Dwarf cases in Estonian and elsewhere

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Jussi Ylikoski

University of Oulu &
Sámi University of Applied Sciences
Outline

1. Introduction

2. Background

3. “Dwarf cases” in Estonian and Finnish
   - Big data
   - Reasoning
   - Grammaticality judgements

4. Conclusions
Introduction
International Astronomical Union 2006:

- the first definition of “planet”
- Pluto no longer a planet, but a “dwarf planet”
“My talk will not be on planets or any other celestial objects, but instead, on morphological cases in Uralic languages.”
“I will especially focus on minor case-like phenomena that have been neglected in the descriptions of case systems of individual languages.”
“Understanding the reluctance of mainstream grammarians to augment traditional case paradigms with dubious new cases, I wish to introduce some of my findings as ‘dwarf cases’.”
“examples come from Estonian, Finnish and Saami languages, and arguments for their case-like status are mainly syntactic.”
No universal – or Uralic – definition of case

“Case is a system of marking dependent nouns for the type of relationship they bear to their heads. Traditionally the term refers to inflectional marking, and, typically, case marks the relationship of a noun to a verb at the clause level or of a noun to a preposition, postposition or another noun at the phrase level.” (Blake 1994: 1)
Background
The number of cases varies greatly across languages, in Estonian there are 14 cases.

(Eesti entsükloopeedia)
Kääne-te arv erine-b case-PL.GEN number vary-3sg

keeli-ti suure-sti.
language-DISTR great-ADV

Az eset-ek szám-a
DEF case-PL number-POSS.3SG

nyelv-enként nagymértékben változ-ik.
language-DISTR greatly vary-3sg
“adverb”:

erine-b keeli-ti suure-sti
vary-3SG language-DISTR great-ADV

“case” ~ “adverb”:

nyelv-enként nagymértékben változ-ik
language-DISTR greatly vary-3SG

‘varies greatly across languages’
“The Hungarian distributive is not a case.”

No adjectival modifiers:

*Kis ház-anként jutalm-at oszt-ott-ak.
small house-DISTR reward-ACC divide-PST-3PL

“Rewards were distributed small house by small house.” (Kiefer 1987: 97)
“The Hungarian distributive is not a case.”

No relative clauses:

*Ház-anként, amely..., house-DISTR REL

jutalm-at oszt-ott-ak.
reward-ACC divide-PST-3PL

“Rewards were distributed house by house which...” (Kiefer 1987: 97)
“The Hungarian distributive is not a case.”

- No adjectival modifiers
- No relative clauses
- No plurals
- No possessive suffixes
- Not all nominals, but nouns only
• Diachronic perspective: cases come and go

• Synchronic perspective: case–non-case continuum
• **Synchronic perspective:** case–non-case continuum

• e.g., “minor cases” in North Samoyed
  o some, but not all case-like features
  o Enets and Nenets essive-translatives (Siegl 2013, Jalava 2017)
  o Enets prolative (Siegl 2013)
• Synchronic perspective: case–non-case continuum

• attempts to promote and revitalize (hypothetically) ancient cases:
  o Estonian essive and instructive
  o Finnish prolatative
• Diachronic perspective:
cases come and go
North Saami -ráigge prolate

Ylikoski (2014, 2015):

ráigi ‘hole’ + gen.-acc. in prolateive compounds

uksaráigge
“through the door hole” > ‘through the door’

johkaráigge
“through the river hole” > ‘along the river’
North Saami -ráigge prolate

-ráigge ‘through (a hole)’ > -rái ‘through, along’

bálggesrái(ge) ‘along the path’
luoddarái(ge) ‘along the road’
Deatnorái(ge) ‘along the river Deatnu’
ráigerái(ge) ‘through the hole’
**North Saami -ráigge prolative**

-rái(gge) phrases as NPs:

<table>
<thead>
<tr>
<th>Case</th>
<th>Word 1</th>
<th>Word 2</th>
<th>Articulation</th>
<th>Explanatory</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOM</td>
<td>dat</td>
<td>boares</td>
<td>bálggis</td>
<td>man gávnnai</td>
</tr>
<tr>
<td>GEN</td>
<td>dan</td>
<td>boares</td>
<td>bálgá</td>
<td>man gávnnai</td>
</tr>
<tr>
<td>ILL</td>
<td>dan</td>
<td>boares</td>
<td>bálglái</td>
<td>man gávnnai</td>
</tr>
<tr>
<td>LOC</td>
<td>dan</td>
<td>boares</td>
<td>bálglás</td>
<td>man gávnnai</td>
</tr>
<tr>
<td>PROL</td>
<td>dan</td>
<td>boares</td>
<td>bálggesrái(gge)</td>
<td>man gávnnai</td>
</tr>
<tr>
<td>COM</td>
<td>dainna</td>
<td>boares</td>
<td>bálglain</td>
<td>man gávnnai</td>
</tr>
</tbody>
</table>
North Saami -ráigge prolative

