

# Non-marked dependents in Moksha<sup>1</sup>

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## 1. Data

- ❖ Moksha language (Mordvin, Finno-Ugric, Uralic)
- ❖ Fieldwork in 2014-2017 in the villages of Lesnoje Tsibajevo, Lesnoje Ardashevo, Lesnyje Sijalji (Mordovia, Russia)

## 2. Non-marked dependents in Finno-Ugric

MOKSHA

- (1) *ker-əz'*                      *kelu tarat-t'*  
cut-PST.3.O.3.S.PL.S birch branch-DEF.SG.GEN  
'They have cut the birch branch'.

HILL MARI

- (2) *püşängä ukš*      *kär-əlt-ä*  
tree branch break-DETR-AOR.3SG  
'A tree branch has crunched'.

UDMURT

- (3) <...> *pipu*      *kuar kad' en*      *kual'ekja*  
          aspens leaf like NEG.IMP tremble.NEG.2SG  
'...don't tremble like an aspen leaf'. (Perevoschikov 1994; 239 from Edygarova 2010; 193)

IZHMA KOMI

- (4) *n'ija* *vož-jas*      *təə-s'ys*                      *vər-enys*  
larch crotch-PL wind-EL.POSS.3SG move-PRS.3PL  
'Larch branches are moving with the wind'.

## 3. Place of non-marked dependents among other nominal dependents in Moksha

- ❖ Genitive dependents in Moksha: two types of genitive  
Referential/anchoring possessor – definite genitive (5a);  
generic/unanchoring dependent – indefinite genitive (5b)

- (5) a. *ava-t'*                      *sumka-c*                      *pra-s'*  
          woman-DEF.SG.GEN bag-3SG.POSS.SG fall-PST.3SG  
'The woman's bag has fallen'.

- b. *ava-n'*                      *sumka-s'*                      *pra-s'*  
          woman-GEN bag-DEF.SG fall-PST.3SG  
'The woman bag has fallen'.

- ❖ Genitive and non-marked form compete in expression of some semantic relations (mentioned already in [Цыганов 1964])
- ❖ Part-whole

- (6) *kelu/keluv-ən'*      *lopa-n'ε-s'*                      *salavan'ə*      *pra-j*  
birch/birch-GEN leaf-DIM-DEF.SG stealthily fall-NPST.3SG  
'The birch leaf is falling slowly'.

- ❖ Substance

- (7) *mon pid'-an*                      *sura-n'/sura*                      *jam*  
I cook-NPST.1SG millet-GEN/millet porridge  
'I'm cooking a millet porridge'.

- ❖ Place

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- (8) *paks'ε-n'/paks'ε pančf-n'ə pan'č-s'-t' n'i*  
 field-GEN/field flower-DEF.PL bloom-PST.3-PL already  
 'The field flowers have already finished blooming'.

❖ Property

- (9) *mon' s't'a-ft-əma-n' zar'ε-n'/zar'ε valc'*  
 I.OBL wake.up-CAUS-PST.1.O-SG.O.3SG.S dawn-GEN/dawn light.DEF.SG  
 'I was woken up by the dawn light'.

❖ No competition in such semantical relations as in (10) and (11)

- (10) *ava oftə*  
 woman bear  
 'she-bear'

- (11) *s'el'ej vel'ə*  
 Sijali village  
 'Sijali village'

❖ Comparing with other Finno-Ugric languages

In other related languages of the Finno-Ugric family the use of non-marked dependents is broader: this form encodes generic dependents.

- (12) *män' ädärämüş plat'ə-m už-a-m*  
 I woman dress-ACC see-NPST-1SG  
 'I see a woman dress'.

- (13) *mužyk dərem-ys əšal-e baba plat'je dor-as*  
 man shirt-POSS.3SG hang-PRS.3SG woman dress edge-ESS.3SG  
 'The man shirt is hanging near the woman dress'.

The main strategy for generic dependents in Moksha is indefinite genitive (5b)

#### 4. Properties of non-marked dependents in Moksha

##### 4.1. Basic morphosyntactic properties

❖ No number marking

- (14) *kelu-(\*ft) lopa-n'ε-t'n'ə salavan'ə pra-j-t'*  
 birch-PL leaf-DIM-DEF.PL stealthily fall-NPST.3-PL  
 'The birch leaves (of many birches) fall slowly'.

