions which assign case to the entire DP, the 'dressed' postpositions do not. We can be almost certain that this is the case because of the fact that demonstratives in Hungarian always show case agreement with the noun. In the case of the 'dressed' postpositions, if the nominal argument were indeed in the nominative case, then the phrase in (62b) would be grammatical. Due to the fact that it is not grammatical, however, we cannot assume that the nominal argument is nominative. The way that Hungarian therefore 'fixes' the phrase is to reduplicate the postposition after the demonstrative in order to put the demonstrative into a position in which it may remain caseless.

Returning now to Finnish, the same pattern may be observed with most prepositions and some postpositions[16]. Much like as is the case with the Hungarian 'dressed' postpositions, there are those pre- and postpositions in Finnish that do not assign case. Therefore, I propose the following for Finnish:

[16] Much like Hungarian, a formal distinction exists in Finnish between those postpositions that assign case, and those that do not (i.e. partitive). There are also those (very few) postpositions that assign an oblique case.

(63) *Partial structure for (57a)*:



This of course does not discuss the cases of those prepositions and postpositions which assign genitive, but that is beyond the scope of our current purposes. For now, it will suffice to say that in cases where the partitive appears in post-/prepositional phrases, the noun remains caseless in Finnish because it appears in positions or moves into positions which do not assign case. We therefore account for the data in a simple manner that can neatly account for the data. By discounting the notion that partitive is a case that is assigned, we can avoid a number of theoretical issues and we can also justify its use in the plethora of environments within which it occurs.

5. Conclusion

As can be seen, the Finnish NNC may be subject to a number of different analyses. The case syncretism between the partitive and the accusative and nominative makes the analysis even more complex as it forces us to have to account for the syntactic differences between which morphological ending appears and PF and why. Using Pesetsky as a basis for the analysis, I endeavored to reconcile the different instances of the NNC in Finnish. This was done using analyses for the Slavic NNC with slight differences due to the presence of the partitive case, which is not present in Slavic languages. My main conjecture in this analysis, veering away from the Slavic analyses and the unmarked case analysis of Norris (2017, 2018), is that the partitive case is not a real case, but rather the lexical root form of the noun in Finnish, similar to Pesetsky's (2012) analysis for the Russian genitive. This lexical suffix is customarily deleted from the stem when the NP is moved into different case projections. In the NNC, I propose that the nominative case is present on the numeral and because the nominal is in the domain of the numeral, it is inaccessible to operations. As a result of this, the nominal remains caseless in the structural case positions. In atelic environments, case concord is observed between the noun and the numeral due to the fact that they are never merged with a case projection. As a result of this they appear in their caseless, root

forms. Finally, cases of case matching in the oblique cases were discussed and shown to be simple cases of case concord. If we take into account the non-locative uses of some of the local cases in Finnish, we can place them within the case hierarchy and simply assign case to the constituent. The case suffix in the case head is simply copied on every element within the constituent moved into the specifier of the case phrase. The final data showcased that in prepositional and postpositional environments, the caseless form of the noun is the complement to pre- and postpositions that do not assign case. As a result, the noun remains in the partitive and therefore, caseless. Thus, the caseless form hypothesis may indeed be able to explain the partitive's appearance in postpositional and prepositional environments, certain verbal arguments as well as the multitude of other environments that the partitive is observed. The partitive of the negative may be more complicated, but nonetheless, further research remains to be done on these uses of the caseless form of the Finnish noun.

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