- Quite infrequent
- No true plurals
- No possessive suffixes
- Not all nominals, but only nouns referring to concrete paths and routes

- “Dwarf case” = almost a case, but not really
Dwarf cases in Estonian (and Finnish)
• Can we find new cases in Finnic?
Can we find new cases in Finnic?

Traditional views (since early 19th century):

- Estonian: 14 cases
  - 10 + “last 4 cases” (+ “instructive”)

- Finnish: 15 cases
  - 12 + 3 “marginal cases” (+ “prolative”)
• Can we find new cases in Finnic?

• The implicit definition of the Finnic case:

**Morphology**
- productive and regular
- singular vs. plural
- (possessive suffixes)

**Syntax**
- modifiers of nouns
  - adjectives
  - genitives
  - pronouns
  - relative clauses
• Can we find new cases in Finnic?
  o Actually, in a way, yes we can.
“adverb”:

erine-b  keeli-ti  suure-sti
vary-3SG  language-DISTR  great-ADV

“case” ~ “adverb”:

nyelv-enként  nagymértékben  változ-ik
language-DISTR  greatly  vary-3SG
Could this be possible in Finnic?
Hypothesis:
There may be even more cases in Finnic.

Methods:
1) intuition
2) corpora
3) surveys

Results:
There are previously unnoticed “dwarf cases”.
Hypothesis:
There may be even more cases in Finnic.

Initial hypothesis:
Certain “adverbs” are very productive – could they have noun-like features?

Example: Estonian distributives in -ti

keeliti ‘by languages’, riigiti ‘by countries’, reedeti ‘on Fridays’, teemati ‘by themes’, ...
Big data

- *etTenTen*, 260M corpus of web texts
  [https://www.sketchengine.eu/ettenten-estonian-corpus/](https://www.sketchengine.eu/ettenten-estonian-corpus/)

- [http://www.keeleveeb.ee/](http://www.keeleveeb.ee/)

- ultimately the entire Internet (billions of words), hundreds of Google searches
• **hundreds if not thousands** of Estonian distributives in *-ti*, apparently **without any true limits**:

*riigiti* ‘by countries’, *reedeti* ‘on Fridays’,...

*emati* ‘by mothers’, *lapseti* ‘by children’,...

*kalati* ‘by fish’, *lihati* ‘by meat’,...

..., *horisonditi, hotelliti, konverentsiti, materjaliti, organisatsiooniti, persooniti, provintsiti, sektoriti, sessiooniti, varianditi*,...
• **hundreds** of Estonian distributive forms

• **hundreds of thousands** of occurrences include
  
  o hundreds of relative clauses
  o hundreds of genitive modifiers
  o dozens of adjective modifiers
  o dozens of pronominal determiners

(Apologies: I must skip most of the semantic issues.)
Relative clauses

leita seetõttu palju. Kobarpeavalud esinevad periooditi, mis võivad kesta 4-8 nädalat. Valu algab mõne minuti jooksul ning
Relative clauses

Kaheksa kuud peale seda, kui neli adventisti vallandati Bessarabka raudteejaamast, kuna nad ei olnud valmis töötama laupäeviti, mis on adventistide jaoks jumalateenistusepäevaks, kinnitas riigi apellatsioonikohus nii kohaliku kui ka regionaalse kohtu otsused.
Relative clauses

„Kui kohtate eksitust... siis proovige kas ei saa te seda kannatlikult keerata ja ringi põrata, nõnda, et valgus langeks headuse ja tõe tuumale, mis on tavaliselt olemas veledes arusaamus.“

Johannes Paulus I

litustel, seda talvisel ajal. Aga suviti, mis on ühtlasi ka minu lemmikaastaaeg, käin Rida- li Lennuklubis lendamas (asub Võru külje all). Avastasin selle
Relative clauses

