

# The Non-autonomous accusative case in Estonian<sup>†</sup>

Mark Norris, University of Oklahoma

SLE 2016, 31 August – 3 September 2016

## 1 Introduction

This talk focuses on the case assigned to objects<sup>1</sup> in Estonian.

- In particular, some objects—so-called total objects—show an alternation based on number: genitive when singular (1) and nominative when plural (2).<sup>2</sup>

(1) *Heiko osti-s kurgi / \*kurk.*  
Heiko buy-PST.3SG cucumber.GEN / cucumber.NOM  
‘Heiko bought a/the cucumber.’

(2) *Heiko osti-s kurgi-d / \*kurki-de.*  
Heiko buy-PST.3SG cucumber-PL.NOM / cucumber.PL.GEN  
‘Heiko bought the cucumbers.’

There are two basic approaches to this case alternation:

- **WYSIWYG approach:** singular total objects are assigned syntactic genitive case, plural total objects are assigned nominative case (Erelt et al., 1993, 2000; Miljan and Cann, 2013).
  - Case is morphological case— there is no distinct abstract syntactic version of case.
- **abstract approach:** singular and plural total objects are assigned the same syntactic case (ACCUSATIVE) but accusative has no uniquely identifiable form in Estonian (Hiietam, 2005; Tamm, 2007), meaning it is **non-autonomous** (Mel’čuk, 1986).

---

<sup>†</sup>For discussion of this work, I thank Claire Halpert, Boris Harizanov, Ruth Kramer, Ethan Poole, and Virve-Anneli Vihman. Thanks as well to the following Estonian speakers for discussing their language with me: Katrin Jänese, Kärt Lazić, Mervi Kalmus, Leelo Kask, Maarja Lutsar, Maire Moisto, and Siim Pöldre. Any remaining errors lie with me.

<sup>1</sup>Throughout, I will say *objects* to mean only objects of verbs.

<sup>2</sup>Gloss abbreviations are as follows: 2 second person, 3 third person, ACC accusative case, ADE adessive case, DEF definite, DET determiner, ELA elative case, FEM feminine gender, GEN genitive case, GOV governed, NOM nominative case, OBL oblique, PAR partitive case, PL plural number, PST past, SG singular number, SUBJ subject

- Case is both syntactic and morphological, and the systems overlap but are not necessarily isomorphic.

In this talk, I provide a novel argument **in favor of the abstract approach** (i.e., Estonian has an accusative) and then propose an analysis in terms of Distributed Morphology.

- Estonian pseudopartitives (e.g., *tükk leiba* ‘piece of bread’) have a unique form in total object contexts.
  - Genitive on objects is not the same as genitive in other contexts.
- The non-autonomous character of the accusative can be captured if we adopt a decomposition of traditional case labels into component features (Bierwisch 1967; Keine 2010; Müller 2004, see also Calabrese 2008; Halle and Vaux 1998).

Talk outline:

- ✓ **Section 1:** Introduction
- ❑ **Section 2:** Case-marking in the Estonian pseudopartitive
- ❑ **Section 3:** Non-autonomous accusative in Distributed Morphology
- ❑ **Section 4:** Conclusion

## 2 Case-marking in the Estonian pseudopartitive

The PSEUDOPARTITIVE (in Estonian): a partitive-like construction involving two nouns side-by-side in its simplest form.<sup>3</sup>

- (3) *hargitäis*            *põhku*  
 pitchforkful.NOM straw.PAR  
 N1                        N2  
 ‘a/the pitchforkful of straw’ (EKSS, entry for *hargitäis*)

- (4) *parv*            *pääsuke*  
 flock.NOM swallow.PL.PAR  
 N1                    N2  
 ‘a/the flock of swallows’ (Nemvalts, 1996, 69)

---

<sup>3</sup>The term *pseudopartitive* has at least two uses in the literature. It is sometimes used to indicate a construction that is different from a PARTITIVE in that its quantified substance is syntactically smaller than the quantified substance of a true partitive (Selkirk, 1977). The other use of the term is for constructions that look superficially similar to true partitives but do not have partitive semantics, strictly speaking. Here, I follow Tamm (2011) in using the term PSEUDOPARTITIVE to refer to the Estonian construction where N2 is marked with partitive case.



