Case Matching in Estonian Pseudopartitives*

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1 Introduction

In Estonian pseudopartitives, the Substance phrase can show two different kinds of case-marking.

• In some cases, the Substance phrase is marked with partitive case:

(1) a. tükki leiba
   piece.NOM bread.PAR
   ‘a/the piece of bread’

b. kott kartuleid
   bag.NOM potatoes.PL.PAR
   ‘a/the bag of potatoes’

• In all other cases, the Substance phrase’s case matches the Measure’s case:

(2) a. tükki-le leiva-le
   piece-ALL bread-ALL
   ‘onto a/the piece of bread’

b. koti-ks kartulite-ks
   bag-TRL potatoes.PL-TRL
   ‘for/into a/the bag of potatoes’

• Hereafter, I will reserve the term “partitive” to refer to partitive case. I will use the term Measure-Substance Construction (MSC) to refer to the syntactic constructions like those in (1-2).

• I will call the case pattern in (1) the PARTITIVE PATTERN and the case pattern in (2) the MATCHING PATTERN.

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This alternation between the (mutually exclusive) matching and partitive patterns is the focus of this talk.

(i) How can we account for the alternation between patterns?

(ii) What does the alternation tell us about the assignment of (partitive) case?

Recent work concerning modalities of case assignment (e.g., Baker and Vinokurova 2010; Levin and Preminger In prep.) has focused on whether or not functional heads are implicated in case assignment.

• Dependent case theory (Marantz 1991, a.o.): no,
  Functional heads theory (Chomsky 2000, 2001; Legate 2008): yes

• However, the role of functional heads is not the only difference between dependent case theory and the functional heads theory.

• Marantz’s initial proposal included a special order of operations for case assignment, i.e., the *disjunctive case hierarchy*.
  – I will show that Estonian MSCs show this order of operations at work in an interesting way.

➤ If correct, my proposal provides support for dependent case theory from a new domain: the necessity of the “order of operations” imposed by a hierarchy like Marantz’s.

1.1 Outline

§2: The structure of the Estonian MSC

§3: Analysis of MSC case-marking

§4: Against case stacking

§5, 6: Implications & Conclusions

1.2 Preview

I will propose that the partitive case in (1) is a DP-internal dependent case, assigned to the lower of two caseless nominals in one Extended Projection (in the sense of Grimshaw 2005).

➤ The matching and partitive patterns emerge due to Marantz’s disjunctive case hierarchy, relativized to case domains (McFadden, 2004; Baker and Vinokurova, 2010), which include DP/KP (my proposal).

• Because inherent cases are assigned first, they bleed the assignment of partitive case. **The result is the matching pattern.**

• Because nominative and accusative are not assigned within the DP case domain, they cannot interfere with partitive case assignment. **The result is the partitive pattern.**
2 The structure of the Estonian MSC

Part of my proposal is that the (PARTITIVE)-MSCs in (1-2) form a single Extended Projection.

• Essentially, this means that the Substance phrase is \(<\) DP.

To motivate this proposal, I will compare Estonian MSCs to another Measure-Substance Construction in Estonian, which apparently differs only in the case marking on the Substance:

(3) a. tükk leiva-st
    piece.NOM bread-ELA
    ‘a/the piece of the bread’

b. osa maa-st
    part.NOM land-ELA
    ‘a/the part of the land’

• I will call these constructions ELATIVE-MSCs.

What I will show is that, in addition to the case-marking, there is a deeper structural difference between PARTITIVE-MSCs and ELATIVE-MSCs: the size of the Substance phrase.

2.1 PARTITIVE-MSC Substances are smaller than DP

I present evidence for a structural difference between Substance phrases in PARTITIVE-MSCs and ELATIVE-MSCs from three domains:

(i) non-restrictive relative clause attachment

(ii) pronouns

(iii) definite/specific interpretation

Proposal: Substance phrases in ELATIVE-MSCs contain a DP, Substance phrases in PARTITIVE-MSCs do not contain a DP.