Cluster headaches may last from 4 to 8 weeks.
Relative clauses

laupäevi-ti, mis on adventisti-de
Saturday-DISTR REL be.3PL Adventist-PL.GEN

jaoks jumalateenistusepäeva-ks
for day.of.worship-TRA

‘on Saturdays, which is the day of worship for Adventists’
Relative clauses

suvi-ti, mis on ühtlasi
summer-DISTR REL be.3SG at.the.same.time

ka minu lemmikaastaeg
also 1SG.GEN favorite.season

‘in the summer, which is also my favorite time of year’
Genitive modifiers

Kategooria-d on malli-de-l
category-PL be.3PL template-PL-ADE

riigi-ti ja ka Eesti
state-DISTR and also Estonia.GEN

maakonni-ti erineva-d.
county-DISTR different-PL

‘The categories in the templates differ by states and also by the counties of Estonia.’
Genitive modifiers

*Tul-gu või uputus, aga come-IMP.3SG even deluge but* 
*nädalavahetusteenommiku-tipea-vadweekend-PL.GENmorning-DISTRmust-3PL* 
*laual ole-mapankoogi-dmoosi-ga!table-ADBe-INFpancake-PLjam-COM* 

‘Let the deluge come, but there must be pancakes with jam on the table in the weekend mornings!’
Adjective (indeclinable) modifiers

VII Riigikogu stenogramm
III istungjärk
Teisipäev, 14. september 1993, kell 10:00

Isteeriumi enda analüüsi tulemusel on täna 50–60 pr.
Tallinnas on üürivõlglaste teatud paikkonniti üle 30%.
Mõnest üle Eesti maksujõuetuks? Kas siin ei ole mitte tegi?
Adjective (indeclinable) modifiers

Tallinna-s on üürivõlglas-i
Tallinn-INE be.3SG rent.debtor-PL.PART

teatud paikkonni-ti üle 30%.
certain location-DISTR over 30%

‘In Tallinn, in certain locations over 30% of the residents have rental debts.’
Adjective (indeclinable) modifiers

Alternate, other possibilities can be shown on the fields mentioned below.

‘Alternatively, experts can register their own interests by the fields mentioned below.’
Pronominal determiners

Eri riigi-ti on professori different country-DISTR be.3SG professor.GEN

nimetuse-l erinev tähendus.
title-ADE different meaning

‘The title of professor has different meanings from country to country.’
Summary: distributives in -\textit{ti} have

- relative clauses
- genitive modifiers
- adjective modifiers
- pronominal determiners (\textit{eri}, \textit{iga}, \textit{mingi}, \textit{oma})

- infrequent, but common in large corpora
- internal syntax of the noun phrase
- differs from other, true adverbs
The distributive in *-ti* is

- semantically plural (singular impossible)

- morphologically partly irregular
  - “singular”, e.g. *keele-ti* ‘by languages’, *teema-ti* ‘by themes’, *riigi-ti* ‘by countries’
  - “plural”, e.g. *keeli-ti* ‘by languages’

- syntactically noun-like
“Well, you can find anything on the Internet.”
“Well, you can find anything on the Internet.”

But some noun-like features are so common that it is not worth counting the hundreds or thousands of individual occurrences.
Analogues in Finnish
<table>
<thead>
<tr>
<th>Estonian</th>
<th>Finnish</th>
</tr>
</thead>
<tbody>
<tr>
<td>“distributive adverbs”</td>
<td>“distributive adverbs”</td>
</tr>
<tr>
<td>-(i)ttAin</td>
<td>-(i)ttAin</td>
</tr>
<tr>
<td>riigi-ti</td>
<td>ma-ittain</td>
</tr>
<tr>
<td>‘across states’</td>
<td></td>
</tr>
<tr>
<td>reede-ti</td>
<td>perjanta-isin</td>
</tr>
<tr>
<td>‘on Fridays’</td>
<td></td>
</tr>
</tbody>
</table>
Finnish temporals in **-isin** are less productive than **-ti**, but have similar noun-like syntax:

*laupäeviti, mis on adventistide jaoks jumalateenistusepäevaks*

*lauantaisin, joka on adventistien jumalanpalveluspäivä.*

‘on Saturdays, which is the day of worship for Adventists’
Finnish **temporals in** *-isin* are less productive than *-ti*, but have similar noun-like syntax:

*suviti, mis on minu lemmikaastaaeg kesäisin, joka on lempivuodenaikani*

‘in the summer, which is my favorite time of year’
Finnish **temporals in** *-isin* are less productive than *-ti*, but have similar noun-like syntax:

`nädalavahetus-te  hommiku-ti`
`viikonloppu-jen   aamu-isin`

weekend-PL.GEN   morning-DISTR

‘in the weekend mornings’
Finnish distributives in -(i)ttAin are as productive as -ti, and have analogous noun-like syntactic features.

