

# Post-Syntactic Operations and Morpheme Order in Georgian Derived Nominals

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# Background

- The goals of the paper are:

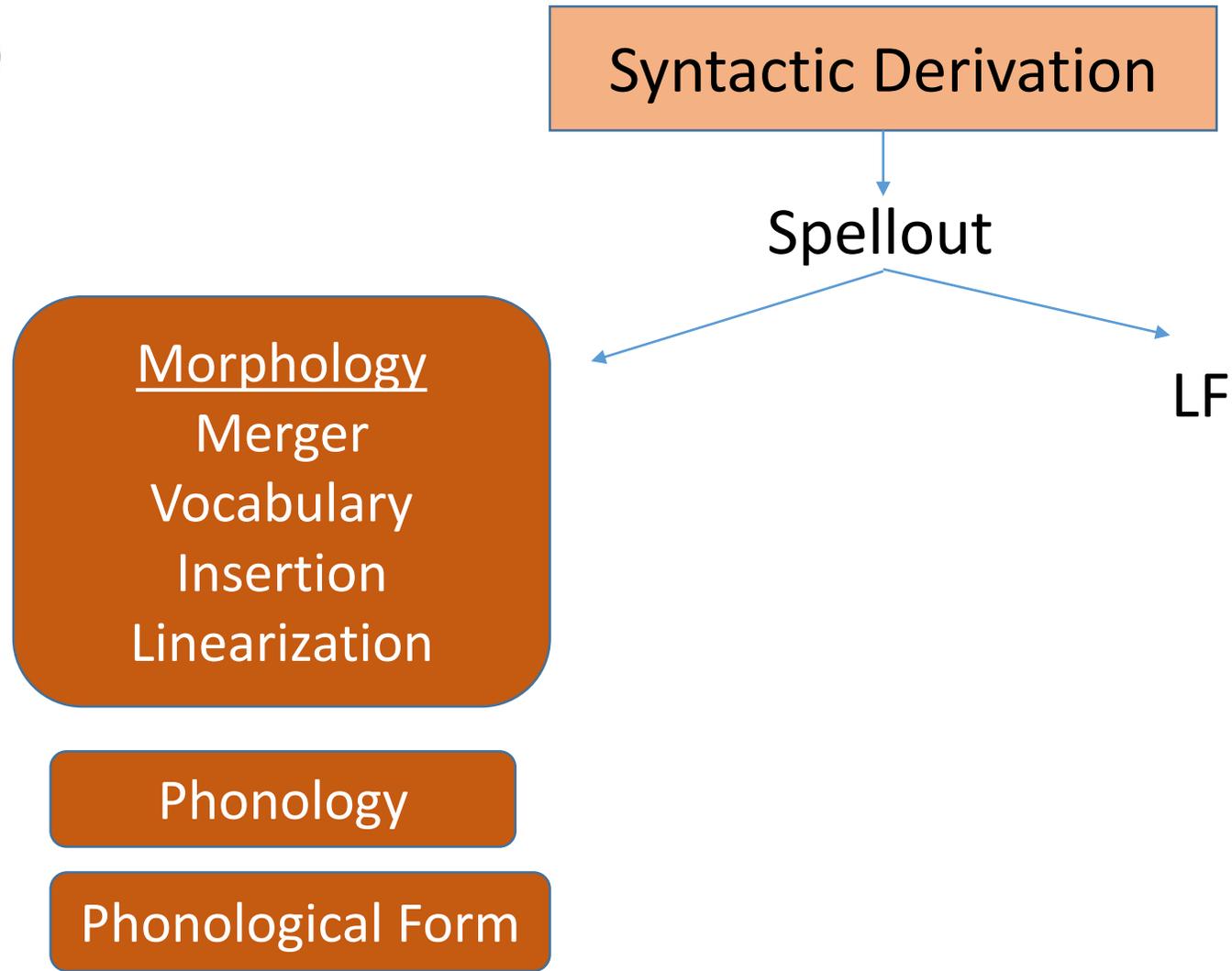
(1)a. to clarify syntactic and post-syntactic processes that are responsible for the morpheme order of multi-morphemic nominals with a substantial functional layer of verbal expressions;

b. Explain the Distributed Morphology (DM, Halle and Marantz 1993, 1994) approach to post-syntactic processes such as Fusion and Merger Under Adjacency (MUA) that are involved in the derivation of the morpheme order in these nominals.