The structures I assume for PARTITIVE-MSCs and ELATIVE-MSCs are given in (4) and (5).\(^2\)

• In (4), the Substance is a nominal projection \(<\) DP (represented by N\(^+\)P) that is a complement of the Measure, a nominal functional projection.

• In (5), the Substance is a KP, adjoined to an NP headed by the Measure, a lexical noun.\(^3\)

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\(^3\)In (5), I have represented the Substance as a KP for reasons of consistency, as I ultimately argue that inherent cases in Estonian are represented by K heads. However, they could also be PPs– nothing crucial in my proposal hinges on the absence of a P layer in these constructions.
2.1.1 Argument 1: non-restrictive relative clause attachment

- A non-restrictive relative clause modifying a PARTITIVE-MSC can only be interpreted as modifying the entire PARTITIVE-MSC.

- A non-restrictive relative clause modifying an ELATIVE-MSC is ambiguous: it can either be interpreted as modifying the Substance phrase alone or the entire ELATIVE-MSC (see Selkirk 1977 for a parallel claim for English).

(6) Context: There is a loaf of bread that has started to mold, but there are still some parts on it that are not moldy. Heiko eats a piece of that bread, but the piece that he eats doesn’t have any mold on it.

a. Heiko sōi tüki leiba, mis muuseas oli hallita-nud.  
   H ate piece GEN bread PAR what NOM by the way was mold PSTPART  
   ‘Heiko ate a piece of bread, which was moldy by the way.’  
   PARTITIVE-MSC

b. Heiko sōi tüki leiva-st, mis muuseas oli hallita-nud.  
   H ate piece GEN bread ELA what NOM by the way was mold PSTPART  
   ‘Heiko ate a piece of the bread, which was moldy by the way.’  
   ELATIVE-MSC

In the given context, the only felicitous interpretation is a Substance modification, where the bread was moldy, but the piece that Heiko ate was not moldy.

- This interpretation is not possible for the PARTITIVE-MSC in (6a), which can only mean that Heiko ate a piece of moldy bread.

- It is possible for the ELATIVE-MSC in (6b), which does not necessarily mean that Heiko ate moldy bread.

On the assumption that non-restrictive relative clauses attach to DPs (Demirdache, 1991; Bianchi, 2002), the distribution of interpretations is predicted under my proposal:

- **ELATIVE-MSCs contain two DPs**: the entire ELATIVE-MSC and the Substance phrase alone.

- **PARTITIVE-MSCs contain only one DP**: the entire PARTITIVE-MSC. For this reason, the only possible interpretation is one where it is the entire PARTITIVE-MSC (i.e., piece of bread) that was moldy.
2.1.2 Argument 2: pronouns

Offering (7), Erelt et al. (2000) note that pronominal Substances are only possible in ELATIVE-MSCs.

- Speakers reject PARTITIVE-MSCs with pronominal Substances (8).

(7) Enamik mei-st on lõpeta-nud Tartu ülikooli.
    most/majority.NOM we-ELA be.PRS.3 finish-PST PART T.GEN university.GEN
    ‘Most of us have finished (our studies at) Tartu University.’ (Erelt et al., 2000, 552)

(8) Context: I met many people at the party.
    a. * Hulk neid tuli-(d) õhtusöögi-le.
       bunch they.PAR come.PST-3PL dinner-ALL
       Intended: ‘A bunch of them came to dinner.’
    b. Osa nende-st tuli-d õhtusöögi-le.
       part they-ELA come.PST-3PL dinner-ALL
       ‘Some of them came to dinner.’ (Speaker volunteered alternative to (8a))

On the assumption that the relevant pronouns are DPs in Estonian, this is exactly what my analysis predicts.

- **ELATIVE-MSC Substances are DPs** (inside of a KP): pronouns should be possible.
  - PARTITIVE-MSC Substances are < DP: pronouns should not be possible.

2.1.3 Argument 3: definite/specific interpretation

Erelt et al. (2000) also note that, whereas a modifier in partitive case simply denotes an object/substance, a modifier in elative case denotes a definite/specific whole/set.

- In discussing the minimal pair below, speakers comment that (9b) refers to a piece from some particular (loaf of) bread, whereas there is no specific bread in (9a).