❖ No possessive marking

- (15) *kelu-(\*z'ə) lopa-n'ε-t'n'ə salavan'ə pra-j-t'*  
 birch-1SG.POSS.SG leaf-DIM-DEF.PL stealthily fall-NPST.3-PL  
 'The leaves of my birch fall slowly'.

❖ No definiteness marking

- (16) *kelu-(\*s') lopa-n'ε-t'n'ə salavan'ə pra-j-t'*  
 birch-DEF.SG leaf-DIM-DEF.PL stealthily fall-NPST.3-PL  
 'The leaves of the birch fall slowly'.

❖ No dependents (unrecursive)

- (17) *mon mol'-ən' (??pičə) vir' ki-va*  
 I walk-PST.1SG pine forest road-PROL  
 'I walked along a (pine) forest road'.

❖ Cannot be discontinuous

(18) \*paks'ε **mazi** pan'čf-n'ə pan'č-s'-t' n'i  
 field beautiful flower-DEF.PL bloom-PST.3-PL already  
 'The beautiful field flowers have already finished blooming'.

(19) \*paks'ε **n'i** pan'čf-n'ə pan'č-s'-t'  
 field already flower-DEF.PL bloom-PST.3-PL  
 'The field flowers have already finished blooming'.

❖ Cannot be postposed

(20) a. son iz'-əz'ə ker'-ə **mar'** ked'-t'  
 he NEG.PST-3SG.S.3SG.O cut-CN apple peel-DEF.SG.GEN  
 'He has not cut the apple peel'.

b. \*son iz'-əz'ə ker'-ə ked'-t' **mar'**  
 he NEG.PST-3SG.S.3SG.O cut-CN peel-DEF.SG.GEN apple  
 Expected meaning: 'He has not cut the apple peel'.

❖ Cannot be autonomous

(21) \*t'ε ki-s' **vir'**  
 this road-DEF.SG forest  
 Expected meaning: 'This road is a forest road'.

#### 4.2. One more semantic restriction

❖ animate dependents cannot normally be non-marked

(22) **id'-ən'/\*id'** ked'-s' jomla-n'ε  
 child-GEN/child hand-DEF.SG small-DIM  
 'The child hand is small'.

#### 4.3. Non-marked dependents as modifiers of NPs in indefinite genitive

❖ Non-marked animate dependent is possible in contexts like (23)

(23) šuvar-t' lank-s lac' **id'-ən'/\*id'**  
 sand-DEF.SG.GEN on-ILL remain.PST.3SG child-GEN/child  
**ked'lapa-n'** vastə  
 hand-GEN place  
 'A track of a child hand remained on the sand'.

❖ There are three types of non-specific dependents according to their possibility to be non-marked:

1) Can be non-marked only as a dependent of indefinite genitive (22)-(23)

2) Has to be non-marked as a dependent of indefinite genitive (6), (24)

(24) vas'ε t'is' **kelu/\*kelu-vən'** lopa-n' nastojka  
 Vasja make-PST.3SG birch/birch-GEN leaf-GEN liqueur  
 'Vasja has made a birch leaf liqueur'.

3) Cannot be non-marked (25)-(26)

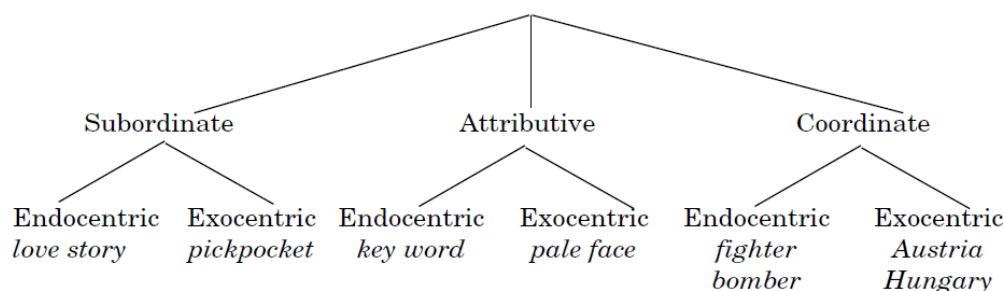
(25) **šuftə-n'/\*šuft(ə)** s'ec' pal-s'  
 tree-GEN tree bridge.DEF.SG burn-PST.3SG  
 'The wooden bridge has burned down'.