c. Explain how morpheme-specific information whether it will be prefix or suffix interacts with head-to-head (HtH) movement and other post-syntactic processes in the formation of the final shape of complex nominals.

# Distributed Morphology Framework

(2)

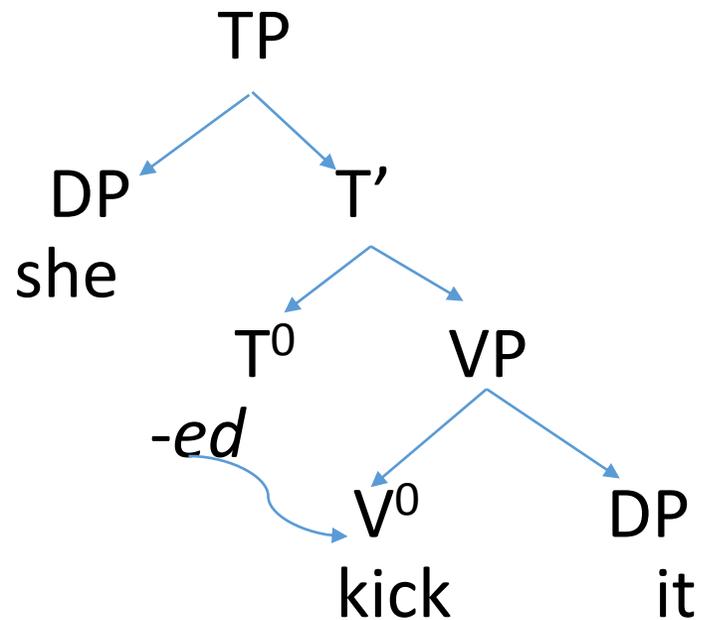


# Architecture of Grammar in DM

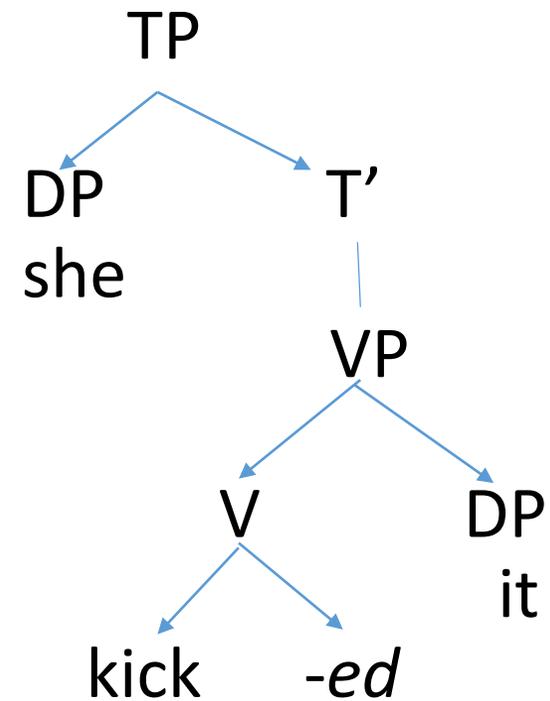
- The input to syntactic derivation is the ordering of non-hierarchical features whose values are computed in syntax;
- *Head-to-head movement* (HtH, Travis 1986, Chomsky 1965) assembles complex words following the lexical properties of heads to be merged as either prefix or suffix.
- *MUA* or *post-syntactic lowering* applies to linearly adjacent nodes adjoining the higher node to the lower one under a single category node as in English Past Tense inflection shown in the following:

# Merger Under Adjacency (MUA)

(3)a. before MUA



b. after MUA



# Empirical Base of Temporal Nominals

(4)a. Past

mo-xn-ul-i

Asp-plough-Nom-nom\*

‘ploughed land’

b. Future

mo-sa-xn-av-i

Asp-Fut/Nom-plough-TH-nom

‘land that needs ploughing’

(5)a. Present

mo-mav-al-i

Asp-come-Nom-nom

‘coming person’

b. Future

mo-sa-svl-el-i

Asp-Fut/Nom-come-Nom-nom

‘one who will come’

\**Nom* stands for the nominalizer marker, and *nom* for the nominative case.

# More Data and Interpretation

c. mo-s-ul-i

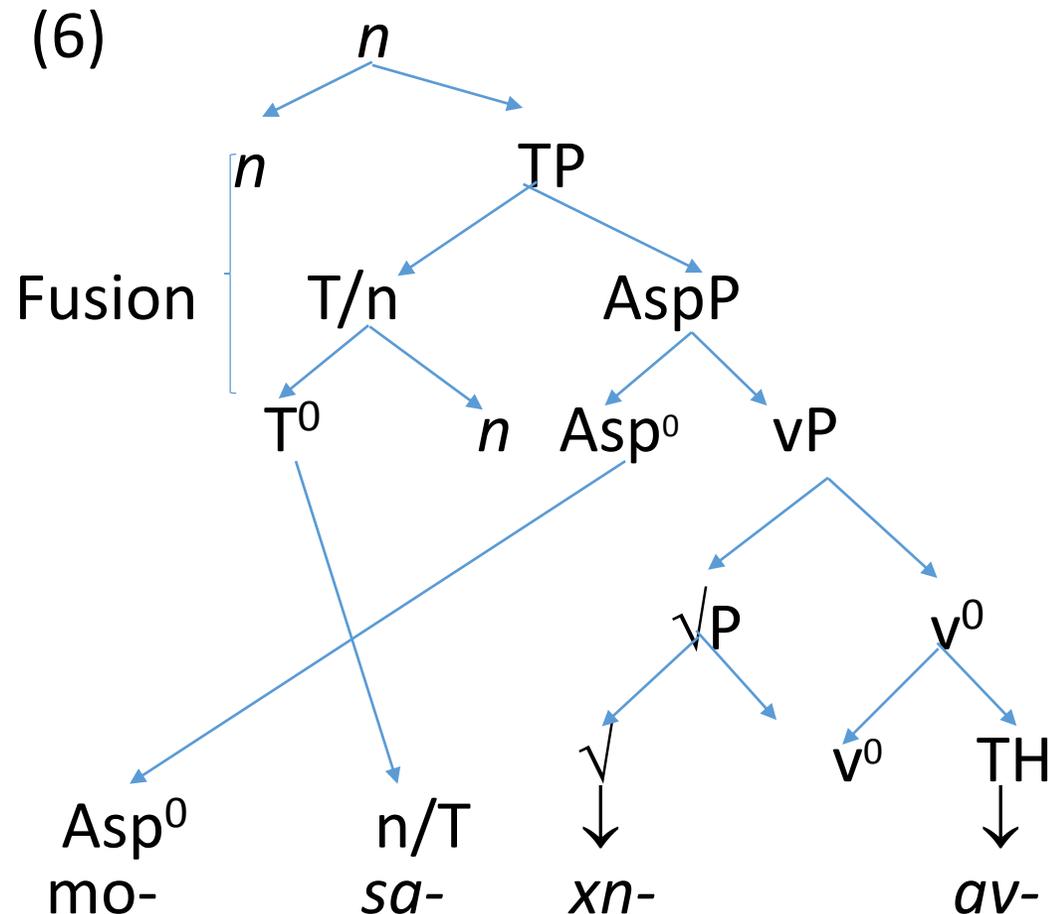
Asp-come-Nom/Pass-nom

'One who came'

These nominals are derived through HtH movement and the only instance of the Mirror Principle (Baker 1985) violation is apparent where the aspectual morpheme is linearized before the fused Tense/n morpheme in the pre-base position as shown in (4b)-(5b).

