

The dual nature of Lithuanian reflexive *-si-*: remarks on Local Dislocation

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1 Introduction

- This study provides some insights on how "movement" works in mobile affixation.
- One well known mechanism of "movement" is **Local Dislocation** (Embick and Noyer 2001 (E&N)) - a local PF operation which manipulates morphosyntactic words (MWds) and subwords (SWds) under linear adjacency.
- In this talk, I focus on one of the most cited case studies of Local Dislocation, namely the Lithuanian reflexive clitic *-si-*, which has been mistakenly identified as a second position clitic.
- The Lithuanian reflexive marker *-si*¹ appears as a suffix in unprefixated verbs in (1a) and as a prefix in prefixed verbs in (1b).

(1)	a.	slèpi-au- si hide-PST.1.SG-[RFL] 'I was hiding myself.'	b.	pa-si -slèpi-au PVB-[RFL]-hide-PST.1.SG 'I have hidden myself.'
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- *-si-* has been argued to show second position effects (Nevis and Joseph 1993; Embick and Noyer 2001; Arregi and Nevins 2012). It is adjacent to the leftmost prefix in prefixed verbs.
 - in prefixed verbs with one perfective lexical prefix² as in (1b)
 - in verbs with a negation prefix (2a) or two prefixes, a lexical prefix and a nominal prefix (NOMP), as in (2b)

(2)	a.	ne- si -splèi-au NEG-[RFL]-hide-PST.1.SG 'I did not hide myself'	b.	su-si-pa -žin-au PVB-[RFL]-NOMP-know-PST.1.SG 'I have become acquainted with'
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- To derive second position effects, E&N 2001 and Embick 2007 propose the operation of Local Dislocation.
 - After the hierarchical tree structure is converted into a linear order of morphemes, Local Dislocation (LD) can manipulate the order of MWds and SWds.
- **E&N's analysis:** *-si-* is a sub-word, a dissociated morpheme (similar to a theme vowel or Agr node) inserted at PF (late in the derivation).

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¹For a discussion whether *-si-* is an affix or a clitic see Nevis & Joseph (1993)

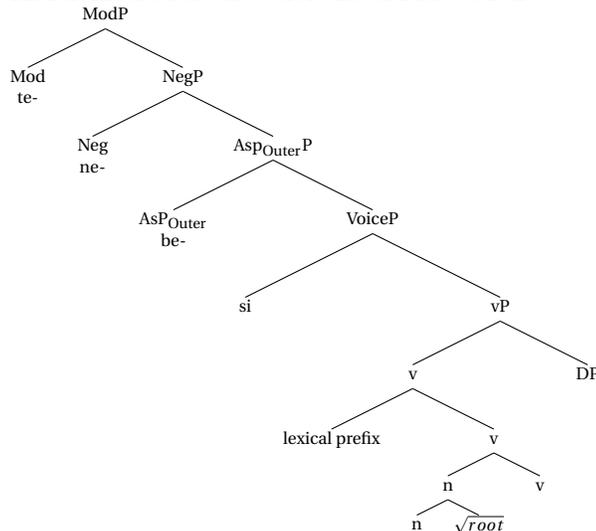
²Say something about glossing

- It is linearized as the leftmost element in the morphological MWd and then it undergoes Local Dislocation with an adjacent SWd:
 - either V+T complex (3), which correctly derives the examples in (1a)
 - (3) a. slėp-iau-si - ‘I was hiding by myself’
 - b. *Input*: [-**si-** [V+T]
 - c. *Output after LD*: [[V-T] -**si-**]
 - or a prefix (4), which correctly derives (2)
 - (4) a. **su-si-pa**-žin-au ‘I have become acquainted with’
 - b. *Input*: [-**si-** [Prefix+Prefix+V+T]]
 - c. *Output after LD*: [Prefix+**-si-**+Prefix+V+T]

Proposal:

- (i) -si- has one underlying position: it is a valency-reducing morpheme that starts off above a *vP* in a non-thematic VoiceP as in (6) (Schäfer 2008; Alexiadou et al. 2015; Wood 2015).
- (ii) Building on previous work (Šereikaitė 2017; Korostenskienė 2017), I provide an extensive argumentation against E&N’s analysis showing that -si- **is not a second position clitic**.
 - if no verbal prefix is present, -si- appears as a suffix
 - after linearization -si- in prefixed verbs is always attached as a prefix to a **verbalized complex** regardless of how many prefixes precede -si-
- (5) **ne-be-pa-si-slėpi**-au
 NOT-BE-PVB-RFL-hide-PST.1.SG
 ‘I was not able to hide myself’ Neg-Asp_{Outer}-Asp_{Inner}-si-Root-*v*-T
- (iii) LD is not a generic operation that applies to any SWds. LD applies only in a very specific instance i.e., when -si- precedes a lexical prefix showing that LD at the sub-word level is restricted.

