Case-marking in Estonian pseudopartitives

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BLS 41, February 7-8, 2015

1 Introduction

The examples in (1) and (2) exemplify what I will call PSEUDOPARTITIVES in Estonian.

(1) hargi-täis\textsubscript{N1} põhku\textsubscript{N2}
pitchfork-ful straw\textsubscript{PAR}
‘a/the pitchforkful of straw’ (EKSS, entry for hargitäis)

(2) parv\textsubscript{N1} pääsukses\textsubscript{N2}
flock swallow\textsubscript{PL.PAR}
‘a/the flock of swallows’ (Nemvalts, 1996:69)

Key aspects of the pseudopartitive construction:

• One noun (N1) serves a quantifying or measuring role (broadly speaking).

• One noun (N2) is the substance measured or quantified.
  
  – N2 may be syntactically complex (=N2 phrase).

The structure I assume for Estonian pseudopartitives is shown below.

(3) DP
     \[\text{D} \quad \text{NP} \quad \text{N}\]
     \[\text{(N1)} \quad \text{[DP] \leftarrow (N2 Phrase)}\]

\[\text{D} \quad \text{NP} \quad \text{N}\]
     \[\text{(N1)} \quad \text{[DP] \leftarrow (N2 Phrase)}\]

\*Unannotated examples are from my fieldwork with native speakers in the bay area and in Estonia. Examples marked with EKSS are from the largest dictionary of Estonian. Examples marked with BALANCED are from a balanced literary corpus of Estonian (15 million words). The latter two resources are available online at http://www.keeleveeb.ee/. Gloss abbreviations are as follows: 1 first person, 2 second person, 3 third person, ACC accusative case, ADE adessive case, ALL allative case, GEN genitive case, INE inessive case, NOM nominative case, PAR partitive case, PL plural, POSS possessor agreement, PST past, SG singular number
• N1 is an N₀ head taking a DP complement, the N2 phrase.

The N2 case alternation: a case-marking alternation visible on the N2 phrase.

(4) tükk leiba  
    piece.NOM bread.PAR  
    ‘a piece of bread’  
    (PARTITIVE PATTERN)

(5) tüki-le leiva-le  
    piece-ALL bread-ALL  
    ‘onto a piece of bread’  
    (MATCHING PATTERN)

• Partitive Pattern: N2 bears partitive case, N1 bears some other case (e.g., nominative)

• Matching Pattern: N2 and N1 bear the same case (e.g., allative, genitive, etc.)

The goal of this talk is to precisely characterize and analyze the N2 case alternation.

① The matching pattern and partitive pattern are the only case patterns, and they are mutually exclusive (that is, each case on N1 corresponds to one pattern only).

② The alternation arises due to the syntax of case assignment, not the mechanisms of case realization (cf. Brattico 2011; Pesetsky 2013).

Preview of the analysis:

• Partitive case in Estonian pseudopartitives is an unmarked case (in the sense of Marantz (1991)), assigned to caseless complements of N₀ heads.

• The matching pattern arises because the independently necessary rule of case concord applies before unmarked partitive can be assigned, so unmarked partitive is unnecessary.

• The partitive pattern arises because the cases that show the partitive pattern are assigned after unmarked partitive is assigned— too late to affect case-marking internal to the pseudopartitive.

Outline of the talk

§2 Characterizing the N2 case alternation

§3 Against a morphological analysis

§4 Partitive as an unmarked case

2 Characterizing the N2 case alternation

Looking at the table in (6), there are two obstacles to claim ①.
(6) Case patterns for the pseudopartitive *tükk leiba* ‘piece of bread’ (to be revised)

