

## Small nominals in locative phrases

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### 1. What this talk is about

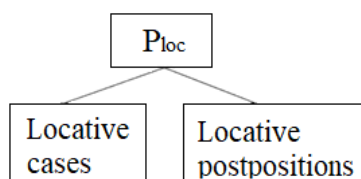
- Locative cases show **different affix order** compared to grammatical cases Genitive/Accusative and Dative: POSS-CASE in grammatical cases vs. CASE-POSS in locative cases

Table 1: Grammatical vs. lexical cases

<b>Grammatical</b> (Structural + Inherent)	<b>Lexical</b>
Nominative; Genitive/Accusative; Dative	Inessive; Illative; Elative; Lative; Prolative (and some others, but here I restrict to <b>locative</b> cases)
NB: There is no Genitive vs. Accusative distinction in Moksha. This is characteristic for Uralic (Sörös & Hevér-Joly 2019)	

- **Number** and **definiteness/specificity** cannot be expressed together with locative cases
- I argue that locative cases are instances of the **category P**, together with postpositions, see (1); grammatical cases, in contrast, are only features, they do not have their own syntactic node and are inserted in morphology
- The special status of locative expressions is explained by the sources of grammaticalization of the elements within the split P projection (AxPart – Place – Path)

(1)



- Previous approaches:
  - (McFadden 2004): inherent / lexical cases are Ps; different null Ps assign different cases to DPs
  - (Asbury 2008): inherent / lexical cases are Ps, and they are exponents of Ps
- In contrast to the previous approaches which claim that PPs are always larger than DPs, I argue that in Moksha complements of P are **bare NPs, not DPs**
  - In some languages some Ps in some contexts take bare NPs as their complements

(2)a. Sp: *Trabajamos en equipo*. ‘We do group work.’

b. Sp: *En \*(un) equipo hay cinco tipos de líderes*. ‘There are five types of leaders in a group.’

c. Eng: *On top of* vs. *on the top of*

- In some languages, some Ps take **only** bare NPs as their complements

### 2. Roadmap of the talk

Theoretical background (section 3)

Moksha locative cases: evidence from morphology (section 4)

Interaction between locative cases and other nominal categories (data)

The puzzle and two hypotheses:

H1: Syntactic explanation

H2: Morphological explanation

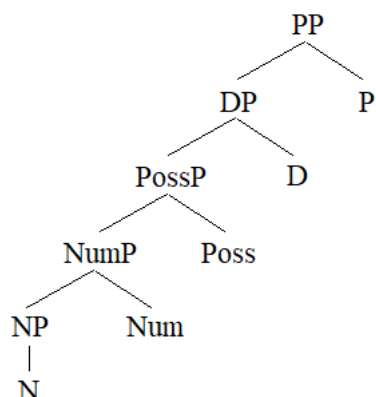
The special status of locative phrases (section 5)

Conclusions (section 6)

### 3. Theoretical background

- Hierarchical structure of DP (Abney 1987; Szabolcsi 1984)
- Small nominals (terminology by (Pereltsvaig 2006))
- Locative cases and locative adpositions – instances of the same category P (McFadden 2001, 2004; Riemsdijk & Huybregts 2002; Asbury et al. 2007)

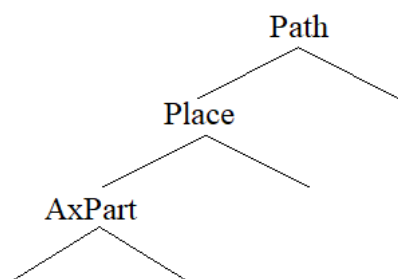
(3a)



NB: PossP is the projection where possessors are licensed/case-marked/agreed-with, not where they are generated

- → Locative phrases arise by adding structure **on top of the DP** (I will argue that this is **not always** so: some PPs can have phrases smaller than DPs as their complements)
- The P can be split further, i.e. be more complex (Svenonius 2006)

(3b)