(6) Hierarchical Structure before Local Dislocation



- Road Map
 - Section 2 Placement of *-si-*
 - Section 3 Syntax of *-si-*
 - Section 4 Towards an analysis
 - Section 5 Conclusion

2 Placement of *-si-*

- In this section, I provide a number of arguments from affixation showing that E&N's analysis cannot derive the *-si-* facts.
- *-si-* is not a second position clitic.

2.1 Suffixes

- V+T is considered to be a single SWd in E&N's (2001) analysis, cf. (8-7).

- (7) a. slèpi-au-si - 'I was hiding by myself.'
 b. *Input*: [*-si-* [V+T]
 c. *Output after LD*: [[V+T] *-si-*]

- (8) a. *slèpi-si-au - 'I was hiding by myself'
 b. *Input*: [*-si-*[V+T]
 c. **Output*: [[V-*si-*T]

- However, a number of suffixes can intervene between V and T making it a complex MWd rather than a SWd.
- **Prediction:** if *-si-* is a second position clitic that undergoes LD from left to right by one SWd (V+T), then in cases with more than SWd, *-si-* is predicted to appear in between suffixes.
- **Observation 1:** this prediction is not borne out. *-si-* cannot be realized in the middle of the word, it always comes at the end as a suffix if there is no prefix present.
- A single verb may contain not only a root and T, but also a verbalizer *ν* which is followed by aspectual morphology or participial morphology (for discussion see Williams 2007; Šereikaitė 2017; Korostenskienė 2017).

- (9) a. deg-in-au-**si**
 burn-CAUS-PST.1SG-RFL
 'I was sun tanning' Root-*ν*-T-si
- b. deg-in-dav-au-**si**
 burn-CAUS-HAB-PST.1SG-RFL
 'I used to suntan.' Root-*ν*-Asp-T-si
- c. deg-in-dam-as-**is**
 burn-CAUS-CVB-M.SG-RFL
 'while sun tanning' Root-*ν*-PTC-Infl-si

- Some verbs are formed like compounds consisting of at least two roots. In those cases, *-si-* appears at the end.

- (10) Mums labai gerai bendra-darb-i-au-j-a-**si**.
us.DAT very well common-work-TH-*v*-EP-PRS.3-RFL

‘Our collaborative work is going very well.’³

Root-root-Th-*v*-T-si

- Complex deverbal nouns show the same pattern.⁴ They may contain multiple suffixes and -*si*-. -*si*- always appears at the end of the MWd.

- (11) a. deg-in-im-as-**is**
burn-CAUS-NLZM-NOM.M.SG-RFL

‘sun tanning’ (n)

Root-*v*-*n*-nInfl-si

- b. važ-inė-j-im-as-**is**
ride-IPFV-EP-NMLZ-NOM.M.SG-RFL

‘riding’ (repeatedly) (n)

Root-*v*-AsP-*n*-nInfl-si

- c. bendra-darb-i-av-im-as-**is**
common-work-TH-*v*-NMLZ-NOM.M.SG-RFL

‘collaborative working’ (n)

Root-root-Th-*v*-*n*-nInfl-si

- Generalization so far: if there is no prefix, -*si*- will appear to the left of the MWd. Thus, it has to lean on something to its left.

2.2 Prefixes

- Prediction: in the case of multiple prefixes, E&N’s (2001) analysis predicts that -*si*- will be always adjacent to the leftmost prefix. It correctly derives cases like in (12).

- (12) a. su-**si**-pa-žin-au
PVB-RFL-NOMP-know-PST.1.SG
‘I have become acquainted with’
b. *Input*: [-**si**- [Prefix+Prefix+V+T]]
c. *Output after LD*: [Prefix+-**si**-+Prefix+V+T]

- Prediction for verbs which have more than two prefixes:

- (13) a. *Input*: [-**si**- [Prefix+Prefix+Prefix+V+T]]
b. *Output after LD*: [Prefix+-**si**-+Prefix+Prefix+V+T]

- Observation 2: Cases like (12) are not representative of the main pattern! In verbs without the nominal prefix, -*si*- appears adjacent to the verbalized root regardless of how many prefixes precede it.

– This suggests that -*si*- is not a second position clitic.