<table>
<thead>
<tr>
<th>Case</th>
<th>Pseudopartitive</th>
<th>Pattern</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE</td>
<td>tükk leiba</td>
<td>PARTITIVE</td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td>GENITIVE</td>
<td>tüki leiba /</td>
<td>PARTITIVE</td>
<td>‘of a piece of bread’</td>
</tr>
<tr>
<td></td>
<td>tüki leiva</td>
<td>MATCHING</td>
<td>‘of a piece of bread’</td>
</tr>
<tr>
<td>PARTITIVE</td>
<td>tükk leiba</td>
<td></td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td></td>
<td>tükk-leiba</td>
<td>(can’t tell)</td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td>ILLATIVE</td>
<td>tüki-sse leiva-sse</td>
<td>MATCHING</td>
<td>‘into a piece of bread’</td>
</tr>
<tr>
<td>INESSIVE</td>
<td>tüki-s leiva-s</td>
<td>MATCHING</td>
<td>‘in a piece of bread’</td>
</tr>
<tr>
<td>ELATIVE</td>
<td>tüki-st leiva-st</td>
<td>MATCHING</td>
<td>‘out of a piece of bread’</td>
</tr>
<tr>
<td>ALLATIVE</td>
<td>tüki-le leiva-le</td>
<td>MATCHING</td>
<td>‘onto a piece of bread’</td>
</tr>
<tr>
<td>ADESSIVE</td>
<td>tüki-l leiva-l</td>
<td>MATCHING</td>
<td>‘on a piece of bread’</td>
</tr>
<tr>
<td>ABLATIVE</td>
<td>tüki-lt leiva-lt</td>
<td>MATCHING</td>
<td>‘off of a piece of bread’</td>
</tr>
<tr>
<td>TRANSLATIVE</td>
<td>tüki-ks leiva-ks</td>
<td>MATCHING</td>
<td>‘for/into a piece of bread’</td>
</tr>
<tr>
<td>TERMINATIVE</td>
<td>tüki leiva-ni</td>
<td>SUSPENDED</td>
<td>‘until a piece of bread’</td>
</tr>
<tr>
<td>ESSIVE</td>
<td>tüki leiva-na</td>
<td>SUSPENDED</td>
<td>‘as a piece of bread’</td>
</tr>
<tr>
<td>ABESSIVE</td>
<td>tüki leiva-ta</td>
<td>SUSPENDED</td>
<td>‘without a piece of bread’</td>
</tr>
<tr>
<td>COMITATIVE</td>
<td>tüki leiva-ga</td>
<td>SUSPENDED</td>
<td>‘with a piece of bread’</td>
</tr>
</tbody>
</table>

1. Terminative, essive, abessive, and comitative cases show a special pattern, labeled SUSPENDED here.
   - N1.GEN N2.(GEN)-CASE

2. Genitive case on N1 can yield either the matching or the partitive pattern.

These difficulties are only superficial.

1. Cases showing the suspended pattern are not cases, but morphologically-dependent postpositions (Nevis, 1986; Norris, 2014).
   - Their complement appears in genitive case, which is the most common case assigned by adpositions in Estonian.
   - They can thus be subsumed under the behavior of genitive case.

2. “Genitive” is actually two cases: genitive and accusative.
   - True genitive is assigned to adnominal possessors and objects of adpositions.
   - The case assigned to some direct objects, traditionally characterized as genitive case as well (Erelt et al., 1993, 2000), should be treated as a different case: accusative.

2.1 **Morphological genitive has two sources in Estonian**

Pseudopartitives with an apparently genitive N1 can show both patterns in isolation.
N1s marked with genitive case can be followed by either a partitive N2 or a matching N2, unlike every other case in Estonian.

Syntactic context shows the patterns are **not in free variation** when N1 is apparently genitive.

- Objects of adpositions, adnominal possessors → matching pattern

(9) 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)

(10) **Kolmandiku** tordi / *torti hind oli kaks rubla. third_GEN tart_GEN / tart_PAR price.NOM be.PST.3SG two.NOM ruble.PAR
‘The price of a third of a tart was two rubles.’ (Erelt et al., 1993:145)

- Genitive objects of verbs (= accusative) → partitive pattern

(11) 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)

Under the traditional view (Saareste (1926); Erelt et al. (1993, 2000)), the case assigned in each of these environments is the same: genitive.

- Case-marking in pseudopartitives suggests that genitive objects of verbs are different from other genitives.

The direct object genitive in Estonian is the morphological realization of a syntactic accusative (Caha, 2009; Hiietam, 2003).

2.2 **The case-marking of N1 determines the case pattern**

Positing an accusative case for Estonian allows us to state the choice between case patterns in terms of case-marking on N1.