- (1) *Heiko osti-s kurgi / \*kurk.*  
 Heiko buy-PST.3SG cucumber.GEN / cucumber.NOM  
 ‘Heiko bought a/the cucumber.’
- (8) Genitive assigned to adnominal possessors
- a. *välisukse võti*  
 front.door.GEN key.NOM  
 ‘front door key’ (EKSS, entry for *võti*)
- b. *taime-de kasv*  
 vegetable-PL.GEN growth.NOM  
 ‘growth of vegetables’ (EKSS, entry for *kasv*)
- (9) Genitive assigned to complements of adpositions
- a. *Kardina-d on akna ees.*  
 curtain-PL.NOM be.3 window.GEN front  
 ‘The curtains are in front of the window.’ (EKSS, entry for *ees*)
- b. *Tuul on aken-de pealt.*  
 wind be.3 window-PL.GEN from.on.top  
 id. ‘The wind is coming from the window.’ (EKSS, entry for *aken*)

In these three environments (as well as other contexts yielding genitive nominals), singular nouns take the same form.

- Since at least Saareste (1926), these have been treated as the same case in traditional grammars (Erelt et al., 1993, 2000) as well as in more recent research (Miljan and Cann, 2013).
- However, unlike singular nouns on their own, pseudopartitives **do not** exhibit the same form in all three environments.

### 2.1.1 Object genitive requires partitive case on N2

The choice of case-marking on N2—genitive or partitive—is dependent on the source of genitive case.

- In some contexts, N2 must bear genitive case, i.e., it must match the case-marking of N1.

- (10) Pseudopartitives as adnominal possessors → genitive N2
- a. *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)
- b. *enamiku inimes-te / \*inimesi soov*  
 majority.GEN person-PL.GEN / person.PL.PAR wish  
 ‘[the majority of people]’s wish’ (Erelt et al., 1993, 142)

- (11) Pseudopartitives as complements of adpositions → genitive N2
- a. *Putukas rooma-s ümber klaasi vee / \*vett.*  
 bug.NOM crawl-PST.3SG around glass.GEN water.GEN / water.PAR  
 ‘The bug crawled around the glass of water.’
- b. *Kui palju sa koti kartuli-te / \*kartule-id eest mak-si-d?*  
 how much you bag.GEN potato-PL.GEN / potato-PL.PAR for pay-PST-3PL  
 ‘How much did you pay for the bag of potatoes?’ (Erelt et al., 1993, 145)

so these two contexts require case matching

- When the pseudopartitive is a total object, N2 must bear partitive case and cannot bear genitive case.

- (12) Pseudopartitives as total objects → partitive N2
- a. *Juku suusata-s tüki maa-d / \*maa.*  
 Juku ski-PST.3SG piece.GEN land-PAR / land.GEN  
 ‘Juku skied a piece of land (i.e., an unspecified distance)’ (Erelt et al., 1993, 142)
- b. *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)

Whereas most nominals look the same whether they are total objects, adnominal possessors, or complements of an adposition, the same is not true of pseudopartitives.

- Pseudopartitives have a form only found in object position. N1.GEN N2.PAR.

Pseudopartitives have a unique accusative form.

## 2.2 Paths to an analysis

The case-marking alternation seen in Estonian pseudopartitives exists in a similar guise in numeral-noun constructions in several other languages.<sup>5</sup>

- Finnish (Brattico, 2008, 2010, 2011)
- Inari Saami (Nelson and Toivonen, 2000)
- Polish (Rutkowski, 2002)
- Russian (Babby, 1980, 1984, 1987; Pesetsky, 2013)

<sup>5</sup>Estonian exhibits the same type of alternation in its numeral-noun constructions. I do not discuss them here, but for some discussion, see Norris (2014:60–92, 218–223, 228–235)

Unsurprisingly, the proposals in the above works are not identical, though they typically involve some form of multiple case assignment for the noun (corresponding to N2 in the pseudopartitive).

