

# **Dwarf cases in Estonian and elsewhere**

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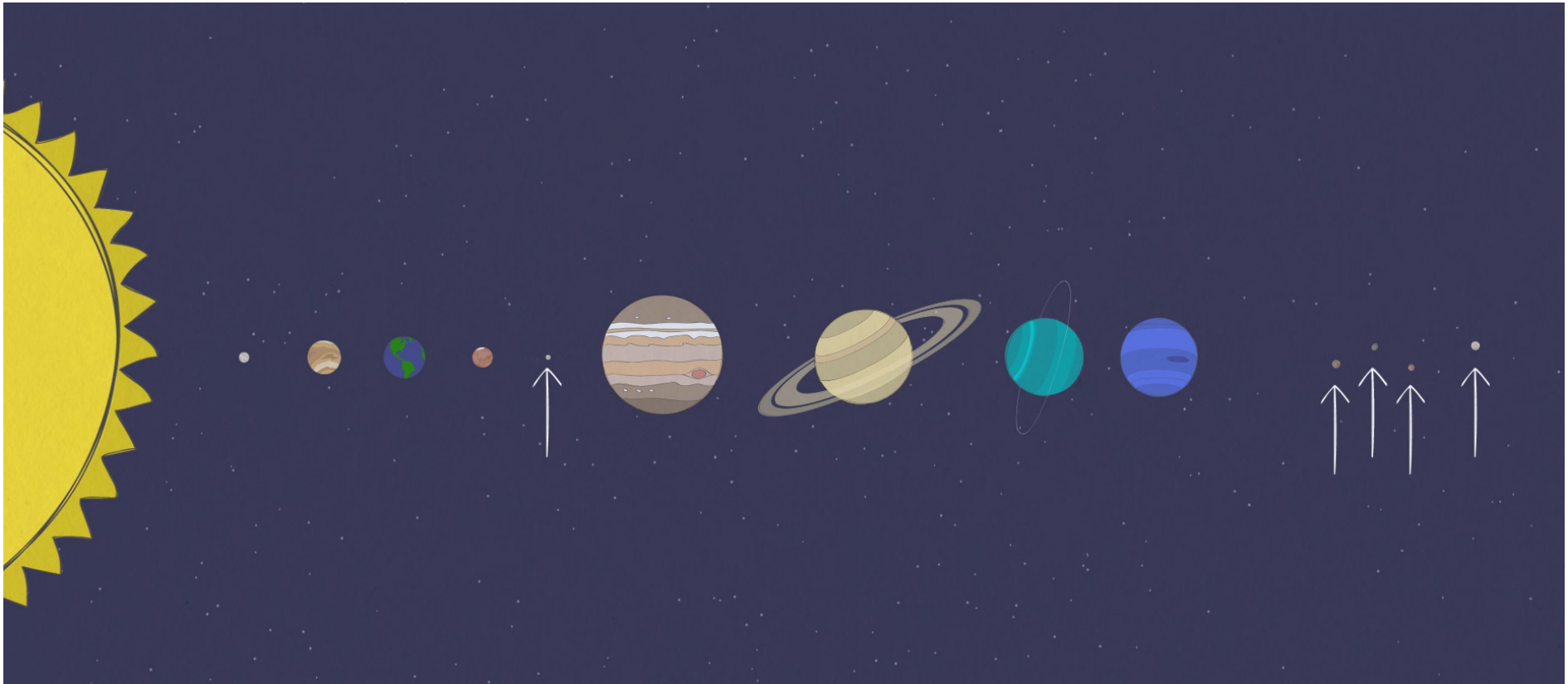
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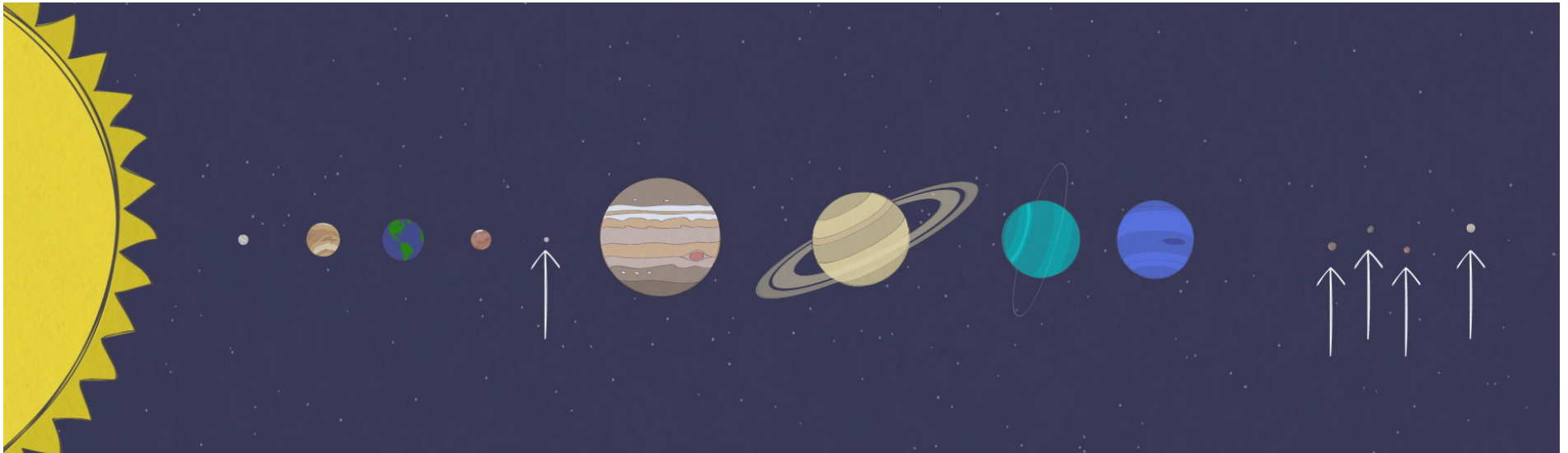
# Introduction