- Table 1 gives a template of Lithuanian prefixes that can be attached to a verb (Arkadiev 2011b:2).⁵

Super-lexical		Lexical			
Permissive, Restrictive, Affirmative	Negation	Aspectual meaning	Lexical/Perfective	Reflexive	Root
Te-	Ne-	Be-	į, iš-, per-, su-, ap-, pa-, nu-, pri-, etc	-si-	Root

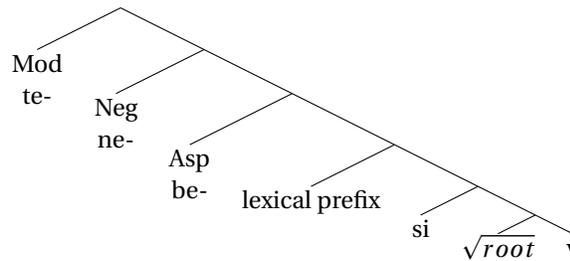
³<http://www.elibrary.lt/resursai/Ziniasklaida/Ausra/ausra/2007/489.pdf>, Accessed, November 23. These examples are rare, but accepted by native speakers.

⁴Lithuanian deverbal nouns can appear in complex event nominalizations and are morphologically complex. They can host a *v* head, inner aspect and secondary imperfectivization (see Šereikaitė in prep. for discussion and examples).

⁵Also see Arkadiev 2014; Šereikaitė 2017; Korostenskienė 2017; Šereikaitė 2018.

(14) [ModP te- [NegP ne- [AspP be- [vP lexical prefix [root +v]]]]

(15) Complex head



- Korostenskiėnė (2017) and Šereikaitė (2017, 2018) show that Lithuanian exhibits *super-lexical* versus *lexical* prefix distinction attested in many Slavic languages (e.g., Babko-Malaya 1999; Di Sciullo and Slabakova 2005; Svenonius 2004, 2008).

Properties	Lexical Prefix <i>pa-, nu, su-, etc</i>	Super-lexical prefix <i>te-, be-</i>
adds idiosyncratic, spatial meaning	✓	*
adds an argument	✓	*
narrow scope with respect to secondary imperfectivization	✓	*
appear outside lexical prefixes	*	✓
has a fixed meaning	*	✓
can be stacked	*	✓
position	Inside vP	Outside vP

- A few examples with lexical prefixes, which change the meaning of the verb and add an extra argument.

(16) *Lexical Prefixes*

- Aš verki-au.
I cry-PST.1.SG
'I was crying.'
- *Aš iš-verki-au.
I PVB-cry-PST.1.SG
- Aš iš-verkiau visas ašaras.
I PVB-cry-PST.1.SG all.ACC tears.ACC
'I cried out all tears.'

(17) *Super-Lexical Prefixes*

- Te-verk-ia jie.
PRM-cry-PRS.3.SG they
'Let them cry'
- Te-iš-verki-a jie *(visas ašaras).
PRM-PVB-cry-PRS.3.SG they all.ACC tears.ACC
'Let them cry out all their tears.'

- *te-* and *be-* are **super-lexical** prefixes: the former has a permissive meaning (Arkadiev 2011b; Korostenskiėnė 2017; Korostenskiėnė 2017) and the latter has a progressive meaning representing Outer Aspect and follows the negation prefix *ne-* (see Arkadiev 2011a; Korostenskiėnė 2017). When super-lexical prefixes are present, *-si-* appears as a prefix adjacent to the root.

- (18) a. **te-si-slepi-a**
PRM-[RFL]-hide-PRS.3
'Let him/her hide himself/herself by himself/herself' Mod-[si]-Root-*v*-T
- b. **ne-si-slepi-a**
NEG-[RFL]-hide-PRS.3
'he/she is not hiding by himself/herself' Neg-[si]-Root-*v*-T
- c. **be-si-slepi-a**
CNT-[RFL]-hide-PRS.3
'he/she is still hiding by himself/herself' Asp_{Outer}-[si]-Root-*v*-T

- The same can be observed with multiple prefixes, -si- is adjacent to the root!

- (19) a. **ne-be-si-slepi-a**
NEG-CNT-[RFL]-hide-PRS.3.SG
'he/she is not hiding by himself/herself' Neg-Asp_{Outer}-[si]-Root-*v*-T
- b. **te-ne-be-si-slepi-a**
PRM-NEG-CNT-[RFL]-hide-PRS.3.SG
'don't let them no longer hide by themselves' Mod-Neg-Asp_{Outer}-[si]-Root-*v*-T

- Aspectual lexical prefixes like *iš*, *pa-/su-*, also known as *lexical* prefixes, stand for Inner Aspect (Asp_{Inner}) and originate inside a *vP*; they merge lower than the super lexical prefix *be-* and always precede *-si-* standing next to the root (12).