- Transferring this kind of analysis to Estonian: N2 is assigned partitive case in addition to whatever case is assigned to the entire pseudopartitive (= EXTERNAL CASE).
  - First, partitive is assigned to N2.
  - Second, the external case is assigned to both N1 and N2, such that N2 has now been assigned case twice.

(13)

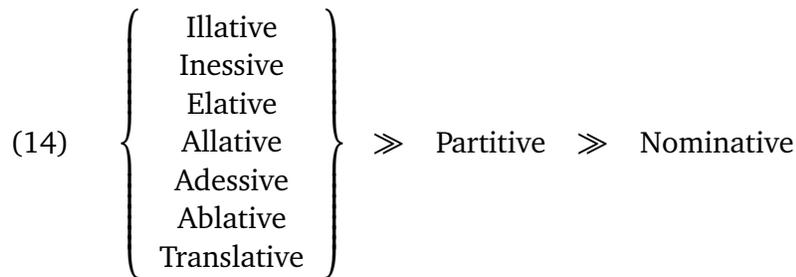
	N1	N2
Partitive Case ⇒		PAR
External Case ⇒	ADE	ADE

### 2.2.1 Case hierarchies: strong vs. weak

Since two case values cannot be realized at the same time in Estonian (or any of the languages listed above), something more must be said about how N2's case value is determined.

- Analyses differ in their implementation, but most invoke some notion of competition between the values on N2, whereby some cases are weaker and others are stronger.<sup>6</sup>
- The stronger case is the one that is expressed.
- As a first attempt, I present the case hierarchy for Estonian in (14), which includes all the Estonian cases except genitive.<sup>7</sup>

don't immediately explain the diagram— it is explained straightaway



It is clear that nominative is weaker than partitive, and it is clear that most other cases are stronger than partitive.

---

<sup>6</sup>Pesetsky (2013) is notably different in this respect, but his account requires a number of independent proposals that would take us too far afield to discuss here.

<sup>7</sup>I assume the terminative, essive, abessive, and comitative, which are included in the traditional Estonian case paradigm, are not cases but morphophonologically dependent postpositions. See Nevis (1986) for argumentation. Pseudopartitives in these contexts show the matching pattern.

- When N2 is assigned both nominative and partitive, it is realized as partitive (15a).
- When N2 is assigned partitive and, e.g., elative, it is realized as elative (15b).

(15) a.	<table style="margin-left: auto; margin-right: auto;"> <tr><td style="padding-right: 20px;">N1</td><td>N2</td></tr> <tr><td style="padding-right: 20px;">Partitive Case ⇒</td><td>PAR</td></tr> <tr><td style="padding-right: 20px;">External Case ⇒</td><td>NOM <del>NOM</del></td></tr> </table>	N1	N2	Partitive Case ⇒	PAR	External Case ⇒	NOM <del>NOM</del>	<p>(PAR ≫ NOM) e.g., <i>parv pääsuke</i> (4)</p>
N1	N2							
Partitive Case ⇒	PAR							
External Case ⇒	NOM <del>NOM</del>							
b.	<table style="margin-left: auto; margin-right: auto;"> <tr><td style="padding-right: 20px;">N1</td><td>N2</td></tr> <tr><td style="padding-right: 20px;">Partitive Case ⇒</td><td><del>PAR</del></td></tr> <tr><td style="padding-right: 20px;">External Case ⇒</td><td>ELA ELA</td></tr> </table>	N1	N2	Partitive Case ⇒	<del>PAR</del>	External Case ⇒	ELA ELA	<p>(ELA ≫ PAR) e.g., <i>potitüest supist</i> (5)</p>
N1	N2							
Partitive Case ⇒	<del>PAR</del>							
External Case ⇒	ELA ELA							

### 2.2.2 Incorporating genitive (and accusative) into the hierarchy

If we posit an accusative case for Estonian, it can be easily integrated with the hierarchy seen here: accusative is weaker than partitive, and genitive is stronger.