#### Roadmap of the talk

##### ✓ Theoretical background

Moksha locative cases: evidence from morphology

#### **Interaction between locative cases and other nominal categories (data)**

The puzzle and two hypotheses

H1: Syntactic explanation

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The special status of locative phrases

Conclusions

#### 4. Moksha locative cases: evidence from morphology

- Moksha (Mordvin < Mordvinic < Finno-Permic < Finnic < Finno-Ugric < Uralic)
- Spoken in Russia, Republic of Mordovia (the Volga Region)
- Rich morphology
  - “Agglutinative” but there are many cumulative markers
  - Nominal categories: number, possession, definiteness, case

(4) *vas'ε put-əz'ə-n'*      *mar'-n'ə-n'*      *maša-n'*      *sumka-zə-nzə*  
 Vasja put-PST.3SG.S-3PL.O apple-DEF.PL-GEN Masha-GEN bag-ILL-3SG.POSS  
 ‘Vasja put the apples to Masha’s bag’.

#### 4.1. Interaction between locative cases and other nominal categories

##### 4.1.1. Case and number

- Indefinite NPs bear number markers only in the Nominative (which does not have an overt morphological marker)

(5) a. NOMINATIVE (GRAMMATICAL) → POSSIBILITY OF PLURAL MARKER

*vel'ə-t* [village-PL] 'villages'

(6) INESSIVE (LEXICAL) → NO POSSIBILITY TO EXPRESS PLURALITY

a. *vel'ə-sə* [village-IN] 'in a village / in villages'

b. \**vel'ə-t-sə* [village-PL-IN] 'in a village / in villages'

c. \**vel'ə-sə-t* [village-IN-PL] 'in a village / in villages'

NB: For a discussion about underspecification vs. ambiguity, see section 4.2

- If the NP is possessed, the number is expressed in Nominative, Genitive/Accusative and Dative (7), in other cases there is no number distinction (8)

(7) NOMINATIVE (GRAMMATICAL) POSSESSED NP → NUMBER DISTINCTION

a. *vel'ə-z'ə* [village-1SG.POSS.SG] 'my village'

b. *vel'ə-n'ə* [village-1SG.POSS.PL] 'my villages'

(8) INESSIVE (LEXICAL) POSSESSED NP → NO NUMBER DISTINCTION

*vel'ə-sə-n* [village-IN-POSS.1SG] 'in my village / in my villages'

NB: Note that there is also case-sensitive allomorphy here

- If an NP is definite, number is expressed in Nominative, Genitive/Accusative and Dative (9a); in the other cases, number and definiteness cannot be expressed within one noun phrase (9b), and a postpositional construction is used instead (10)

(9) a. NOMINATIVE (GRAMMATICAL) → DEFINITENESS + PLURALITY

*vel'ə-t'-n'ə* [village-PL-DEF] 'the villages'

b. INESSIVE (LOCATIVE, LEXICAL) → NO DEFINITENESS, NO PLURALITY

\**vel'ə-t'-n'ə-sə* [village-PL-DEF-IN] 'in the villages'

(10) PLURALITY IN LOCATIVE CONTEXTS → POSTPOSITIONAL PHRASE WITH DEFINITE PHRASE

c. *vel'ə-t'-n'ə-n' esə* [village-PL-DEF-GEN in.IN] 'in the villages'

- Compare to English (11) with possibility to avoid the number expression on the complement of the locative preposition itself

(11) *in the interior of the villages*

#### 4.1.2. Case and possession

- The order of possessive marking/agreement and case is POSS+CASE in Nominative, Genitive/Accusative and Dative

(12) GENITIVE (GRAMMATICAL) → POSS+CASE

*vel'ə-z'ə-n'* [village-1SG.POSS.SG-GEN] 'of my village'

- The order of possessive marking/agreement and case is CASE+POSS in other cases

(13) INESSIVE (LEXICAL) → CASE+POSS

*vel'ə-sə-n* [village-IN-POSS.1SG] 'in my village / in my villages'