## International Astronomical Union 2006:

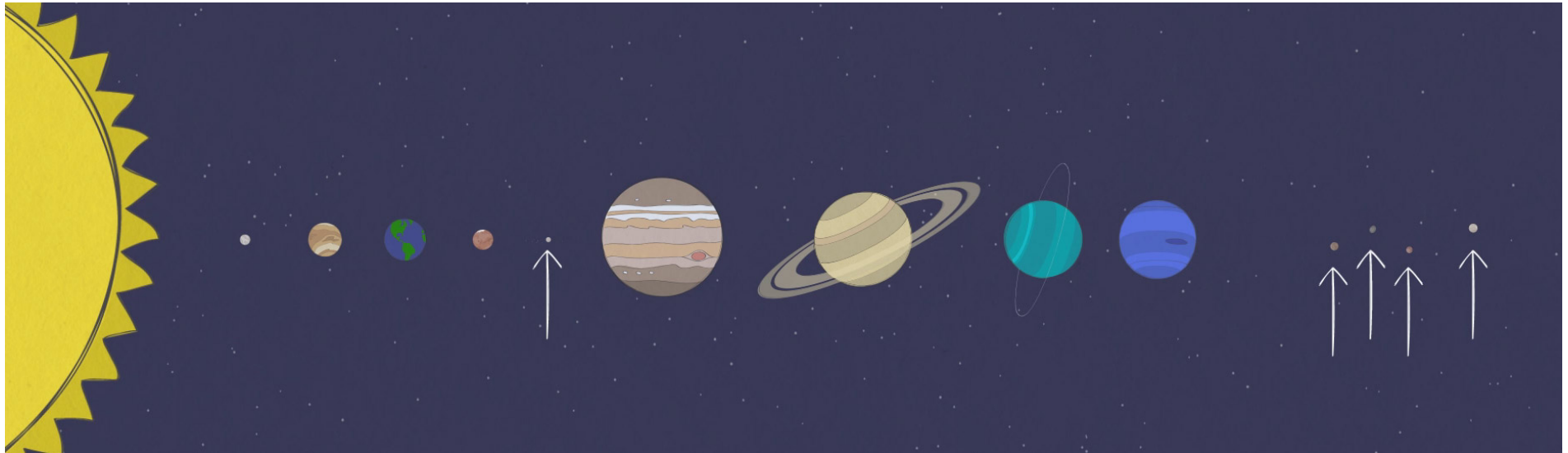
- the first definition of “planet”
- Pluto no longer a planet, but a “dwarf planet”