(16)	{	<p style="text-align: center;"><b>Genitive</b></p> <p style="text-align: center;">Illative</p> <p style="text-align: center;">Inessive</p> <p style="text-align: center;">Elative</p> <p style="text-align: center;">Allative</p> <p style="text-align: center;">Adessive</p> <p style="text-align: center;">Ablative</p> <p style="text-align: center;">Translative</p>	} ≫	Partitive	≫	{	<p style="text-align: center;">Nominative</p> <p style="text-align: center;"><b>Accusative</b></p>
------	---	--	-----	-----------	---	---	--

The hierarchy generates the proper distribution of marking for pseudopartitives. [turn the page?](#)

- When N2 is assigned accusative and partitive, it will surface as partitive (17a).
- When it is assigned genitive and partitive, it will surface as genitive (17b).

(17) a.	<table style="margin-left: auto; margin-right: auto;"> <tr><td style="padding-right: 20px;">N1</td><td>N2</td></tr> <tr><td style="padding-right: 20px;">Partitive Case ⇒</td><td>PAR</td></tr> <tr><td style="padding-right: 20px;">External Case ⇒</td><td>ACC <del>ACC</del></td></tr> </table>	N1	N2	Partitive Case ⇒	PAR	External Case ⇒	ACC <del>ACC</del>	<p>(PAR ≫ ACC) e.g., <i>koti kartuleid</i> (12b)</p>
N1	N2							
Partitive Case ⇒	PAR							
External Case ⇒	ACC <del>ACC</del>							
b.	<table style="margin-left: auto; margin-right: auto;"> <tr><td style="padding-right: 20px;">N1</td><td>N2</td></tr> <tr><td style="padding-right: 20px;">Partitive Case ⇒</td><td><del>PAR</del></td></tr> <tr><td style="padding-right: 20px;">External Case ⇒</td><td>GEN GEN</td></tr> </table>	N1	N2	Partitive Case ⇒	<del>PAR</del>	External Case ⇒	GEN GEN	<p>(GEN ≫ PAR) e.g., <i>koti kartulite</i> (11b)</p>
N1	N2							
Partitive Case ⇒	<del>PAR</del>							
External Case ⇒	GEN GEN							

This resulting hierarchy is in line with conclusions from the literature on the alternation in numeral-noun constructions: **structural cases are weak and inherent/lexical cases are strong** (Babby, 1980, 1987).

.....

If all morphological genitives are treated as the same case, we cannot generate the proper forms for pseudopartitives based on hierarchy alone.

- If **genitive is weaker than partitive**, we capture the appearance of a partitive N2 in object position.
  - But we also expect a partitive N2 when the pseudopartitive is a possessor or complement of an adposition.
- If **genitive is stronger than partitive**, we capture the appearance of a genitive N2 when the pseudopartitive is a possessor or complement of an adposition.
  - But we also expect a genitive N2 when the pseudopartitive is in object position.

These facts from pseudopartitives are not new—the behavior is noted in the main grammars (Erelt et al., 1993, 2000)—but their relevance for the accusative debate has not been noted, so far as I know.