(9) a. tükk leiba
    piece.NOM bread.PAR
    ‘piece of bread’

  b. tükk leiva-st
    piece.NOM bread-ELA
    ‘piece of the bread’

On the assumption that definite/specific interpretations require a DP, these interpretations are predicted by my proposal.

- **ELATIVE-MSC Substances contain DPs**: definite/specific interpretation is available.
  - PARTITIVE-MSC Substances do not contain DPs: definite/specific interpretation is unavailable.
2.2 Summary

In this section, I have proposed that the Substance phrase in PARTITIVE-MSCs is < DP on the basis of three pieces of evidence:

(i) non-restrictive relative clause attachment
(ii) pronouns
(iii) definite/specific interpretation

Interestingly, Substance phrases in PARTITIVE-MSCs can contain both possessors and demonstratives:

(10) a. Heiko sõi ämbritaie Priidu kurke.
    H.NOM ate.3SG bucketful.GEN P.GEN cucumbers.PAR
    ‘Heiko ate a bucketful of Priit’s cucumbers.’

    b. Heiko sõi ämbritaie neid kurke.
    H.NOM ate.3SG bucketful.GEN these.PAR cucumbers.PAR
    ‘Heiko ate a bucketful of these cucumbers.’

From this, I conclude that possessors and demonstratives occupy positions lower than the DP layer in Estonian.5

3 Analysis of MSC case-marking

In Estonian, the case-marking on the Substance in PARTITIVE-MSCs depends (descriptively) on the case-marking of the Measure.6

• Measure = [GEN.SG] or [NOM] → Substance = partitive (PARTITIVE PATTERN)

• Else, Substance case = Measure case (MATCHING PATTERN)

But wait: if the Measure is genitive singular, it can actually show either the matching pattern or the partitive pattern:

(11) a. tükı leiva / leiba
    piece.GEN bread.GEN / bread.PAR
    ‘a/the piece of bread’

    b. koti kartuli-te / kartule-id
    bag.GEN potato-PL.GEN / potato-PL.PAR
    ‘a/the bag of potatoes’

4Unsurprisingly, ELATIVE-MSC Substances can also contain possessors and demonstratives. I have foregone examples here.
5For parallel claims regarding demonstratives, see Bošković (2008) on Serbian/Croatian and Deal (2010) on Nez Perce. I am happy to answer questions about this during the question period.
6See Appendix A for a full Table.
3.1 Why genitive singular measures show both patterns

For genitive singular Measures, the choice of case pattern is not random (Erelt et al., 1993).

- Genitive direct objects only show the partitive pattern (12).
- All other genitives (e.g., possessors, objects of postpositions) only show the matching pattern (13-14).

(12) PARTITIVE-MSCs as objects show the partitive pattern:
- a. Tõi-n koti kartule-id / *kartuli-te. bring.PST-1SG bag.GEN potato-PL.PAR / potato-PL.GEN
  ‘I brought a bag of potatoes.’
  (Erelt et al., 1993, 145)
- b. Mehe-d tõi-d autotäie telliskive / *telliskivi-de.
  men-PL.NOM brought.PST-3PL carful.GEN brick-PL.PAR / brick-PL.GEN
  ‘The men brought a carload of bricks.’

(13) PARTITIVE-MSCs as objects of adpositions show the matching pattern:
- a. Kui palju sa koti kartuli-te / *kartule-id eest mak-si-d?
  how much you.NOM bag.GEN potato-PL.GEN / potato-PL.PAR for pay-PST-2SG
  ‘How much did you pay for the bag of potatoes?’
  (Erelt et al., 1993, 145)
- b. Putukas roomsas ümber klaasi vee / *vett.
  bug.NOM crawl-PST.3SG around glass.GEN water.GEN / water.PAR
  ‘A/the bug crawled around a/the glass of water.’