Q: How is this order derived both in syntax and post-syntactic component?

# Derivation of Temporal Nominals



⇒ First, HtH movement applies to the Root node merging it with the verbalizer head  $v^0$  which is added the TH head realized as [eb] to satisfy some well-formedness condition.

⇒ HtH movement continues from  $v$  to Asp and further to the T head.

⇒ Fusion applies to T and  $n$  nodes in post-syntactic component and only one morpheme will be inserted in the fused T/ $n$  head: [sa].

⇒ The last step will be MUA between T/ $n$  and Asp resulting in the Asp- $n/T$  order.

# Why MUA and Fusion?

- MUA in temporal nominals is due to morpheme-specific information to be projected either as prefix or suffix with respect to Root or even with respect to another morpheme.
- In Georgian, the aspectual morpheme is always at the very beginning of both verb and nominal words since it is specified as a prefix with respect to all other morphemes and Roots included.
- This is why MUA is needed to derive the word-initial position of the aspectual marker.

# Empirical Base of Pretend-state Nominals

Another group of nouns necessitating MUA at PF branch of grammar is the following:

(7)a. tav-mo-m-k'vdar-**un**-eb-ul-i

self-Asp-Nom-dead-Nom-**Pretend**-TH-Nom/Voice-nom

'someone pretending to be dead'

b. tav-mo-m-dzin-ar-eb-ul-i

self-Asp-Nom-sleep-Adj-TH-Nom-nom

'someone pretending to be asleep'

c. tav-mo-k'at'-**un**-eb-ul-i

self-Asp-Nom-cat-**pretend**-TH-Nom-nom

'someone pretending to be like a cat'

# More Empirical Base

d. tav-mo-gizh-ian-eb-ul-i

self-Asp-crazy-Adj-TH-Nom-nom

‘someone pretending to be crazy’

e. tav-mo-sac’q’l-eb-ul-i

self-Asp-poor-TH-Nom-nom

‘someone pretending to be poor/wretched’

f. tav-mo-nayvl-ian-eb-ul-i

self-Nom-sad-Adj-TH-Nom-nom

‘someone pretending to be sad’

# Phrasal Domains in Derivation

- There are multiple domains identified in the derivation of these complex expressions:
  - (8)a. The Reflexive head *tavi* ‘self’ realized at the beginning of these nominals and presumably it is realizing some XP merging at the end of the derivation which we ignore in this paper.
  - b. The first is the inner nominalizer domain which includes the acategorical Root along with the inner category-defining head of adjectival, nominal or of similar nature;
  - c. The next domain is the Small Clause consisting of the PretendP and the complex nominalizer head.

# More Phrasal Domains

d. The third domain is the verbal inflectional one which includes the vP which is added the thematic marker *-eb*, the Aspectual and Tense heads realized as the prefix *mo-* and the suffix *-ul* respectively.