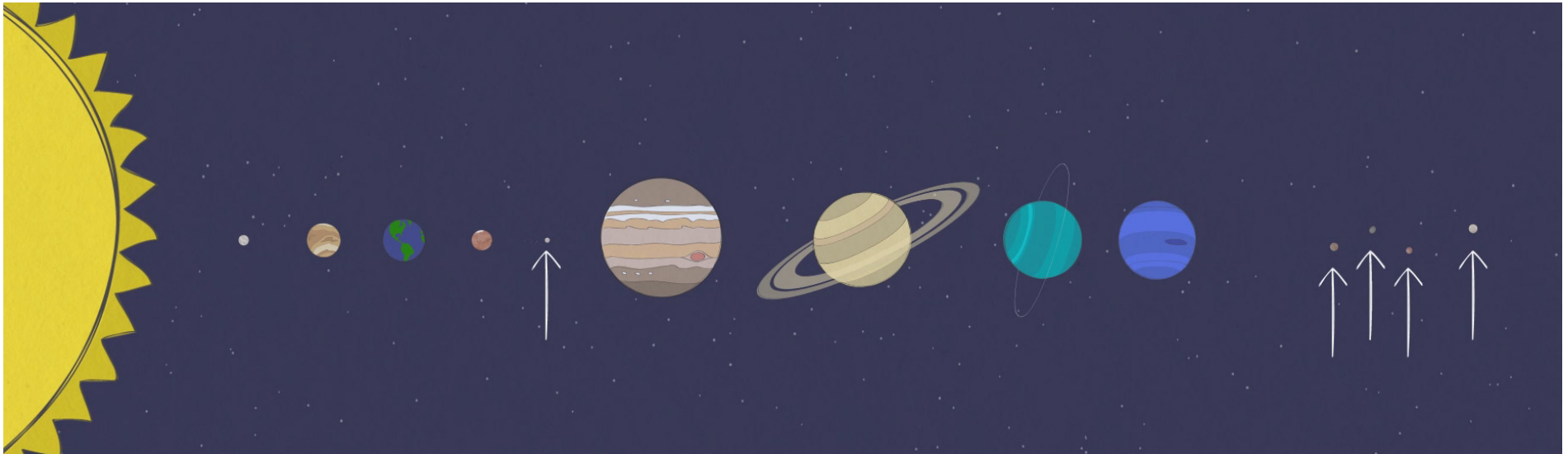
“My talk will not be on planets or any other celestial objects, but instead, on morphological cases in Uralic languages.”



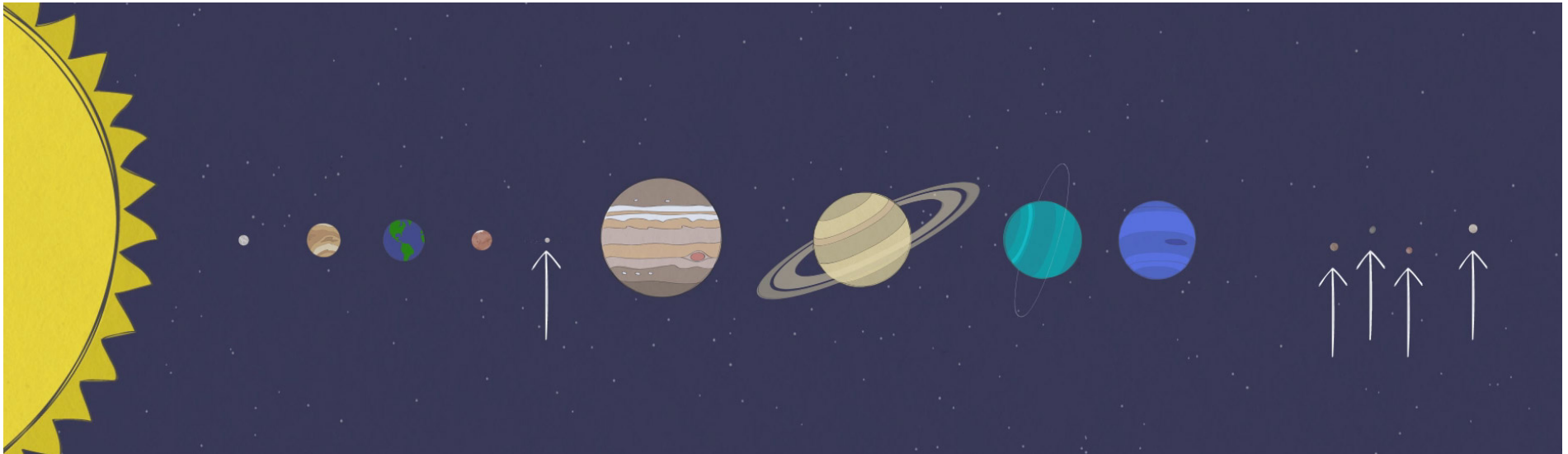
“I will especially focus on **minor case-like phenomena that have been neglected** in the descriptions of case systems of individual languages.”