(14) PARTITIVE-MSCs as possessors show the matching pattern:
  bag.GEN potatoes-PL.GEN / potatoes.PL.PAR weight.NOM was 20 kilograms
  ‘The weight of the bag of potatoes was 20 kilograms.’
- b. Kolmandiku tordi / *torti hind oli kaks rubla.
  third.GEN tart.GEN / tart.PAR price.NOM was two.NOM ruble.PAR
  ‘The price of a third of a tart was two rubles.’
  (Erelt et al., 1993, 145)

Based on these data, it is clear that not all surface genitives are the same in Estonian.

- In particular, object genitives are different from other genitives, and they must be distin-
  guished in some way.

I propose that the genitive object is actually the manifestation of accusative in Estonian (Saareste, 1926; Hiietam, 2011).7

- This is a departure from modern traditional grammars, which do not posit an accusative case
  (Erelt et al., 1993, 2000).

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7Estonian objects are traditionally divided into two classes: TOTAL OBJECTS and PARTIAL OBJECTS. Partial objects are always marked with partitive case, and total objects are marked with genitive if singular and nominative if plural (either morphologically or semantically, as numerals are morphologically singular but nominative). My proposal is essentially that “total objects” are marked with accusative. More discussion of Estonian object marking can be found in Tamm 2007.
• The language has no accusative case that is morphologically distinct from the other cases (cf. Finnish, which does for pronouns).

With this assumption, the divide between the matching pattern and the partitive pattern is clearer:

• CP-level structural cases (nominative, accusative) show the partitive pattern.

• Other cases show the matching pattern.

3.2 Partitive as a Dependent Case

To account for the alternation between the matching pattern and the partitive pattern, I propose that the partitive (in PARTITIVE-MSCs) be treated as a DP-internal dependent case.8

➤ Just as within the clause, if there are two elements within a DP that are similar enough (e.g., both (semi-)lexical nominals), the lower of the two is assigned partitive case.

• This implementation differs from previous implementations of dependent case in that the case competitors are not two full-sized DPs.

• For time considerations, I will not talk through the formalization (provided in Appendix B).

I assume case competition occurs cyclically within certain case domains.

• In McFadden 2004 and Baker and Vinokurova 2010, case domains are defined in terms of phases (Chomsky, 2000, 2001) — in particular, vP/VP and CP.

➤ I take this one step further in proposing that DP/KP can also be a case domain.9

• The resulting picture is given in Table 1.

<table>
<thead>
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<th>CP</th>
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<td>INH</td>
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<tr>
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<td>ACC</td>
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<tr>
<td>Default</td>
<td>-</td>
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</table>

Table 1: Partitive as DP-internal dependent case

Case assignment proceeds in the following way:

• When a KP is built, case is assigned to the elements inside KP starting first with inherent cases.

• After assignment of inherent case, the structural requirements for partitive case are checked, and if they are met, partitive case is assigned.

8On dependent case, see Marantz (1991); Bittner and Hale (1996); McFadden (2004); Bobaljik (2008); Baker and Vinokurova (2010); Preminger (2011).

• Since default case is a kind of last resort, it cannot play a role in DP-internal case assignment, lest there be no room for CP-level case assignment.

• When the KP is merged with the larger structure, it can participate in further case-marking (at the vP or CP level)

The emergence of matching and partitive patterns reduces to an order of operations problem.

(15) Order of operations
a. DP-internal inherent case: local cases, translative, genitive matching pattern
b. DP-internal dependent case: partitive
   c. CP-level dependent case: accusative partitive pattern
d. CP-level default case: nominative partitive pattern

• Everything assigned before partitive = matching pattern.
• Everything assigned after partitive = partitive pattern.

3.2.1 Matching Pattern

Part of the proposal is that inherent cases are assigned/included in the KP case domain.

• Possibly inevitable: these cases clearly affect DP-internal case assignment (i.e., they block partitive assignment).

• I will adopt a KP analysis of the obliques, following Bittner and Hale (1996) in assuming that they enter the derivation already valued.¹⁰

Estonian has a rich system of case concord, so the case value is shared with all elements of the KP (16):

(16) KP
    K [TRL]
   / \\  \\
  N[I][TRL] P[I][TRL]  ...  N*P[TRL]
  koti-ks kartulite-ks

Partitive is only assigned in KPs with two caseless nominals.