- Nominative N1, Accusative N1 → partitive pattern
- Else (including Genitive N1) → matching pattern

A revised distribution of case patterns is given in (12).
(12) Case patterns for the pseudopartitive tükk leiba ‘piece of bread’ (final version)

<table>
<thead>
<tr>
<th>N1 Case</th>
<th>Pseudopartitive</th>
<th>Pattern</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOMINATIVE</td>
<td>tükk leiba</td>
<td>PARTITIVE</td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td>ACCUSATIVE</td>
<td>tüki leiba</td>
<td>PARTITIVE</td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td>PARTITIVE</td>
<td>tüki leiba</td>
<td>(can’t tell)</td>
<td>‘a piece of bread’</td>
</tr>
<tr>
<td>GENITIVE</td>
<td>tüki leiva</td>
<td>MATCHING</td>
<td>‘of a piece of bread’</td>
</tr>
<tr>
<td>ILLATIVE</td>
<td>tüki-sse leiva-sse</td>
<td>MATCHING</td>
<td>‘into a piece of bread’</td>
</tr>
</tbody>
</table>

3 A realizational analysis of the N2 case alternation

**Basic idea:** The N2 case alternation is driven by morphological realization of (possibly complex) syntactic representations.

- Assume that partitive case in pseudopartitives is assigned by N1 to its complement.

(13) NP
    N1 [PAR] DP

- Assume a model of case concord where case spreads from a node to its daughters (Babby, 1987; Chomsky, 1981, 1986; Delsing, 1993; Matushansky, 2008; Pesetsky, 2013; Richards, 2012).

- When the entire pseudopartitive is assigned some other case (e.g., allative), that case value is “stacked” outside the previously assigned partitive when it spreads to the N2 phrase (Baker and Vinokurova, 2010; Pesetsky, 2013; Richards, 2012).

For Estonian pseudopartitives, this builds representations like those in (14).

(14) a. **Partitive Assignment:** [ bag [ potatoes-PAR ]]
    b. **External Assignment:** [ bag-ALL [ potatoes-PAR-ALL ]]

But, Estonian exhibits no visible case-stacking (see (15)–(16)), so something more must be said about how the abstract representations in (14) are realized.

(15) * mees-t-le
    man-PAR-ALL

(16) * mehe-le-t
    man-ALL-PAR

In Pesetsky’s (2013) analysis of Russian numeral phrases, he proposes an algorithm that realizes the outermost case in a case-stack (= PRONOUNCE OUTERMOST).

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1Recall that I have adopted an analysis whereby the terminative, essive, abessive, and comitative cases are actually postpositions that assign genitive case to their complements. Therefore, the analysis of the genitive is intended to extend to the case-marking patterns seen for those cases.
The partitive pattern requires pronunciation of the innermost case, but the matching pattern requires pronunciation of the outermost case.

We could augment the case-stacking algorithm with a bit of morphology.

- e.g., PRONOUNCE OUTERMOST OVERT: pronounce the outermost case that is overt (Baker and Vinokurova, 2010; Brattico, 2008, 2010, 2011).

This explanation cannot straightforwardly account for Estonian pseudopartitives, because partitive case trumps both nominative and accusative—both would have to count as “not overt.”

Furthermore, any account that pins the distinction on case morphology would run into difficulty accounting for the difference between genitive and accusative.

There is nothing wrong morphologically with a string like tüki leiva, it is just not a well-formed ACCUSATIVE pseudopartitive.

The partitive and matching patterns are not surface simplifications of covert case stacks.

4 Partitive as a DP-internal unmarked case

Partitive case only surfaces in nominative and accusative contexts: a natural class (in Estonian).

- Nominative and accusative are only assigned to DPs based on their clausal position (i.e., never inherently, never DP-internally).

- A timing-based analysis: nominative and accusative yield the partitive pattern because they are assigned later than other cases.
In this section, I will pursue the idea that partitive case is an UNMARKED CASE inside of DPs (or more correctly, KPs).

(22) **Unmarked Partitive Hypothesis:** Partitive case in Estonian nominals is an unmarked case, assigned to complements of nouns that do not already have a case value.

- The proposal in (22) is couched within the general framework of case as proposed by Marantz (1991) and developed in subsequent work.

4.1 **Marantz (1991): more than one way to assign case**

One of the insights of Marantz’s proposal is that there is more than one way for a DP to end up bearing morphological case.

- **lexical/inherent case:** assigned by the selecting V₀ or P₀.
- **dependent case:** assigned to one of two caseless DPs in an asymmetric c-command relationship.
  - C-commanded DP: accusative
  - C-commanding DP: ergative
- **unmarked case:** assigned to otherwise caseless DPs; may be sensitive to syntactic environment (e.g., an unmarked case for caseless nominals inside DPs).
- **default case:** case assigned to any DP that is not in a position to receive case (Schütze, 2001).