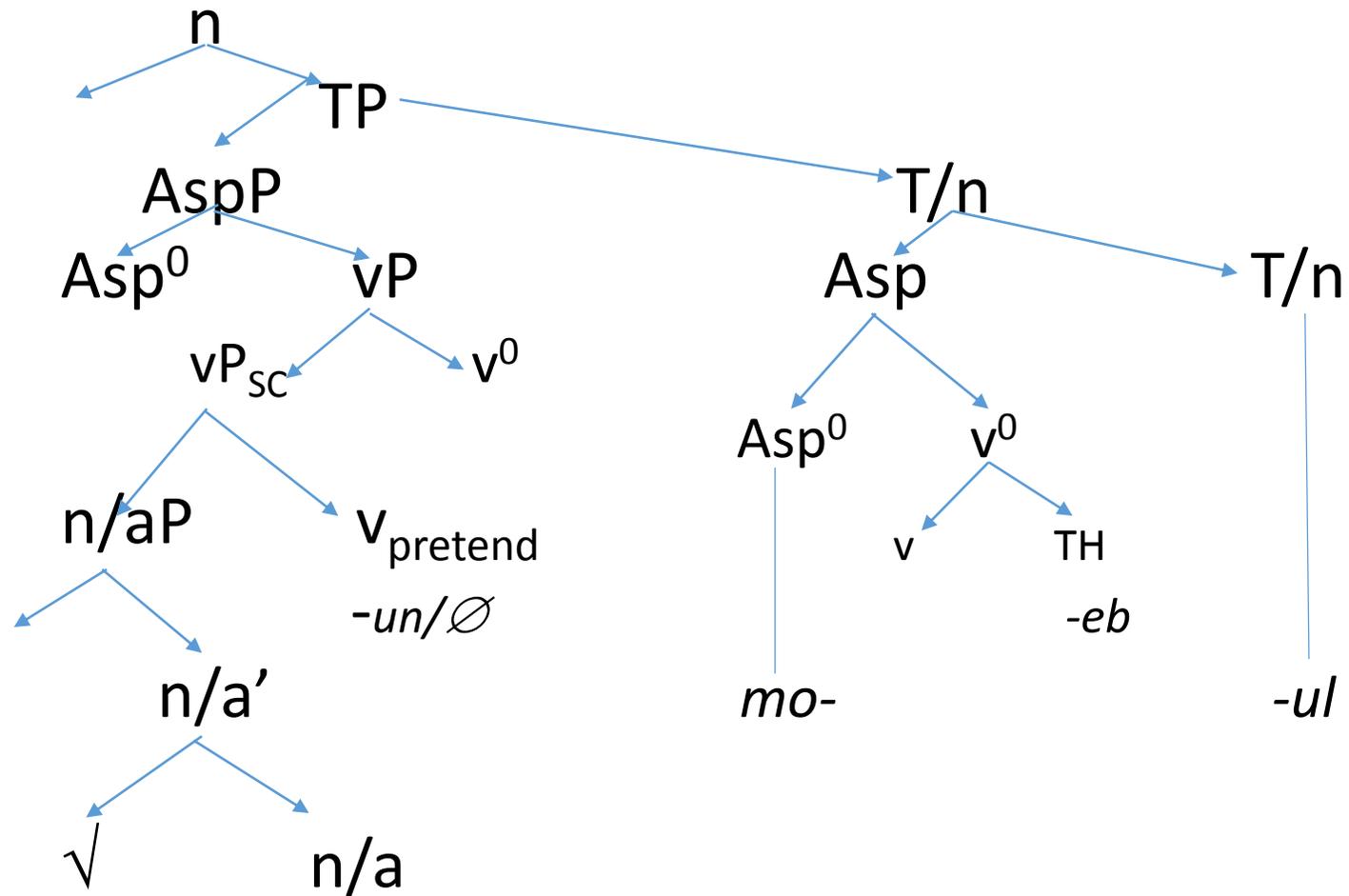
e. The last domain is the outer nominalizer one which ensures that the structure will be a nominal rather than a verb.

⇒ HtH movement proceeds from the Root up to the small clause boundary and then from the Pretend<sup>0</sup> to the n head.