- Erelt et al. (1993), p. 144: “When [N1] is genitive singular, the form of [N2] depends on the phrase’s function: if the phrase is an object, [N2] is partitive, but otherwise [N2] agrees in case.”<sup>8</sup>
- In other words, to identify the case pattern of a pseudopartitive whose N1 bears genitive case, we must turn to its syntactic position. **This is tantamount to admitting that genitives are not all equal in the language despite their morphological similarity**

So far:

- ✓ **Section 1:** Introduction
- ✓ **Section 2:** Case-marking in the Estonian pseudopartitive
- ❑ **Section 3:** Non-autonomous accusative in Distributed Morphology
- ❑ **Section 4:** Conclusion

If we adopt an abstract accusative case, then the widespread syncretism it exhibits requires an explanation. **This is what I turn to in the next section.**

### 3 Non-autonomous accusative in Distributed Morphology

I propose an account within the framework of Distributed Morphology (Halle, 1990; Halle and Marantz, 1993; Embick, 2010; Arregi and Nevins, 2012).

- In Distributed Morphology, the syntax manipulates feature bundles that lack morphophonology; these feature bundles are exponed by pronounced morphemes post-syntactically.
- The exponing process consists of matching the syntactic feature bundles to “Vocabulary Items” (bits of morphophonology) and is called Vocabulary Insertion.

.....

---

<sup>8</sup>The original Estonian is as follows: “kui kvantor on ainsuse genitiivis, sõltub laiendi vorm fraasi funktsioonist: kui fraas on lauses sihitiseks, on laiend partitiivne sõltlaiend, muudel juhtudel laiend ühildub käändes.”

A small illustration using French definite determiners:

(18) Syntax: [DET, DEF, -PL, +FEM]

Possible Vocabulary Items in French:

- a. [DET, DEF, -PL, -FEM]  $\leftrightarrow$  *le*
- b. [DET, DEF, -PL, +FEM]  $\leftrightarrow$  *la*  $\Leftarrow$  inserted because it matches the feature bundle

(19) Syntax: [DET, DEF, +PL, +FEM]

Possible Vocabulary Items in French:

- a. [DET, DEF, -PL, -FEM]  $\leftrightarrow$  *le*
- b. [DET, DEF, -PL, +FEM]  $\leftrightarrow$  *la*
- c. [DET, DEF, +PL]  $\leftrightarrow$  *les*  $\Leftarrow$  inserted because it has no feature mismatches

In (19), we see one mechanism for capturing syncretism in Distributed Morphology: UNDER-SPECIFICATION of Vocabulary Items.

- The plural definite Vocabulary Item *les* has no gender specification— it is a suitable exponent regardless of gender.

### 3.1 Decomposition of case features

Traditional case labels do not allow any way to make connections between particular cases.

- But patterns in case syncretism reveal that cases are not all equally distinct— any given case is closer to some cases than to others (Caha, 2009, 2013).
- Decomposing traditional labels into constellations of component features allows some cases to have degrees of similarity and difference.

There are several different systems in the literature— I adopt the systems proposed by Keine (2010) and Müller (2004), which involve the features [ $\pm$ SUBJ(ECT)], [ $\pm$ GOV(ERNED)], [ $\pm$ OBL(IQUE)].

- For simplicity, I ignore [+SUBJ]— could easily feature in the analysis, but it is not necessary.

(20) a. nominative = [(+SUBJ), -GOV, +OBL]

b. accusative = [(-SUBJ), +GOV, -OBL]

c. genitive = [(+SUBJ), +GOV, +OBL]

- Thus, when accusative case is assigned in the syntax, what is actually assigned is the feature bundle [+GOV, -OBL].
- In this system, genitive and accusative have a feature in common: [+GOV].

## 3.2 Underspecification of vocabulary items

The case morphemes are sensitive to different feature combinations than the features assigned in the syntax.

(21) Vocabulary Items:<sup>9</sup>

[ ]	↔	/-∅ <sub>NOM</sub> /
[+GOV]	↔	/-∅ <sub>GEN</sub> /
[+PL]	↔	/-d/
[+GOV, +PL]	↔	/-{de, te}/

- The genitive case morpheme (∅<sub>GEN</sub>) is sensitive to [+GOV], shared by syntactic accusative ([+GOV, -OBL]) and genitive ([+GOV, +OBL]).
- Thus, the chosen exponent for accusative and genitive singular is the same, but that Vocabulary Item is not suitable for a nominative singular form.