Marantz (1991) himself focuses on an exploration of the behavior of dependent case, and much research in this framework has followed suit.²

- In fact, unmarked case and default case are often collapsed (Bobaljik, 2008; Levin and Preminger, 2015).
- According to Schütze’s (2001) tests, the default case in Estonian must be nominative; unmarked case and default case cannot be collapsed under my account.

4.2 **A syntactic analysis of the N2 case alternation**

The cases that yield the partitive pattern (nominative and accusative) form a natural class: those cases that are only assigned based on a DP’s position in the clausal spine.

- Other cases (so-called lexical or inherent cases) yield the matching pattern.

**A formal distinction:** Bittner and Hale (1996) propose that case features are located on K₀ heads, which take DP complements.

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²See, for example, Baker and Vinokurova 2010; Levin and Preminger 2015 on Sakha, Tucker 2013 on Maltese, or Poole 2014 on Finnish.
• Some (but not all) \( K^0 \) heads enter the derivation with a value.

• **Upshot:** The case pattern a particular pseudopartitive shows is determined on the basis of its \( K^0 \)-head.

\[(23) \text{ Valued } K^0: \text{ Matching Pattern} \]

\[\text{KP} \]

\[\text{K} \]

\[\text{DP} \]

\[[\text{VAL}] \quad \text{piece-VAL bread-VAL} \]

\[(24) \text{ Else: Partitive pattern} \]

\[(\text{KP})\]

\[\text{(K)} \]

\[\text{DP} \]

\[[\quad \text{piece bread-PAR} \]

The choice between patterns is determined at the moment the entire pseudopartitive is built.

I propose that this also the moment when the conditions for Unmarked Partitive are checked.

• When the pseudopartitive extended projection is complete, if there is a caseless complement of \( N^0 \), then it is assigned partitive case.

In other words, it is only when the entire KP is built, as in (23)-(24), that the conditions for unmarked case can be checked.

### 4.3 Deriving the patterns

When a head like \( K^0_{[ADE]} \) is merged, its case value spreads downward in the normal fashion.

• Because the N2 phrase has no case value of its own, adessive case spreads all the way down to N2 itself.

\[(25) \]

\[\text{KP} \]

\[\text{K}_{[ADE]} \]

\[\text{DP} \]

\[[ADE] \]

\[\text{D} \]

\[\text{NP} \]

\[[ADE] \]

\[[ADE] \]

\[\sqrt{\text{ENAMIK}} \]

\[\text{NP} \]

\[\text{DP} \]

\[[ADE] \]

\[\sqrt{\text{INIMENE}} \]

\[(26) \text{ enamiku-l inimes-te-l} \]

\[\text{majority-ADE person-PL-ADE} \]

\[\text{‘(on) a majority of people’} \]
• The unmarked partitive does not surface, because its environment is not met. If the K^0-head has no case value, the N2 phrase remains caseless (just like the rest of the KP).

• This is the environment that underlies the assignment of partitive case.

(27) KP

        K
      [CASE:__]  DP
            D  ...  NP
              N  DP
          \√ENAMIK  \[PAR]\  \(Unmarked\ Partitive\)
          \...\√INIMENE...

(28) enamiku  inimesi
majority.ACC  person.PL.PAR
‘a majority of people’

When accusative is assigned to the entire pseudopartitive, it spreads as far as the N2 phrase (by case concord).

• I assume that accusative spreads no further, i.e., case overwriting/stacking does not occur in Estonian, but this is not a necessary assumption.³

4.4 Analysis summary

This analysis gives teeth to the oft-noted generalization that structural cases (e.g., nominative and accusative) are treated differently from inherent cases (Babby, 1980; Moravcsik, 1995; Richards, 2012).

➤ Descriptively speaking, inherent cases overwrite the DP-internal partitive case in Estonian, but structural cases apparently cannot.

• The proper way to formalize this notion is not obvious.

The unmarked partitive analysis derives these effects as a matter of timing.

• The cases that yield the matching pattern enter the derivation before the unmarked partitive can be assigned, and thus, it is not necessary.

• The cases that yield the partitive pattern enter the derivation after the unmarked partitive is assigned, and thus, too late to have any effect.

The partitive pattern emerges due to how case is assigned, not how it is realized.

³If we allowed accusative to spread all the way down to the N2 phrase, we could then follow Baker and Vinokurova (2010) and assume that the innermost case value is always realized— this would account for the partitive pattern just as well. I make the stronger claim here and propose that case stacking does not occur in Estonian.
5 Conclusions

The N2 case alternation is not unique to the Estonian pseudopartitive.