- An explanation in terms of restrictions on syllable structure does not work: reverse order in locatives is not an instance of phonologically-driven metathesis

## (14) a. CVN-STRUCTURE

*vel'ə-zə-n* [village-ILL-POSS.1SG] 'to my village / to my villages'

## b. NCV-STRUCTURE

*vel'ə-nzə* [village-3SG.POSS.PL] 'his/her villages'

## 4.1.3. Case and definiteness

- There are definite forms only for Nominative, Genitive/Accusative and Dative, and no definite forms for other cases (see table 2)
- In order to express definiteness in oblique positions, one has to use constructions with postpositions

(15) *vel'ə-t' esə* [village-DEF.SG.GEN in.IN] 'in the village'

Table 2: Moksha nominal declension, a fragment (Kholodilova 2018)

Case	Indefinite declension		Definite declension	
	SG	PL	SG	PL
Nominative	∅	-t/-t'	-s'	-(t')n'ə
Genitive	-ən' / -ən'n'ə		-t'	-(t')n'ə-n'
Dative	-ən'd'i		-t'i	-(t')n'ə-n'd'i
Ablative	-də / -tə / -d'ə / -t'ə			
Inessive	-sə			
Elicative	-stə			
Illative	-s			
Lative	-u / -v / -i			
Prolative	-əva / -ga / -ka			

## Roadmap of the talk

## ✓ Theoretical background

## Moksha locative cases: evidence from morphology

- ✓ Interaction between locative cases and other nominal categories (data)

**The puzzle and two hypotheses**

H1: Syntactic explanation

H2: Morphological explanation

The special status of locative phrases

Conclusions

## 4.2. The puzzle and possible explanations of the patterns

Table 3: The puzzle: the set and the order of affixes in lexical cases does not match the presumable structure

	Non-possessed	Possessed
Grammatical	<p>sumka -t' -n'ə -n' bag -PL -DEF -GEN [put] the bags</p>	<p>sumka -z'ə -n' bag -1SG.POSS.SG -GEN [put] my bag</p>
Lexical	<p>sumka bag in a bag / in bags</p>	<p>sumka bag in my bag / in my bags</p>

- Hypothesis 1: the lack of particular morphological affixes reflects **reduced underlying syntactic structure**
- Hypothesis 2: the lack of particular morphological affixes is due to **postsyntactic operations in morphology**

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4.2.1 **Hypothesis 1:** Moksha locative phrases as bare NPs inside PPs

- Locative phrases lack number and definiteness → bare NPs, not DPs
- Possessed NP → “restructuring”
- Hypothesis: locative cases – same category as postpositions

## Structure of PP phrase: two strategies for realization

## First strategy:

- Genitive DP
- Possessive marker/agreement on the head (obligatory with pronominal complement)

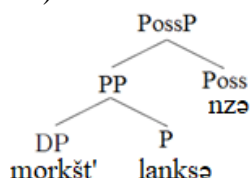
(16) a. DEFINITE GENITIVE NON-PRONOMINAL PERSON COMPLEMENT → OPTIONAL AGREEMENT

*morkš-t' lank-sə(-nzə)*  
 table-DEF.SG.GEN on-IN-POSS.3SG  
 'on the table'

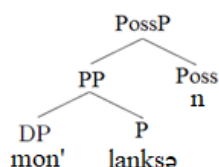
b. PRONOMINAL GENITIVE COMPLEMENT → OBLIGATORY AGREEMENT

*mon' lank-sə-n*  
 I.GEN on-IN-POSS.1SG  
 'on me'

(17a)



(17b)

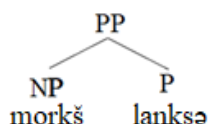


Second strategy:

- Bare NP complement
- No possessive marker/agreement with the complement

(18a) *morkš lank-sə*  
 table on-IN  
 'on a table'

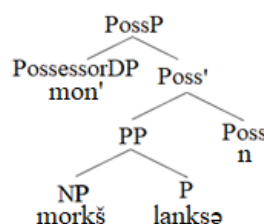
(18b)