➤ This structural description is not met in oblique KPs—the nominal elements in oblique KPs already have a case value (e.g., translative).

• Thus, partitive is not assigned, and we see the matching pattern.

¹⁰Nikanne (1993) proposes that the parallel cases in Finnish are assigned by covert prepositional heads. Some of the arguments presented there can be replicated for Estonian, but some of the most interesting ones cannot be replicated, because Estonian has no possessive suffixes. However, the claims made here would be compatible with a PP analysis of Estonian “semantic” case markers as well, as long as we assume that the adpositions assigning these case values are present (and have already assigned the case value) when case is computed inside the DP.
3.2.2 Partitive Pattern

If there is no oblique K head, then when the KP is built, there are two caseless nominals, thus partitive case is assigned (17)

- Once the KP is merged with the larger structure, the remaining caseless elements get assigned either accusative or nominative (18).

• The result is the partitive pattern.

(17) Partitive assignment:

(18) Accusative assignment:

4 Against Case Stacking

My analysis relies on a crucial assumption about case-marking in Estonian: once an element has received a case value, it cannot receive another one.

• This is morphologically true in Estonian, as nominal elements never bear more than one case marker.

• However, it is not a crosslinguistic universal—there are languages (e.g., Lardil) where nominal elements can bear two overt case suffixes (see Richards (2012) and references therein).

Conjecture: Perhaps the matching pattern and the partitive pattern in Estonian could be reduced to another example of “covert case-stacking” (as in Baker and Vinokurova 2010; Pesetsky 2012).

• Suppose we assumed that when a Measure is merged, it immediately assigns partitive to the Substance.

• When the entire DP is assigned some other case, the Substance receives another value, “stacked” on top of the previously-assigned [PAR].

(19) Case-stacking in Estonian MSCs:

a. Partitive Assignment: [ bag [ potatoes-PAR ]]

b. External Assignment: [ K_{TRL} [ bag-TRL [ potatoes-PAR-TRL ]]]

- Only one of these case values is actually realized, so we need an algorithm to determine which one is pronounced.
One possible algorithm would be “pronounce the outermost case value” (Pesetsky, 2012).

(20) Matching pattern predicted:
   a. **Partitive Assignment:** [ bag [ potatoes-PAR ] ]
   b. **External Assignment:** [ bag-TRL [ potatoes-PAR-TRL ] ]

   ✔

(21) Partitive pattern not predicted:
   a. **Partitive Assignment:** [ bag [ potatoes-PAR ] ]
   b. **External Assignment:** [ bag-ACC [ potatoes-PAR-ACC ] ]
   c. **Desired Result:** [ bag-ACC [ potatoes-PAR-ACC ] ]

   ✗

   ✔

• This works well for the matching pattern (20), but it cannot generate the partitive pattern (21).

➤ The matching pattern requires pronunciation of the outermost case, but the partitive pattern requires pronunciation of the innermost case.

We also cannot use a “Pronounce Innermost” algorithm (as in Baker and Vinokurova 2010), because that would fail to predict the matching pattern.11

(22) Matching pattern not predicted:
   a. **Partitive Assignment:** [ bag [ potatoes-PAR ] ]
   b. **External Assignment:** [ bag-TRL [ potatoes-PAR-TRL ] ]
   c. **Desired Result:** [ bag-TRL [ potatoes-PAR-TRL ] ]

   ✗

(23) Partitive pattern predicted:
   a. **Partitive Assignment:** [ bag [ potatoes-PAR ] ]
   b. **External Assignment:** [ bag-ACC [ potatoes-PAR-ACC ] ]

   ✔

Some previous accounts of similar phenomena have relied on an interesting empirical generalization: the partitive pattern surfaces only when the “outer” case marker is not overt (Brattico, 2011; Pesetsky, 2012).

• We could propose that accusative fails to be assigned in this context (Pesetsky, 2012), or that it is only cases “with an overt realization” that trigger the matching pattern (Brattico, 2011).

It is difficult to implement such a proposal with Estonian MSCs, because the nominative and accusative forms of the Measure have distinct realizations.