(22) ACC.SG [+GOV, -OBL, -PL]  
GEN.SG [+GOV, +OBL, -PL]

- |                |   |                      |                   |
|----------------|---|----------------------|-------------------|
| a. [+GOV, +PL] | ↔ | /-{de, te}/          | ** (mismatch)     |
| b. [+PL]       | ↔ | /-d/                 | ** (mismatch)     |
| c. [+GOV]      | ↔ | /-∅ <sub>GEN</sub> / | ⇐ (no mismatches) |
| d. [ ]         | ↔ | /-∅ <sub>NOM</sub> / |                   |

(23) NOM.SG [-GOV, -OBL, -PL]

- |                |   |                      |                   |
|----------------|---|----------------------|-------------------|
| a. [+GOV, +PL] | ↔ | /-{de, te}/          | ** (mismatch)     |
| b. [+PL]       | ↔ | /-d/                 | ** (mismatch)     |
| c. [+GOV]      | ↔ | /-∅ <sub>GEN</sub> / | ** (mismatch)     |
| d. [ ]         | ↔ | /-∅ <sub>NOM</sub> / | ⇐ (no mismatches) |

## 3.3 Impoverishment

In the plural, accusative is syncretic with nominative rather than genitive.

- Morphologically speaking, this is a retreat to a less-marked form, as nominative is the least marked case in Estonian (Miljan and Cann, 2013).

---

<sup>9</sup>These vocabulary items abstract away from the very complicated system of declension classes in Estonian. To put it briefly, there is no dedicated exponent for nominative or genitive singular, while there is for nominative plural (-d) and for genitive plural, there are basically two options (-de/-te), although some words allow a genitive plural to be formed with -i. The exponents given here (e.g., ∅<sub>NOM</sub> and ∅<sub>GEN</sub>) could be interpreted as stand-ins for the more complete analysis, which involves some combination of contextual allomorphy and morphophonology. See Blevins (2008) for a recent thorough explanation in different terms, but also see Mürk (1991).

- Because this is retreat to a less-marked form, it is a prime candidate for a rule of Impoverishment, like the one presented in (24).<sup>10</sup>

(24) Impoverishment rule:  
 $[+GOV] \rightarrow \emptyset / \text{---} [-OBL, +PL]$

This rule removes the specification of [+GOV] from any nominal that is specified [+GOV, -OBL, +PL].

- Without the specification of [+GOV], such nominals cannot be realized by genitive case morphemes, which are all specified as [+GOV].
- That means that accusative plural nominals are now expounded by the *-d* suffix shared with nominative plural nominals.

(25) ACC.PL [-OBL, +PL] (after Impoverishment)  
 NOM.PL [-GOV, -OBL, +PL]

- $[+GOV, +PL] \leftrightarrow /-\{de, te\}/$  \*\* (mismatch)
- $[+PL] \leftrightarrow /-d/$   $\Leftarrow$  (no mismatch)
- $[+GOV] \leftrightarrow /-\emptyset_{GEN}/$  \*\* (mismatch)
- $[ ] \leftrightarrow /-\emptyset_{NOM}/$

(26) GEN.PL [+GOV, +OBL, +PL]

- $[+GOV, +PL] \leftrightarrow /-\{de, te\}/$   $\Leftarrow$  (no mismatch)
- $[+PL] \leftrightarrow /-d/$
- $[+GOV] \leftrightarrow /-\emptyset_{GEN}/$
- $[ ] \leftrightarrow /-\emptyset_{NOM}/$

## 4 Conclusion

In this talk, I investigated the divide between the syntactic and morphological sides of case through the example of Estonian objects.

- Estonian has lost almost all traces of its historical accusative, but pseudopartitives still exhibit a unique accusative form.
- To capture the non-autonomous character of the accusative case, at least two assumptions are necessary.