- BUT: possessive marker/agreement with **the possessor of the complement**

(19a) *mon' morkš lank-sə-n*  
 I.GEN table on-IN-POSS.1SG  
 'on my table'

(19b)



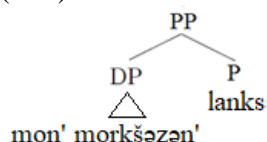
- Possessive marker/agreement in different strategies of taking complements

(20a) POSSESSOR AGREEMENT WITHIN THE DP → NO AGREEMENT WITH THE POSSESSOR ON THE POSTPOSITION (BUT POSSIBLE AGREEMENT WITH ENTIRE COMPLEMENT)

*put-it' maṛ-n'ə-n' mon' morkš-əz'ə-n' lank-s / \*langə-zə-n*  
 put-IMP apple-DEF.PL-GEN I.GEN table-1SG.POSS.SG-GEN on-ILL on-ILL-1SG.POSS

'Put the apples on my table'.

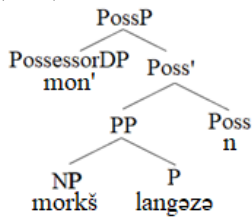
(20b)



(21a) NP COMPLEMENT → POSSESSOR CASE/AGR/LICENSING POSITION OUTSIDE THE NP

*put-it' maṛ-n'ə-n' mon' morkš langə-zə-n / \*lank-s*  
 put-IMP apple-DEF.PL-GEN I.GEN table on-ILL-1SG.POSS on-ILL  
 'Put the apples on my table'.

(21b)



- Non-genitive complements are bare, as they cannot bear plural markers

(22) \*ber'ə-n'    s'ora-t'n'ə    ašči-j-t'                      **morkš-t** lank-sə  
 garden-GEN    seed-DEF.PLbe.situated-NPST.3-PL    table-PL on-IN  
*Int: 'The vegetables lay on tables.'*

Table 4: Summary: Locative encoding in Moksha

	Full DP complement	Bare NP complement
Locative postposition (no possessor of he complement)	<p>‘on the table’</p>	<p>‘on a table’</p>
Locative postposition (+ possessor of he complement)	<p>‘on (to) my table’</p>	<p>‘on (to) my table’</p>
Locative case (no possessor of he complement)		<p>‘in a table’</p>
Locative case (+ possessor of he complement)	*	<p>‘in my house’</p>

Lexical cases are Ps themselves, not assigned by null Ps

- If there were a null P that assigned a case, the affix order would be -POSS-CASE-(nullP), which does not explain the -CASE-POSS pattern
- Moksha postpositions only assign genitive case (just one postposition assigns ablative); no other oblique cases are assigned by postpositions

Advantages of this proposal:

- Captures the difference in affix order
- Captures the absence of some nominal categories in locative expressions

Potential problems:

- Some nominal modifiers trigger obligatory plural marker on the head noun (in grammatical cases), but they are compatible with locative phrases, that cannot bear a plural marker

(23) SMALL NUMERAL (< 11) → OBLIGATORY PLURAL

*maša sta-s' kolmā mešək-t / \*mešək*  
 Masha sow-PST.3SG three bag-PL bag  
 'Masha sewed three bags'.

(24) SMALL NUMERAL + LOCATIVE PHRASE WITH NO POSSIBILITY TO EXPRESS PLURALITY → WHY THERE IS NO CONFLICT!?

*min' sactā s'embā maṛ-n'ə-n' kandə-s'k kolmā mešək-sə*  
 we.GEN garden.EL all apple-DEF.PL-GEN bring-PST.3.O.1PL.S three bag-IN  
 'We brought all apples from the garden in three bags'.

○ Possible solution:

- singular DPs in grammatical cases and cannot cooccur with the small numerals because they have [-PL] feature
- locative phrases lack [-PL] feature (*viz.* they lack any number whatsoever), and nothing prevents them from co-occurring with the small numerals

- We can try to analyze this alternatively: as a morphological process
- Other questions that arise: how this is compatible with Caha's (2009) proposal?