• We would have to say that two case forms count as being “non-overt.”

• Furthermore, recall that the accusative form, which shows the partitive pattern, is morphologically identical with another form that shows the matching pattern: (true) genitive.

➤ Thus, PARTITIVE-MSCs in Estonian provide support for the claim that the alternation between the partitive pattern and the matching pattern is not driven by morphology, but syntax.

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11Baker and Vinokurova (2010) propose that it is the innermost case affix that has a non-zero realization. Even if we assumed, counter to fact, that partitive case had a zero realization in Estonian, this would predict the MaP, but it would again fail to predict the PaP. For MSCs in Estonian, suggesting that partitive case has a zero realization essentially turns the Pronounce Innermost algorithm back into a Pronounce Outermost algorithm.
5 Implications

I proposed that DP/KP is (or can be) a case domain in addition to vP/VP and CP.

• If this proposal is on the right track, it would provide further support to the idea that case domains are isomorphic with phases (McFadden, 2004; Baker and Vinokurova, 2010).

Though not discussed here, note that numerals in Estonian have the same case-marking facts as Measures.

(24) a. Kolm poissi tulid peo-le.
   three.NOM boy.PAR came party-ALL
   ‘Three boys came to the party.’

b. Ema leidi-s kolm poissi kodunt eest.
   mother find-PST.3SG three.ACC boy-PAR home.ELA from
   ‘Mother found three boys behind her home.’

c. Ema andis küpsise-id kolme-le poisi-le.
   Mother gave cookie-PL.PAR three-ALL boy-ALL
   ‘Mother gave cookies to three boys.’

• The analysis presented here thus provides support for the idea that numerals are nouns (Ionin and Matushansky, 2004).

➤ At the very least, they are noun-like enough to trigger assignment of dependent case.

6 Conclusions

In this talk, I investigated the structure of Estonian partitive-MSCs and how it relates to the patterns of case-marking found in them.

• Based on a comparison with elative-MSCs, I proposed that the Substance phrase in partitive-MSCs is smaller than DP and thus does not constitute a case domain independent of the entire MSC.

I then argued that the alternation between the partitive pattern and the matching pattern in partitive-MSCs arises essentially due to order of operations.

• I sketched an analysis in terms of dependent case theory, where partitive is a DP-internal dependent case.

➤ Nominative and accusative are assigned later than partitive case and thus too late to be marked on the Substance.
Thus far, the debate surrounding modalities of case assignment has largely focused on whether or not functional heads are implicated in assignment (Baker and Vinokurova, 2010; Levin and Preminger, In prep.).

- However, **dependent case theory also contains an order of operations** (i.e., Marantz’s (1991) disjunctive case hierarchy).

- **This order of operations is different from the order of operations imposed by a bottom-up derivation**, because partitive case must “wait” to be assigned until the KP is built.

- If this proposal is correct, it provides support for dependent case theory from a new domain: the necessity of a disjunctive case hierarchy.

**References**


Bošković, Željko. 2008. What will you have, DP or NP? In *Proceedings of the North East Linguistic Society* 37, 101–114. GLSA, University of Massachusetts, Amherst.


A Full table of forms

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Table 2: PARTITIVE-MSC case patterns in Estonian
Some notes about Table 2

- No plural forms are given. Erelt et al. (1993) notes that MSCs with plural Measures are avoided. In fieldwork, speakers reject them, although some are not as bad as others.

- As Nevis (1986) argued, I assume the “last four cases” (terminative, essive, abessive, and comitative) are actually bound postpositions, not full cases. They assign genitive like any adposition, and MSCs that they modify show the matching pattern (i.e., both genitive), although that is obscured by their morphology (i.e., the fact that they are bound morphemes).

B Partitive as Dependent Case: some formal aspects

The first thing to note is that it is not just the lower noun that is marked with partitive case, but everything up to the Measure noun (e.g., adjectives and demonstratives).