- relative clauses
- genitive modifiers
- adjective modifiers
- pronominal determiners
Relative clauses

periodidit, mis võivad kesta 4–8 nädalat jaksoittain, jotka voivat kestää 4–8 viikkoa

‘in periods that may last from 4 to 8 weeks’
Genitive modifiers

erine-vad Eesti maakonni-ti
eroa-vat Viron maakunn-ittain
vary-3PL Estonia.GEN county-DISTR

‘vary by the counties of Estonia’
Adjective (indeclinable) modifiers

teatud       paikkonni-ti
 certain . NOM location- DISTR

tiety-in     alue-ittain
 certain- PL. INSTR location- DISTR

‘across certain locations’
Adjective (indeclinable) modifiers

allpool nimeta-tud valdkonni-ti.
below mentioned.NOM area-DISTR

alla mainitu-in alue-ittain
below mentioned-PL.INSTR area-DISTR

‘by the fields mentioned below’
Pronominal determiners

erinev tähendus eri riigi-ti
erilainen merkitys eri ma-ittain
different meaning different state-DISTR

‘different meanings from country to country.’
Reasoning

Finnic or other Uralic adverbs do, by definition, not have

- relative clauses
- genitive modifiers
- adjective modifiers
- pronominal determiners

Estonian and Finnish “distributives” simply are not plain adverbs.
The noun-like syntactic features of the Finnic “distributive(-temporal) dwarf cases” are all-new to science.

Why?
The noun-like syntactic features of the Finnic “distributive(-temporal) dwarf cases” are all-new to science.

Why?

“You can find anything on the Internet. Do people really accept these kind of sentences?”
Grammaticality judgements

A quick glance to very interesting surveys
Parallel questionnaires in Estonian and Finnish (spring 2019)

- 29 sentences
- evaluated by
  - 17 students of Estonian in Tartu
    (Aitäh Helle Metslangile ja Merit Müllerile!)
  - 39 students of Finnish in Oulu
    (Kiitos Eveliina Mäntylälle!)
Parallel questionnaires in Estonian and Finnish (spring 2019)

- work in progress
- open questions
Parallel questionnaires in Estonian and Finnish (spring 2019)

- Dwarf cases are accepted as dwarf cases.

- relative clauses
- genitive modifiers
- adjective modifiers
- pronominal determiners

- Acceptance correlates with frequency.
Relative clauses

<table>
<thead>
<tr>
<th>OK</th>
<th>?</th>
<th>??</th>
<th>*</th>
</tr>
</thead>
</table>

periooditi,
*mis võivad kesta 4–8 nädalat*

| 13 | 4 |

jaksoittain,
*jotka voivat kestää 4–8 viikkoa*

| 19 | 11 | 6 | 3 |

‘in periods that may last from 4 to 8 weeks’
## Genitive modifiers

<table>
<thead>
<tr>
<th></th>
<th>OK</th>
<th>?</th>
<th>??</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eesti maakonniti</td>
<td>13</td>
<td>4</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Suomen maakunnittain</td>
<td>19</td>
<td>14</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

‘by the counties of Estonia/Finland’
## Adjective modifiers

<table>
<thead>
<tr>
<th>OK</th>
<th>?</th>
<th>??</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### teatud teemavaldkonniti

- OK: 10
- ??: 6
- ?: 1
- *: –

### tietyin aihealueittain

- OK: 12
- ??: 5
- ?: 13
- *: 9

‘by certain thematic areas’
Pronominal determiners

<table>
<thead>
<tr>
<th>OK</th>
<th>?</th>
<th>??</th>
<th>*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>9</td>
<td>4</td>
</tr>
</tbody>
</table>

*eri sorditi* *ja eri paikades*

‘(vary) by different species in different places’
In a nutshell:

• The previously unnoticed noun-like features of the dwarf cases are mostly accepted by native speakers.

• To be fair, certain noun-like features of the Finnish distributive have been first briefly speculated by Jukka-Pekka Hammari (1993, 2006).
In a nutshell:

• The previously unnoticed noun-like features of the dwarf cases are mostly accepted by native speakers.

Why “previously unnoticed”?

How is it possible to find “new cases” in Estonian and Finnish?
Why?

- Hundreds of noun-like distributives can be found among billions of words.
  - Impossible for Hammari in 1993.