Roadmap of the talk

✓ Theoretical background

Moksha locative cases: evidence from morphology

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The special status of locative phrases

Conclusions and Agenda

#### 4.2.2. Hypothesis 2: Moksha locative phrases and Morphological Merger

- Distributed Morphology framework [Halle 1990; Halle & Marantz 1993; Embick & Noyer 2001]
  - No single, unified lexicon
  - Terminal nodes are bundles of features
  - Syntactic Hierarchical Structure All the Way Down
  - Underspecification
  - Late Insertion
- Fusion [Halle & Marantz 1993]: several consecutive nodes are fused in one
- Impoverishment [Bonet 1991]: the morpheme A influences the context in such way that some features are deleted
- Is the syncretism of plural and singular, definite and indefinite, due to Underspecification or to Impoverishment?

##### 4.2.2.1 Underspecification

- Let's assume that in (25a) the sequence of nodes NUM < DEF < CASE is realized as a fused node, and we have a lexical entry (25b).

(25) a. *vel'ə-t'* [village-DEF.SG.GEN] 'of the village'

b. [SG, DEF, GEN] ↔ *-t'*

- If the syncretism of (26a) is due to underspecification, this means that the inessive morpheme is specified for case exceptionally (26b) and can lexicalize singular, plural, definite and indefinite features in presence of inessive feature, as there is no other more specified morpheme that would compete with it (→ elsewhere principle).

(26) a. *vel'ə-sə* [village-IN] 'in a village' / 'in villages / in the village / in the villages'



b. [IN] ↔ -sə

- However, such a system would overgenerate: consider plural forms where the number and definiteness are lexicalized separately from case (27a). For this derivation we need the following lexical entries (27b,c).

- (27) a. *vel'ə-t'n'ə-n'* [village-PL.DEF-GEN] 'of the villages'  
 b. [PL, DEF] ↔ -t'n'ə  
 c. [GEN] ↔ -n'

QUESTION: What would block such forms as (28)?

- (28) \**vel'ə-t'n'ə-sə* [village-PL.DEF-IN] 'in the villages'

Therefore, syncretism cannot be due to the underspecification of morphemes.

#### 4.2.2.2. Impoverishment

- Let us assume that

- (29) a. [+/-PL] → [] / [+OBL]  
 b. [+/-DEF] → [] / [+OBL]

- This, again, is compatible with examples (30a) vs. (30b)

- (30a) *vel'ə-t'* [village-DEF.SG.GEN] 'of the village': [SG, DEF, GEN] ↔ -t'

- (30b) *vel'ə-sə* [village-IN] 'in a village' / 'in villages': [~~SG, DEF~~, IN] → [IN] ↔ -sə

- This can be also extended to plural forms

- (31a) *vel'ə-t'n'ə-n'* [village-DEF.PL-GEN] 'of the village': [PL, DEF] + [GEN] ↔ -t'n'ə-n'

- (31b) \**vel'ə-t'n'ə-sə* [village-DEF.PL-IN] 'of the village': [~~PL, DEF~~] + [IN] → [IN] ↔ -sə → *vel'ə-sə*

The main problem for such an analysis is that it could explain a non-attested "reverse Moksha" as well. The rules can be reorganized in such a way that only locative cases would have a number and definiteness distinction, in contrast to Nominative, Genitive and Dative.

- The rule of Impoverishment would be the following:

- (32) a. [+/-PL] → [] / [-OBL]  
 b. [+/-DEF] → [] / [-OBL]

The genitive case would be always like in (33).

- (33) [~~SG, DEF~~, GEN] → [GEN]: *vel'ə-n'* [village-GEN]

Locative phrases, in contrast, would have the full paradigm, including (34).