(26) son ašč-i **šuft-ən'/\*šuft s'ed'-ən'** per'ila-t'n'ə-n' lank-sə  
 he be.situated-NPST.3SG tree-GEN tree bridge-GEN banisters-DEF.PL-GEN on-IN  
 'He is staying on the banisters of the bridge'.

#### 5. NPs with non-marked dependents as Compounds

- ❖ Compounding is defined as “The process of forming a word by combining two or more existing words: *newspaper, paper-thin, babysit, video game.*” (Trask 1993)
- ❖ Nominal compound as a sequence of nouns which function as a single noun: *orange juice* (Downing 1977)
- ❖ Phonological, orthographical, morphological and syntactical features of compounds are language-specific (Nakov 2013)
  - Orthography: one word/ hyphenated/ two words
  - Morphology: (no) internal inflection
- ❖ Moksha compounds are endocentric attributive compounds (Bisetto & Scalise 2005:326)

(I)



- ❖ Compounds can be right-bracketing and left-bracketing

GERMAN

- (27) [Nord-[bahn-hof]]  
north-train-court  
'North station' (Mukai 2015)

HUNGARIAN

- (28) [[vér-nyomás]-mérő]  
blood-pressure-apparatus (Mukai 2015; from Kiefer 2009: 527)

What could we have in Moksha?

- (29) #*mon mol'-ən'*      *pičə vir'*      *ki-va*  
I      walk-PST.1SG      pine forest      road-PROL  
Expected meaning: 'I walked along a [[pine forest] road]'.  
Hypothetical meaning: 'I walked along a [pine [forest road]]'

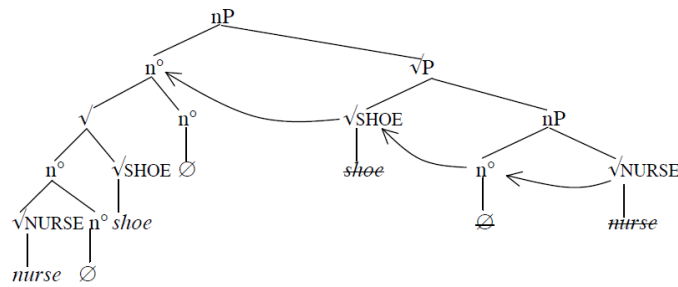
Problem: to invent a semantically acceptable example with combination of these particular relations (part-whole, substance, place, property)?

## 6. Two analyses of Nominal Compounds

### 6.1. Analysis in the framework of Distributed Morphology (Harley 2009)

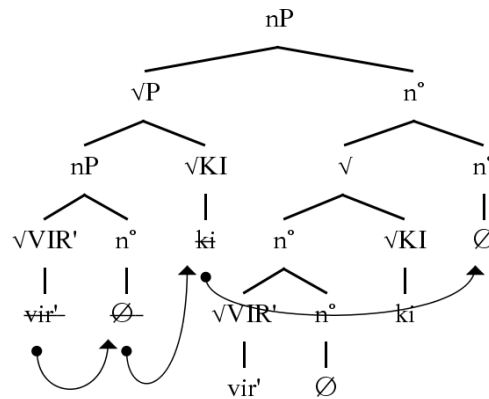
- ❖ Morphology-as syntax principle: morphologic and syntactic processes take place in a single module (Marantz 2007)
- ❖ Compound: A word-sized unit containing two or more Roots
- ❖ Roots are acategorical, needing to be Merged in the syntax with a category creating feature bundle,  $n^\circ$ ,  $a^\circ$  or  $v^\circ$  (Marantz 2001).
- ❖ Derivation of compounds is incorporation (Baker 1988)
- ❖ Modifying nominal is introduced as sister to the Root of the head noun before it is categorized by its own  $n^\circ$  head (see *nurse shoe* in (II))