- Like dwarf planets, “dwarf cases” may have existed for ages, but simply have not been visible before modern telescopes?
Why distributives?

• -(i)ti and -(i)ttain are clearly cognates:

\[
\begin{align*}
teatud \ küla-\text{i} & \quad \text{eri} \ küla-\text{i} \\
tietyin \ kyli-\text{ttäin} & \quad \text{eri} \ kyli-\text{ttäin}
\end{align*}
\]

‘by certain villages’ \quad ‘by different villages’

• “Distributive case” even in Proto-Finnic?
• How about elsewhere in Finnic?
Why distributives?

- The instructive in Estonian and the prolative in Finnish have been propagated as cases – with meager results.

- What if Johannes Aavik and Elias Lönnrot had propagated the distributives instead?

- The distributives have gained much more case-like features, without anyone noticing.
Why distributives?

- Finnic has so many cases that no-one notices when adverbs have noun-like properties and infiltrate the paradigm?

- Estonian NP fits better for infiltrators:
  - no possessive suffixes
  - non-agreeing modifiers and determiners
Two more things
“Case is a system of marking dependent nouns for the type of relationship they bear to their heads. Traditionally the term refers to inflectional marking, and, typically, case marks the relationship of a noun to a verb at the clause level or of a noun to a preposition, postposition or another noun at the phrase level.” (Blake 1994: 1)
• The distributives are also case-like in being **governed** by a number of verbs:
  o ‘differ’: *erinema*, *varieeruma*; *vaihdella*
  o ‘divide’ etc.: *jagama*, *jaotama*, *jagunema*; *jakaa*, *jakautua*, *jakaantua*
  o ‘sort’: *sorteerima*; *lajitella*
  o With these verbs, virtually **all nouns can be inflected in the distributive.**
Another thing:
Estonian distributive at its most extreme

• Occasional -de/-te plurals

\[ riigi-ti \sim riiki-de-ti \quad \text{[country-PL-DISTR]} \]

• Occasional genitival agreement

\[ eri \sim erineva-te \quad riigi-ti \]
\[ \text{different} \quad \text{different-PL.GEN country-DISTR} \]
\[ \text{‘across different countries’} \]
KUIDAS KOHVI OSTES MITTE IDIOOT OLLA?

8) KUI SA TELLID AMERICANO...
... siis esiteks Americano on erinevate kohvikutetist erinev
Sole example, but all the more fascinating:

Americano on
Americano be.3sg

erineva-te kohviku-te-ti erinev
different-PL.GEN café-PL-DISTR different

‘Americano varies across different cafés’
“Viimased viis käänet”

terminative  erineva-te  kohviku-te-ni

essive  erineva-te  kohviku-te-na

abessive  erineva-te  kohviku-te-ta

comitative  erineva-te  kohviku-te-ga

distributive  erineva-te  kohviku-te-ti

different-PL GEN  café-PL-DISTR
Conclusions
SOOME TEADLANE LEIDIS
EESTI KEELEST
UUE KÄÄNDE
• The case-like nature of the Estonian and Finnish “dwarf cases” has not been noticed earlier, because they have been regarded as adverbs.

• The only true reasons to regard the Estonian and Finnish distributive “adverbs” as “dwarf cases” are syntactic.
• In Uralic (and especially Finnic) syntax,
  o we have lots of cases,
  o **cases are important** and interesting,
  o **adverbs are not** important or interesting,
  o ergo adverbs are left unstudied,
  o and we may end up missing something really important – cases.
• Observations like these are made possible by billion-word corpora.

• If new corpora are able to unveil previously unnoticed case-like phenomena in Estonian, Finnish and even Proto-Finnic, how much could such corpora contribute to minor Uralic languages?
Final words about “dwarf cases”
Final words about “dwarf cases”

- The case-like features of the Estonian and Finnish dwarf cases are rare and unusual.

- The concept of “dwarf case” is an attempt to avoid the total denial of “previously unknown cases” in well-known languages.
Final words about “dwarf cases”

- Even Estonian and Finnish change and can provide surprises.

- It would not be utterly wrong to add the new “dwarf cases” in the case paradigms.
  
  - At least they ought to be mentioned when the Estonian instructive or the Finnish prolative are mentioned.
Final words about “dwarf cases”

- At any rate, highly marginal phenomena such as “dwarf cases” force us to define or question basic concepts such as case.
Final words about “dwarf cases”

• The limits and borders of grammar cannot be found without exploring the final frontiers.
Aitäh!
Kiitos!
Thank you!
References