- However, the specifics of its behavior in Estonian pseudopartitives are uniquely revealing about its possible analyses.
- Purely (or essentially) morphological accounts cannot straightforwardly account for the alternation in Estonian.
- Instead, Estonian pseudopartitives reveal that a syntactic account is needed in addition to (or in the place of) the existing morphological accounts of this kind of case-marking alternation.

More broadly, this investigation serves as an exploration of one possible formalization and implementation of Marantz’s notion of unmarked case (as distinct from default case).

- According to Marantz’s original proposal, case assignment takes place in the morphological component—cases must “wait” to be assigned, even when the requisite syntactic structure is built.

Recent analyses following Marantz’s general research program (e.g., Baker and Vinokurova 2010; Levin and Preminger 2015; Preminger 2014) have proposed (contra Marantz) that case is assigned in the syntax.

- Furthermore, case is assigned as soon as its structural description is met, which will not work for the partitive in Estonian pseudopartitives (leading to the issues discussed in §3).

Many modern analyses of case-marking allow for some cases (e.g., a default nominative) to be assigned in a sort of last resort way (e.g., Levin and Preminger 2015).

- The analysis I have proposed here suggests that case-marking systems must allow for more than one kind of last resort case.

Acknowledgements

For comments on the work presented here, I would like to thank Mark Baker, Sandy Chung, Amy Rose Deal, Vera Gribanova, Jorge Hankamer, Boris Harizanov, Ruth Kramer, Jim McCloskey, and Anie Thompson. Thank you to the many Estonians whose judgments have shaped this work, especially Katrin Jänese, Mervi Kalmus, Leelo Kask, Miina Norvik, and Kärt Lazic. For financial support, I thank a Dissertation Year Fellowship from the Institute for Humanities Research at UC-Santa Cruz and a grant from the European Social Funds Doctoral Studies and Internationalisation Programme DoRa.

References


### A Extending the analysis to numerals

The N2 case alternation seen in pseudopartitives is also found in numeral-noun constructions.\(^4\)

\begin{align*}
(29) & \text{kaks inimes-t} & \text{two.NOM person-PAR} \\
& \text{‘two people’} \\
(30) & \text{kahe-l inimese-l} & \text{two-ADE person-ADE} \\
& \text{‘(on) two people’}
\end{align*}

Numeral-noun constructions are not as revealing as pseudopartitives, because the nominative and accusative forms of numerals are identical.

\begin{align*}
(31) & \text{Laua-l on \textbf{kolm} raamatu-t.} \\
& \text{table-ADE be.3 three.NOM book-PAR} \\
& \text{‘There are three books on the table.’} \\
(32) & \text{Mari ost-is \textbf{kolm} raamatu-t.} \\
& \text{Mari.NOM buy-PST.3SG three.ACC book-PAR} \\
& \text{‘Mari bought three books.’}
\end{align*}

A numeral-noun construction can be stacked on top of a pseudopartitive (call these M-stacks).

- **M-stack partitive pattern**: Numeral\(_{\text{NOM}} \) N1\(_{\text{PAR}} \) N2\(_{\text{PAR}} \)

\begin{align*}
(33) & \text{kolm kotti kartule-id} & \text{three.NOM bag-PAR potato-PL.PAR} \\
& \text{‘three bags of potatoes’} \\
& \text{\footnotesize (EKSS, entry for kott)}
\end{align*}

\(^4\)From a typological perspective, there is reason to believe that the pseudopartitive alternation was based on the numeral alternation, and not vice versa (Koptjevskaja-Tamm, 2001). One interesting fact is that Finnish has the alternation with numerals but not in pseudopartitives. In Finnish pseudopartitives, the N2 phrase is always partitive.
If we adopt Ionin and Matushansky’s (2006) proposal that numerals are nouns, these patterns of exponence are exactly what the unmarked partitive hypothesis predicts.

- If the entire M-stack is the complement of $K^0_{[\text{GEN}]}$, then this value spreads all the way down to N2, yielding full case matching.
- If the entire M-stack is the complement of a $K^0$ with no value, the unmarked partitive rule applies, marking N1 and N2 with partitive case.

In M-stacks, either both N1 and N2 are partitive or neither is.

➤ This analysis predicts that behavior because it ties N1’s case-marking and N2’s case-marking to the same source: the features of $K^0$. 

13