⇒ MUA is an only option to derive the morpheme order in these nominals as shown in (8):

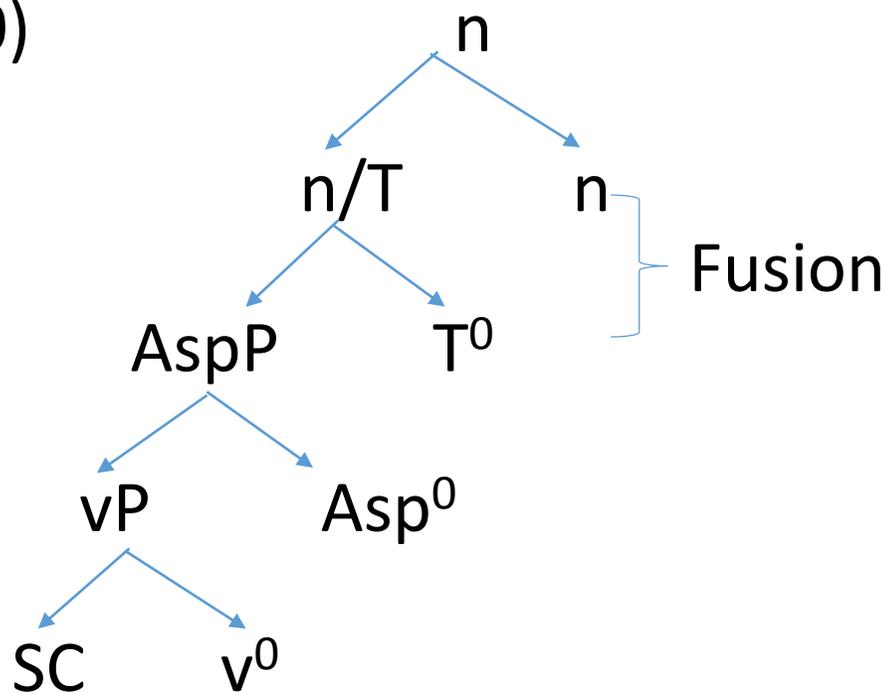
# Step 1: Derivation (HtH Movement)

(9)



## Step 2: Fusion of $n$ and $Tense^0$

(10)



a. HtH movement assembles the following nodes:

√ Root to  $n/a$  head and then to Pretend head creating a Small Clause and ends there.

b. Next step of HtH movement is the  $v^0$  head moves to  $Asp^0$  and then to  $T^0$  creating a complex node under the  $T^0$ .

c. At PF, Fusion applies to  $T^0$  and  $n$  and only one morpheme is inserted into the Fused node.

# Fusion and MUA

(11) Tense

[±Past]

*-ul*



[-active, +N]

*-ul/-il*

*n*

[±N]