**“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

*Kääne-te arv erine-b*  
 case-PL.GEN number vary-3SG

*keeli-ti suure-sti,*  
 language-DISTR great-ADV

*eesti keele-s on 14 kääne-t.*  
 Estonian language-INE be.3SG 14 case-PART

‘The number of cases varies greatly across languages, in Estonian there are 14 cases.’

*(Eesti entsüklopeedia)*

*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
  - some, but not all case-like features
  - Enets and Nenets essive-translatives (Siegl 2013, Jalava 2017)
  - Enets prolatives (Siegl 2013)

- **Synchronic perspective:**  
case–non-case continuum
- attempts to promote and revitalize  
(hypothetically) ancient cases:
  - Estonian essive and instructive
  - Finnish prolativ

- **Diachronic perspective:**  
cases come and go

## North Saami *-ráigge* prolative

Ylikoski (2014, 2015):

*ráigi* ‘hole’ + gen.-acc. in prolative compounds

*uksaráigge*

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

*johkaráigge*

“through the river hole” > ‘along the river’

## North Saami *-ráigge* prolativ

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

*bálggesrái(gge)* ‘along the path’

*luoddarái(gge)* ‘along the road’

*Deatnorái(gge)* ‘along the river Deatnu’

*ráigerái(gge)* ‘through the hole’

# North Saami *-ráigge* prolative

*-rái(gge)* phrases as NPs:

NOM	<i>dat</i>	<i>boares bálggis</i>	<i>man</i>	<i>gávnnai</i>
	that	new path	REL.ACC	find.PST.3SG
	'that/the old path which s/he found'			
GEN	<i>dan</i>	<i>boares bálgá</i>	<i>man</i>	<i>gávnnai</i>
ILL	<b><i>dan</i></b>	<i>boares bálgái</i>	<i>man</i>	<i>gávnnai</i>
LOC	<b><i>dan</i></b>	<i>boares bálgás</i>	<i>man</i>	<i>gávnnai</i>
PROL	<b><i>dan</i></b>	<i>boares bálggesrái(gge)</i>	<i>man</i>	<i>gávnnai</i>
COM	<i>dainna</i>	<i>boares bálgáin</i>	<i>man</i>	<i>gávnnai</i>

## 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?**
  - Actually, in a way, yes we can.

“adverb”:

<i>erine-b</i>	<i>keeli-ti</i>	<i>suure-sti</i>
vary-3SG	language-DISTR	great-ADV

“case” ~ “adverb”:

<i>nyelv-enként</i>	<i>nagymértékben</i>	<i>változ-ik</i>
language-DISTR	greatly	vary-3SG

**\*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)

**\*Ház-anként, amely..., jutalm-at oszt-ott-ak.**

house-DISTR REL reward-ACC divide-PST-3PL

“Rewards were distributed house by house which...”  
(Kiefer 1987: 97)

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/>
- <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*,  
*provintsiiti*, *sektoriti*, *sessiooniti*, *varianditi*,...

- **hundreds** of Estonian distributive forms
  
- **hundreds of thousands** of occurrences include
  - hundreds of relative clauses
  - hundreds of genitive modifiers
  - dozens of adjective modifiers
  - dozens of pronominal determiners

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

# Relative clauses

Virtuaalkliinik  
Usaldusväärne ja teaduspõhine

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

# Relative clauses



SEITSMENDA PÄEVA ADVENTISTIDE KOGUDUS

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 pöörata, nõnda, et valgus langeks headuse ja tõe tuumale, mis on tavaliselt olemas valedes arusaamades.”