(25) a. ämbritäis ne-id värskë-id kurke
    bucketful.NOM those-PAR.PL fresh-PAR.PL cucumber.PAR.PL
    ‘a bucketful of those fresh cucumbers’

b. klaas seda punas-t veini
    glass.NOM that.PAR red-PAR.SG wine.PAR.SG
    ‘a glass of that red wine’

Competition cannot be between two Ns; the lower constituent must be at least NP.

- I treat the relationship inside DP as essentially between an NP (read: a nominal constituent < DP) and an N, formalized as in (26) and exemplified in (27):

(26) \( N^{(+)}P \{\text{CASE:} \_\_\} \rightarrow N^{(+)}P \{\text{CASE:PAR}\} / [N_P N_l \{\text{CASE:} \_\_\} \_\] 

Assign partitive case to any nominal projection that is the complement of another (semi-)lexical nominal.

(27) \hspace{1cm}

\begin{center}
\begin{tikzpicture}
  \node (dp) {DP};
  \node (np) at (dp -| -2) {N_P};
  \node (nl) at (np -| -1) {N_l};
  \node (d) at (nl -| -2) {D};
  \node (ambriais) at (nl -| -3) {ämbritäis};
  \node (värskëid) at (np -| -3) {värskëid kurke};
  \draw[->] (d) -- (nl);
  \draw[->] (np) -- (nl);
  \draw[->] (np) -- (dp);
  \draw[->] (nl) -- (np);
  \draw[->] (nl) -- (dp);
\end{tikzpicture}
\end{center}

I assume that this rule of dependent case assignment takes place postsyntactically, following e.g., Marantz (1991); McFadden (2004); Bobaljik (2008).

\footnote{See the proposal from Bittner and Hale (1996) where a verb with an incorporated D can act as a case competitor.}
B.1 Case concord in Estonian

Estonian has a rich system of case and number concord, though I will set aside the number concord here.

- In addition to familiar rules of case assignment, I assume that case features can be valued by a general rule of case concord, formalized in (28):

\[(28) \quad X [\text{CASE} : \alpha] \rightarrow X [\text{CASE} : \alpha] / Y[\text{CASE} : \alpha] \]

For any given node X, if its case feature is unvalued but its mother’s case feature is valued, then that node X will take the value of its mother’s case feature.

- This conceptualization of case concord has much precedent in the literature (e.g., Chomsky (1981, 1986) or more recently Matushansky (2008)).

- I assume that this rule applies whenever its conditions are met.

The rule crucially does not allow case to passed down to projections that already have a case value.

- Though there are proposals arguing that case can be assigned more than once to a single element (see Richards (2012) and references therein), making this assumption leads to problems in accounting for the case patterns in Estonian MSCs (see section 4).

- Thus, I assume that this option is not available for Estonian— once an element has its case feature valued, the value is fixed.

B.2 Matching Pattern

For the cases showing the MaP, I assume a KP analysis, where these cases are represented as syntactic heads (Bittner and Hale, 1996).

- The value of this K(P) is then passed down to every projection in the nominal by the rule of case concord.

In standard applications of case competition, it is these cases that are assigned first (i.e., before dependent case).

- Thus, the partitive assignment rule’s environment is not met, since that rule requires both elements to lack a case value.

- I follow Bittner and Hale (1996) in assuming that these K heads enter the syntax with their case features already valued. This accounts for the generalization that they are “assigned first.”

Since case competition requires both competitors to lack a case value, it cannot be assigned in a context where the KP is already case-marked.
Recall that the partitive pattern emerges when the entire DP is assigned either (i) nominative case, or (ii) accusative case.

- What is crucial for me is that these cases are assigned after the KP is built.
- I follow much previous work on dependent case theory in assuming that accusative is a clause level dependent case and nominative is a default case.

Under this view, the emergence of the partitive pattern is a direct result of the syntactic derivation.

- When the KP/DP is complete, the entire structure lacks case marking, and the partitive assignment rule applies, marking the Substance with partitive case.
- Later, the entire KP/DP is assigned accusative case.
- The case value spreads downward via the rule of case concord, but because case can only be assigned/valued once, accusative only gets passed down as far as the partitive-marked Substance.

(a) Partitive case assigned

(b) Accusative assigned; case concord blocked