∅

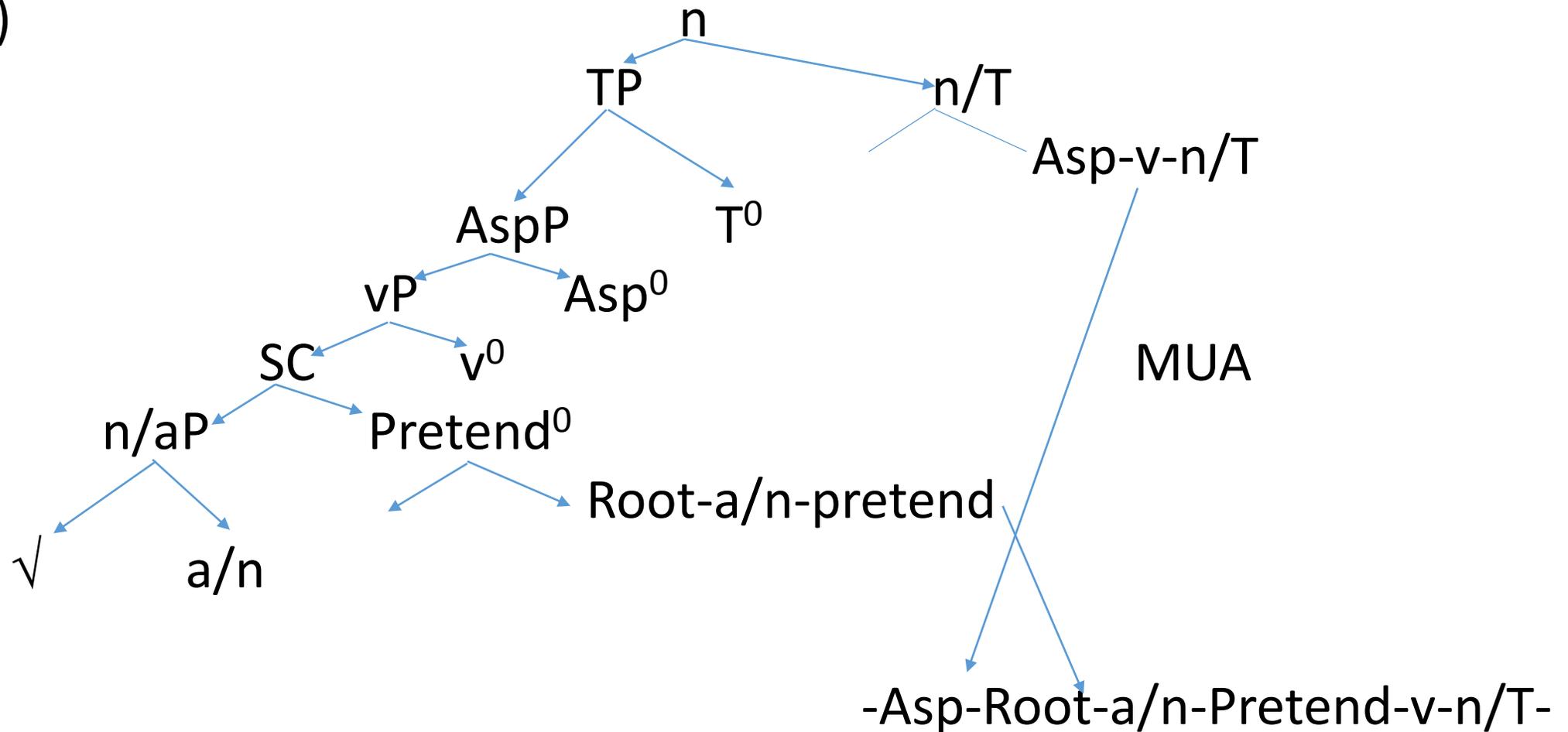
d. The last step is the MUA operation which would lower the complex n/T head on to the complex head created under the Pretend<sup>0</sup> head.

⇒ The morpheme-specific information to be a prefix or suffix will put these morphemes in the following order:

$D_{\text{REFL}} \widehat{\text{Asp}} \widehat{v} \widehat{a/n} \widehat{\text{Pretend}} \widehat{v}$   
 $\widehat{\text{TH}} \widehat{n} \dots$

# MUA in Pretend-state Nominals

(12)



# References

- BARRAGAN, L. (2003). Cupeño Verbal Morphology and the Theory of Contextual Allomorphy. *MITWPL 45*, Eds. S.Smythe et al. Cambridge, MA: MIT Press.
- EMBICK, D. AND NOYER, R. Movement operations after syntax. *Linguistic Inquiry* 32: 555-595.
- BOBALJIK, J. 1994. What does adjacency do? *MIT working papers in linguistics* 21: The morphology-syntax connection, 1-32. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, MA.
- HALLE, M. & MARANTZ, A. 1993. Distributed Morphology and pieces of inflection. In *View from building* 20: 111-176. Cambridge, MA: MIT Press.
- HALLE, M. & MARANTZ, A. 1994. Some key features of Distributed Morphology. *MIT Working Papers in Linguistics* 21:275-288.
- HARLEY, H. 2011. Affixation and the Mirror Principle. In *Interfaces in Linguistics*. Eds. R. FOLLI AND C. ULBRICH. Oxford: Oxford University Press.
- SHANIDZE, A. 1985. *Georgian Grammar*. V.3. Tbilisi: Metsniereba [science].