Johannes Paulus I

# VALGUS

NR. 1 (91) VEEBRUAR 2014

ORAVA VALLA LEHT

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

*Kobarpeavalu-d esine-vad perioodi-ti,*  
 cluster.headaches-PL occur-3PL period-DISTR

*mis või-vad kesta 4-8 nädala-t.*  
 REL.PL may-3PL last-INF 4-8 week-PART

‘Cluster headaches occur in periods that 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

***nädalavahetus-te***    ***hommiku-ti***    *pea-vad*  
 weekend-PL.GEN        morning-DISTR    must-3PL

*laual*                    *ole-ma*    *pannkoogi-d*    *moosi-ga!*  
 table-ADE    be-INF        pancake-PL    jam-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 üürivõlglasi **teatud paikkonniti** üle 30%.  
est üle Eesti maksujõuetuks? Kas siin ei ole mitte teg

## 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

*Teise võimaluse-na või-vad*

other.GEN possibility-ESS can-3PL

*eksperdi-d üles näida-ta oma huvi*

expert-PL up show-INF own interest.GEN

***allpool nimeta-tud valdkonni-ti.***

below mention-PASS.PST.PTCP area-DISTR

‘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 *-ti* have

- **relative clauses**
- **genitive modifiers**
- adjective modifiers
- pronominal determiners (*eri, iga, mingi, 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**

Estonian

“distributive  
adverbs”

*-ti*

*riigi-ti*

‘across states’

*reede-ti*

‘on Fridays’

Finnish

“distributive + “temporal  
adverbs”

*-(i)ttAin*

*ma-ittain*

*-isin*

*perjanta-isin*

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 lemmikaastaag  
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

*perioditi, 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*

**certain.NOM**

*paikkonni-ti*

**location-DISTR**

*tiety-in*

**certain-PL.INSTR**

*alue-ittain*

**location-DISTR**

‘across certain locations’

## Adjective (indeclinable) modifiers

*allpool nimeta-tud*

below mentioned.NOM

*valdkonni-ti.*

area-DISTR

*alla mainitu-in*

below mentioned-PL.INSTR

*alue-ittain*

area-DISTR

‘by the fields mentioned below’

## Pronominal determiners

<i>erinev</i>	<i>tähendus</i>	<b><i>eri</i></b>	<b><i>riigi-ti</i></b>
<i>erilainen</i>	<i>merkitys</i>	<b><i>eri</i></b>	<b><i>ma-ittain</i></b>
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

	OK	?	??	*
<i>periooditi, mis võivad kesta 4–8 nädalat</i>	13	4	–	–
<i>jaksoittain, jotka voivat kestää 4–8 viikkoa</i>	19	11	6	3

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

# Genitive modifiers

	OK	?	??	*
<i>Eesti maakonniti</i>	13	4	–	–
<i>Suomen maakunnittain</i>	19	14	4	2

‘by the counties of Estonia/Finland’



# Adjective modifiers

	OK	?	??	*
<i>teatud teemavaldkonniti</i>	10	6	1	—
<i>tietyin aihealueittain</i>	12	5	13	9

‘by certain thematic areas’

# Pronominal determiners

	OK	?	??	*
<i>eri sorditi ja eri paikades</i>	10	4	2	1
<i>eri lajeittain ja eri paikoissa</i>	25	9	4	1

‘(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:

*teatud küla-ti*

*eri küla-ti*

*tietyin kyli-ttäin*

*eri kyli-ttäin*

‘by certain villages’

‘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:
  - ‘differ’: *erinema, varieeruma; vaihdella*
  - ‘divide’ etc.: *jagama, jaotama, jagunema;*  
*jakaa, jakautua, jakaantua*
  - ‘sort’: *sorteerima; lajitella*
  - 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* ~ *riiki-de-ti* [country-PL-DISTR]

- Occasional genitival agreement

*eri* ~ *erineva-te* *riigi-ti*

different different-PL.GEN country-DISTR

‘across different countries’

2/04/2018

## KUIDAS KOHVI OSTES MITTE IDIOOT OLLA?



### **8) KUI SA TELLID AMERICANO...**

... siis esiteks Americano on erinevate kohvikuteti 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 käännet”

terminative	<i>erineva-te</i>	<i>kohviku-te-ni</i>
essive	<i>erineva-te</i>	<i>kohviku-te-na</i>
abessive	<i>erineva-te</i>	<i>kohviku-te-ta</i>
comitative	<i>erineva-te</i>	<i>kohviku-te-ga</i>
distributive	<i>erineva-te</i>	<i>kohviku-te-ti</i>
	different-PL.GEN	café-PL-DISTR