---

<sup>10</sup>There is another possibility involving a different set of Vocabulary Items: the genitive plural morpheme could be sensitive to [+GOV, +OBL, +PL] rather than simply [+GOV, +PL]. Then, nominals assigned accusative case would have a mismatch—they are specified as [-OBL] whereas the genitive plural Vocabulary Item is specified as [+OBL]. I do not have space to fully discuss this possibility here, but I am happy to discuss the merits of it in the question period.

- Traditional case labels must be decomposed into component features.
- Though syntactic and morphological systems of case do interact, they are not isomorphic (see also Kiparsky (2001) on Finnish).

This is not just an issue of nomenclature.

- The question is whether all cases we call “genitive” in Estonian exhibit the same morphological and syntactic behavior.
- Whether we call the case for objects ACCUSATIVE as opposed to OBJECT-GENITIVE is in a way a matter of preference.

But there is good reason to call the case explored here by the familiar label ACCUSATIVE.

- It is the case assigned to internal arguments of transitive verbs.<sup>11</sup>
- Calling this case accusative renders Estonian less exotic, both in relation to its immediate relatives and to languages outside the Uralic family.
- Estonian is like many languages in having a syntactic case whose primary use is for objects of transitive verbs.
  - The precise distribution of Estonian accusative can and should inform general theories about the behavior of accusative in human language.

## References

- Arregi, Karlos, and Andrew Nevins. 2012. *Morphotactics: Basque auxiliaries and the structure of spellout*. Dordrecht: Springer.
- Babby, Leonard. 1987. Case, prequantifiers, and discontinuous agreement in Russian. *Natural Language & Linguistic Theory* 5:91–138.
- Babby, Leonard H. 1980. The syntax of surface case. In *Cornell working papers in linguistics*, volume 1, 1–32. Cornell University.
- Babby, Leonard H. 1984. Case conflicts and their resolution: a contribution to EST case theory. In *Cornell working papers in linguistics*, ed. Wayne Harbert, volume 6, 1–21. Cornell University.
- Bierwisch, Manfred. 1967. Syntactic features in morphology: general problems of so-called pronominal inflection in German. *To Honour Roman Jakobson* 239–270.
- Blevins, James P. 2008. Declension classes in Estonian. *Linguistica Uralica* XLIV:241–267.
- Brattico, Pauli. 2008. Kayne’s model of Case and Finnish nominal phrases. *Nordic Journal of Linguistics* 31:135–160.
- Brattico, Pauli. 2010. The two-part models and one-part models of nominal case, evidence from case distribution. *Journal of Linguistics* 45:47–81.

---

<sup>11</sup>As in the more familiar Finnish, the dedicated object case is also assigned to some adverbial phrases in Estonian.