- (34) [PL, DEF] + [IN] → *vel'ə-t'n'ə-sə* [village-DEF.PL-IN]

Conclusion: the DM analysis overgenerates

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## 5. The special status of locative phrases

### 5.1. Unrelated languages have restrictions on PPs similar to the ones observed in Moksha

- Kaqchikel prepositional phrases

(35a) PREPOSITION → NO ARTICLE; NO DEMONSTRATIVE

*pa* (\**re* / \**ri*) *jyu'* *e* *k'äs* *ri* *chikop-i'*  
 LOC DEM.PR DEF forest B.3PL live DEF animal-PL  
 'There are animals in this / the forest'.

(35b) RELATIONAL NOUN → ARTICLE OR DEMONSTRATIVE

*ch-u-pan* \*(*re*) *jyu'* *e* *k'äs* *ri* *chikop-i'*  
 LOC-POSS.3SG-stomach DEM.PR forest B.3PL live DEF animal-PL  
 'There are animals in this forest'.

- Ossetic comitative postposition (Erschler 2019)

(36a)	* <i>ɛd</i> <i>asə</i> <i>bel</i>	(36b)	<i>asə</i> <i>bel-imə</i>
	with this spade		this spade-COM
	'with this spade' (intended)		'with this spade'

A morphological approach to such facts would be language-specific, and fail to capture the generalization: what property do oblique phrases have such that they do not express definiteness cross-linguistically?

- English prepositional phrases like *going to school* (see also (2))

### 5.2. Relational nouns as a special class of elements

- Relational nouns take bare complements (37a) while regular postpositions require GEN marking (37b).

(37) a. *pet'ε s'id'ə-stə* *jaka-j* *zabər(??-ən')* *kuvalmə-va*  
 Peter often-EL walk-NPST.3SG fence-GEN length-PROL  
 'Peter often walks along fences'. (Muravjeva & Kholodilova 2018: 229)

b. *pet'ε s'id'ə-stə* *koɾn'-i* *zabər\*(-ən')* *kuvalmə-va*  
 Peter often-EL say.freq-NPST.3SG fence-GEN ength-PROL  
 'Peter frequently talks about fences'. (ibid)

- Possessive agreement is only possible with relational nouns (38a), not with regular postpositions (38b).

(38) a. *ki-t'* *kuvalmə-va(-nzə)* *jota-s'* *mašina*  
 road-DEF.SG.GEN length-PROL-3SG.POSS pass-PST3SG car  
 'A car passed by on the road'. (ibid: 233)

- b. *es'* *er'a-f-ənc* *kuvalmə-va(\*-nzə)* *at'ε-z'ə*  
 REFL live-PTCP.RES-3SG.POSS.SG.GEN length-PROL-3SG.POSS g.father-1SG.POSS.SG  
*pək kel'k-si* *az-ən-kšn'-əma-nc*  
 very like-NPST.3SG.S.3SG.O say-FREQ-FREQ-NZR-3SG.POSS.SG.GEN  
 'My grandfather loves talking about his life'. (ibid)

- Relational elements have a special property; they can have bare complements ((pseudo-)incorporation?)
- Locative cases inherit their properties from the relational elements they grammaticalized from
- → Grammaticalized relational nouns (AxParts) and locative cases have different properties from genuine non-locative non-relational postpositions

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#### Conclusions

## 6. Conclusions, implications and questions for future research

### Table 5: Comparison of the analyses

- Syntactic analysis can capture the crosslinguistic generalization and explain the special status of locative “cases”
- If we think about AxParts (Svenonius 2006) as about grammaticalized relational nouns, not just nouns, we can explain why in some languages their complements are caseless rather than genitive (ibid: 64-65, 69 71).

#### Abbreviations:

B – absolutive, COM – comitative, DEF – definite, DEM – demonstrative, EL – elative, FREQ – frequentative, GEN – genitive, ILL – illative, IN – inessive, IMP – imperative, LOC – locative, NPST – nonpast tense, NZR – nominalizer, O – object, PL – plural, POSS – possession, PR – proximative, PROL – prolicative, PST – past tense, PTCP – participle, RES – resultative, S – subject, SG – singular, 1-3 – person

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