# Conclusions



SOOME TEADLANE LEIDIS

EESTI KEELEST

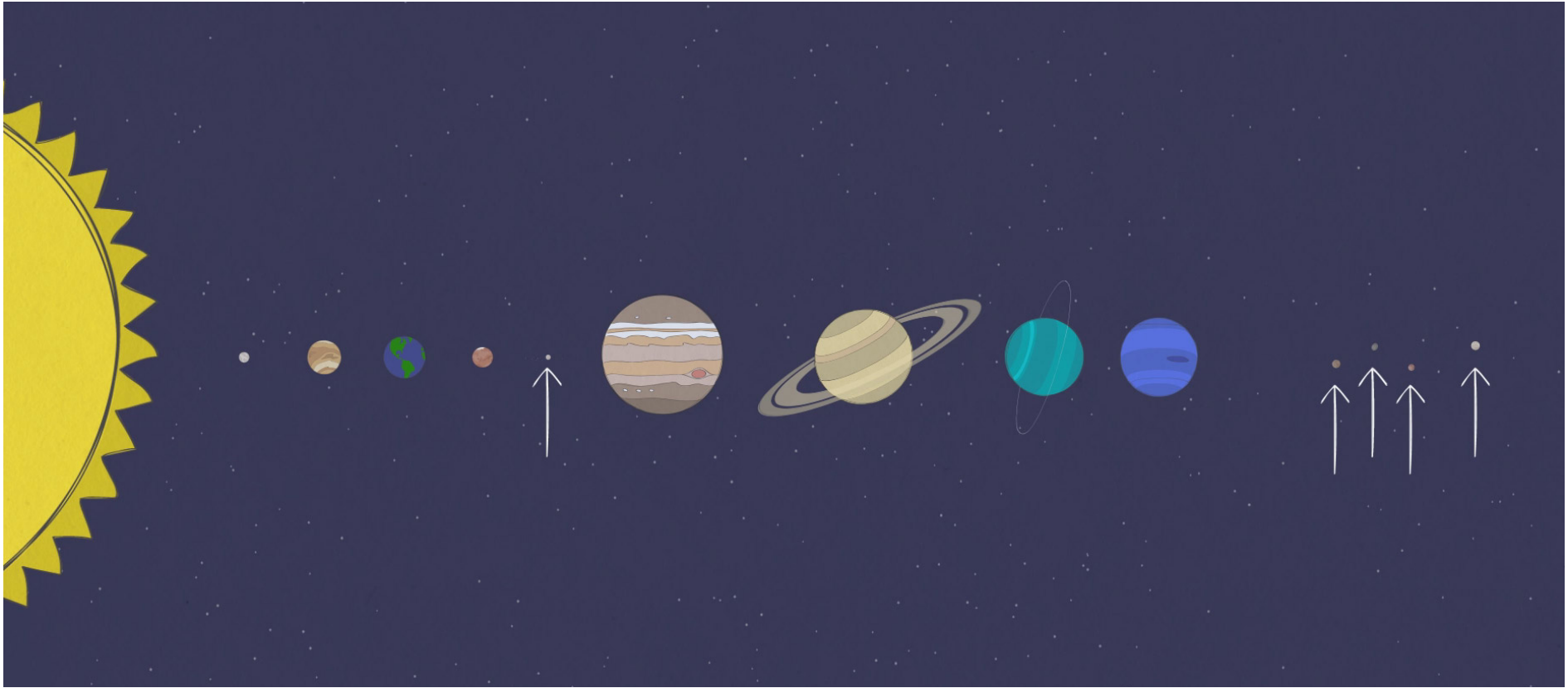
...  
UUE KÄÄNDE

- 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,
  - we have lots of cases,
  - **cases are important** and interesting,
  - **adverbs are not** important or interesting,
  - ergo adverbs are left unstudied,
  - 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 prolativ are mentioned.