- Brattico, Pauli. 2011. Case assignment, case concord, and the quantificational case construction. *Lingua* 121:1042–1066.
- Caha, Pavel. 2009. The nanosyntax of case. Doctoral Dissertation, Universitet i Tromsø.
- Caha, Pavel. 2013. Explaining the structure of case paradigms by the mechanisms of nanosyntax: The Classical Armenian nominal declension. *Natural Language & Linguistic Theory* 31:1015–1066.
- Calabrese, Andrea. 2008. On absolute and contextual syncretism: remarks on the structure of case paradigms and on how to derive them. In *Inflectional identity*, ed. Asaf Bachrach and Andrew Nevins, 156–205. Oxford: Oxford University Press.
- Ehala, Martin. 1994. Russian influence and the change in progress in the Estonian adpositional system. *Linguistica Uralica* 30:177–193.
- Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge, MA: MIT Press.
- Erelt, Mati, Tiiu Erelt, and Kristiina Ross. 2000. *Eesti keele käsiraamat* [Estonian language handbook]. Tallinn: Eesti keele sihtasutus.
- Erelt, Mati, Reet Kasik, Helle Metslang, Henno Rajandi, Kristiina Ross, Henn Saari, Kaja Tael, and Silvi Vare. 1993. *Eesti Keele Grammatika II: Süntaks; Lisa: Kiri* [Estonian Grammar II: Syntax; Appendix: Written Language]. Tallinn, Estonia: Eest Teaduste Akadeemia Keele ja Kirjanduse Instituut.
- Halle, M. 1990. An approach to morphology. In *Proceedings of NELS 20*, 150–184. University of Massachusetts, Amherst: GLSA.
- Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the Pieces of Inflection. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. K. Hale and S. J. Keyser, 111–176. Cambridge, MA: MIT Press.
- Halle, Morris, and Bert Vaux. 1998. Theoretical aspects of Indo-European morphology: the nominal declensions of Latin and Armenian. In *Mir curad: Studies in honor of Calvert Watkins*, ed. Jay Jasanoff, H. Craig Melchert, and Lisi Olivier, 223–240. Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Hiietam, Katrin. 2005. Case marking in Estonian grammatical relations. *The University of Leeds Working Papers in Linguistics and Phonetics* 10.
- Keine, Stefan. 2010. *Case and agreement from Fringe to Core: a minimalist approach*. Linguistische Arbeiten. Berlin: Walter de Gruyter.
- Kiparsky, Paul. 2001. Structural case in Finnish. *Lingua* 111:315–376.
- Mel'čuk, Igor. 1986. Toward a definition of case. In *Case in Slavic*, ed. Richard D. Brecht and James S. Levine, 35–85. Columbus, OH: Slavica.
- Miljan, Merilin, and Ronnie Cann. 2013. Rethinking case marking and case alternation in Estonian. *Nordic Journal of Linguistics* 36:333–379.
- Müller, Gereon. 2004. A distributed morphology approach to syncretism in Russian noun inflection. In *Proceedings of the 12th formal approaches to Slavic linguistics*, ed. Olga Arnaudova, Wayles Browne, Maria Luisa Rivero, and Danijela Stojanovic, 353–373. University of Ottawa.
- Mürk, Harri. 1991. *The structure and development of Estonian morphology*, volume 2. Indiana University.
- Nelson, Diane, and Ida Toivonen. 2000. Counting and the grammar: case and numerals in Inari Sami. *Leeds Working Papers in Linguistics* 8:179–192.
- Nemvalts, Peep. 1996. *Case Marking of Subject Phrases in Modern Standard Estonian*. Stock-

- holm: Almqvist & Wiksell International.
- Nevis, Joel. 1986. The comitative, terminative, abessive and essive as clitics in Estonian. *Ural-Altaische Jahrbücher* 7:79–98.
- Norris, Mark. 2014. A theory of nominal concord. Doctoral Dissertation, University of California, Santa Cruz.
- Pesetsky, David. 2013. *Russian Case Morphology and the Syntactic Categories*. Cambridge, MA: MIT Press.
- Rutkowski, Paweł. 2002. The syntax of quantifier phrases and the inherent vs. structural case distinction. *Linguistic Research* 7:43–74.
- Saareste, A. 1926. Akusatiivist meie grammatikais [On accusative in our grammars]. *Eesti Keel* 101–105.
- Selkirk, Elisabeth. 1977. Some remarks on noun phrase structure. In *Formal syntax*, ed. Peter W. Culicover, Thomas Wasow, and Adrian Akmajian, 285–316. New York: Academic press.
- Tamm, Anne. 2007. Perfectivity, telicity, and Estonian verbs. *Nordic Journal of Linguistics* 30:229–255.
- Tamm, Anne. 2011. Scalarity and dimensionality across categories: Estonian pseudopartitive constructions. *Linguistica Uralica* XLVII:22–40.

Mark Norris  
University of Oklahoma  
Modern Languages, Literatures, and Linguistics  
780 Van Vleet Oval  
Norman, OK 73019  
mark-norris@ou.edu  
<http://faculty-staff.ou.edu/N/Mark.J.Norris-1/index.html>