(II)



The same analysis could be applied to Moksha nominal compounds (structure for *vir' ki* 'forest road' is in (III))

(III)



Problems with this analysis

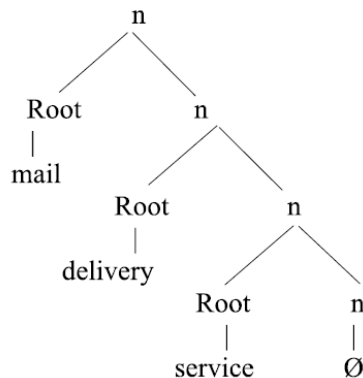
- ❖ No information about recursiveness: why is it impossible? (possible explanation: it is blocked by semantics)
- ❖ How could right-bracketing compounds be analyzed?

## 6.2. Nominal Compounds in Phase Theory (Mukai 2015)

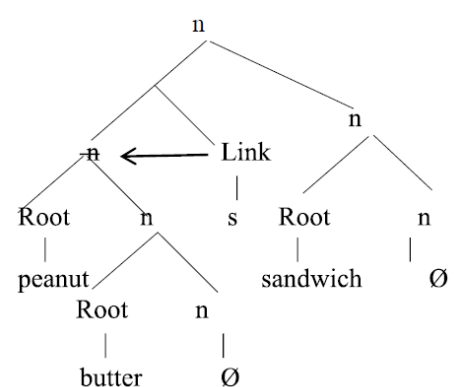
- ❖ Critics of Harley's Distributed Morphology analysis: roots lack any features → no feature to trigger the incorporation
- ❖ The operation Merge is used and there is a phase at wordlevel
- ❖ The three roots are not merged immediately

Observe examples for right-bracketing (*[mail [delivery service]]* (IV)) and left-bracketing (*[[peanut butter] sandwich]* (V))

(IV)



(V)



(IV) A root without word class feature (Zhang 2007) is merged with a syntactic head → then, another root is merged to form compound word and this 'compound' is transferred to the interpretational component and spelled out as phase (Chomsky 2001, 2008).

(V) Two-roots structure is merged with another root which is merged with a categorizing head, which is derived in parallel. It is impossible to have two heads in the syntax → a linking morpheme (null or overt) is merged to check the categorizing head.

How this analysis can be applied to Moksha compounds?

- ❖ Left-bracketing structures can be derived in syntax but then blocked by semantics
- ❖ Right-branching structures need obligatory overt link, which is realized as *-n'*.

(30) *mon mol'-ən' pičə vir'-ən' ki-va*  
 I walk-PST.1SG pine forest-GEN road-PROL  
 'I walked along a pine forest road'.

Problems with this analysis:

- ✓ A very suspicious suggestion about link (NPs with genitive dependents are not compounds)

Properties of genitive (indefinite) dependents

- Can have own dependents (25)
- Can be discontinuous

(31) *mon sura-n' pid'-an jam*  
 I millet-GEN cook-NPST.1SG porridge  
 'I'm cooking a millet porridge'.

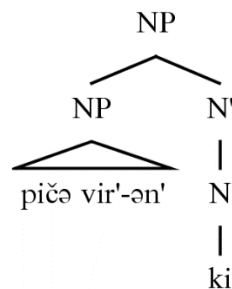
- Can be autonomous

(32) *mon' kud-əz'ə šuft-ən', a ton' kirpic'-ən'*  
 I.OBL house-1SG.POSS.SG tree-GEN a you.OBL brick-GEN  
 'My house is wooden, and yours is made of brick'.

→ Possible suggestion

- ❖ Phase cannot be adjoined to the root → such dependents are situated in Spec, NP of narrow-syntax

(VI)



Conclusions:

- ❖ Nominal Compounds in Moksha are marginal and semantically restricted
- ❖ There are two possible analyses for NC that can be adopted for Moksha
- ❖ Analysis in the framework of Distributed Morphology cannot explain impossibility of recursive compounds
- ❖ One can suggest that NC in Moksha cannot be recursive due to both semantics and phase-restrictions
- ❖ Both analyses cannot explain semantic restrictions

Further questions: How to analyze existing semantic restrictions?

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