## Final words about “dwarf cases”

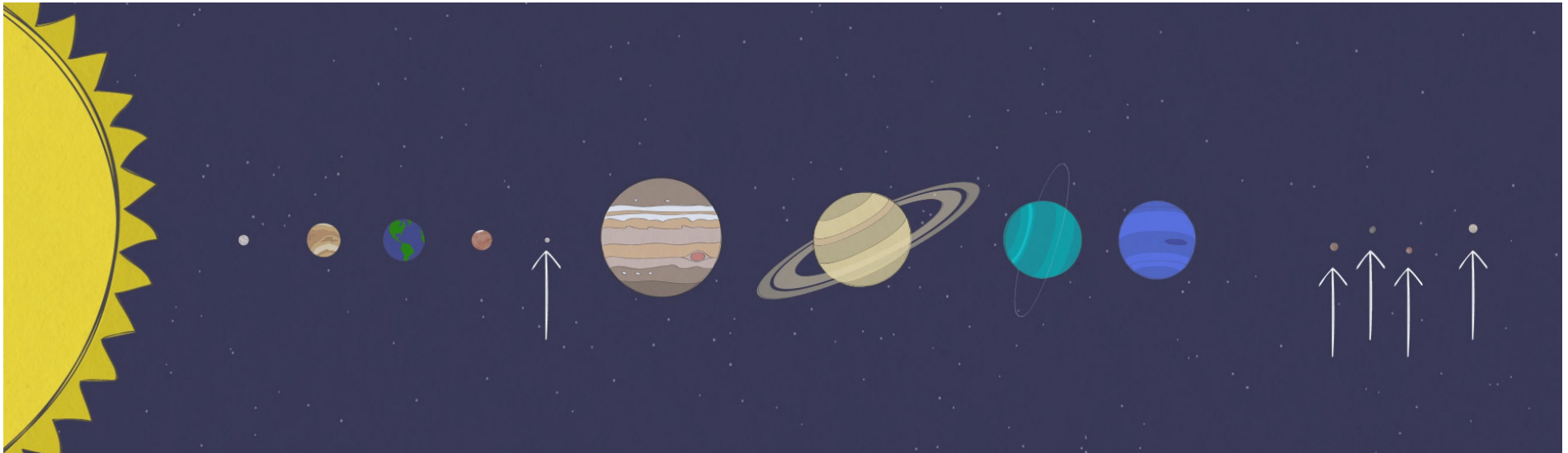
- At any rate, highly marginal phenomena such as “dwarf cases” force us to define or question basic concepts such as case.



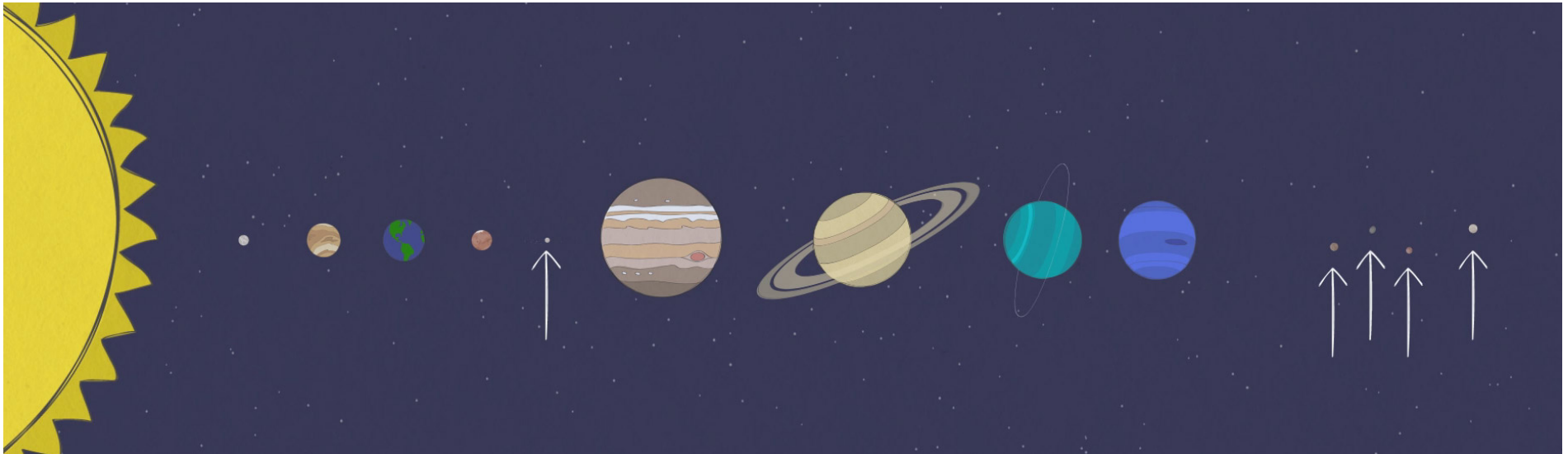


# Final words about “dwarf cases”

- The limits and borders of grammar cannot be found without exploring the final frontiers.



Aitäh!  
Kiitos!  
Thank you!



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