- (20) a. **pa-si-slèpi-au**
PVB-[RFL]-hide.PST.1.SG
'I have hidden myself' Asp_{Inner}-[si]-Root-*v*-T
- b. **ne-pa-si-slèpi-au**
NOT-PVB-[RFL]-hide.PST.1.SG
'I have not hidden myself' Neg-Asp_{Inner}-[si]-Root-*v*-T

- Stacking together both lexical and super-lexical prefixes show that the same results. -si- is adjacent to the root.

- (21) **ne-be-pa-si-slèpi-au**
NOT-CNT-PVB-[RFL]-hide.PST.1.SG
'I was not able to hide myself' Neg-Asp_{Outer}-Asp_{Inner}-[si]-Root-*v*-T

- The following example contains all the prefixes that are possible to find with verbs in Lithuanian. Regardless of the number of prefixes, -si- is adjacent to the root.

- (22) **te-ne-be-iš-si-dirb-inėj-a**
RSTR-NEG-CNT-PVB-[REF]-work-IPFV-PRS.3
'May he/she/they not behave arrogantly anymore.'⁶ Mod-Neg-Asp_{Outer}-Asp_{Inner}-[si]-Root-*v*-ImPr-T
(Korostenskienė 2017:478)

- The same pattern can be observed in the nominal domain, specifically in the deverbal noun with multiple prefixes.

⁶Colloquial Lithuanian

- (23) **ne-su-si**-prat- \emptyset -im-as
 NEG-PVB-[RFL]-ROOT-*v*-NMLZ-NOM.M.SG
 ‘a misunderstanding’

- **Generalization so far:** if there is a prefix, -si- will appear as prefix adjacent to a verbal root.

2.3 Lexical and Nominal Prefixes

- Recall the famous example with a lexical prefix and a nominal prefix. (24) is a denominal verb. E&N’s (2001) analysis accounts for the placement of -si- using LD.

- (24) a. **su-si-pa**-žin-au
 PVB-[RFL]-NOMP-know-PST.1.SG
 ‘I have become acquainted with’
 b. *Input:* [-**si**- [Prefix+Prefix+V+T]]
 c. *Output after LD:* [Prefix+-**si**-+Prefix+V+T]

- **Prediction:** if we have a verb with a single nominal prefix and no lexical prefix, then according to their analysis we should find -si- between a prefix and a root. However, this is not possible (43).

- (25) a. *Input:*[-**si**- [Prefix+V+T]]
 b. *Impossible after LD:* [Prefix+V+T+-**si**-]
 c. *Predicted Output after LD:* [Prefix+-**si**-+V+T]

- (26) ***pa-si**-žin-au
 NOMP-[RFL]-know-PST.1.SG
 ‘I became acquainted with’

- **Observation 3:** Not all classes of prefixes allow -si- to occur between the prefix and the root. In noun-derived verbs with a nominal prefix, -si- tends to occur at the end of the word as a suffix. **-si- is insensitive to nominal prefixes.**

2.3.1 Distinction between lexical and nominal prefixes

- Nominal prefixes are **homophonous** with lexical prefixes (e.g., *pa-*). Despite their identical form, both classes of prefixes exhibit different properties.
- Nominal prefixes are added to either bound or non-bound roots to form nouns.

- | | |
|-----------------------------------------------------------------|------------------------------------------------------------|
| (27) a. pa -sak-a
NOMP-root-NOM.F.SG
‘a tale’ (n) | b. *sak-a
root-NOM.F.SG
‘a tale’ (n) |
| (28) a. už -gául-è
NOMP-root-NOM.F.SG
‘insult’ (n) | b. *gául-è
NOMP-root-NOM.F.SG
‘insult’ (n) |
| (29) a. taik-a
peace-NOM.F.SG
‘peace’ (n) | b. pa -taik-a
NOMP-peace-NOM.F.SG
‘toady’ (n) |

- These prefixes behave like nominalizers in that they determine the gender of a noun, which is a property of *n* (Kramer 2015, see Adamson and Šereikaitė 2018 for Lithuanian).⁷

⁷Furthermore, one and the same root can occur with different nominal prefixes, which yields different meanings.

(30) a. kaln-as
 mountain.M-NOM.SG
 ‘a mountain’

b. pa-kaln-ė
 NOMP-mountain-NOM.F.SG
 ‘a foot of a mountain’

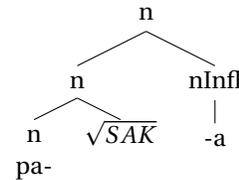
(31) a. lang-as
 window.M-NOM.SG
 ‘a window’

b. pa-lang-ė
 NOMP-window-NOM.F.SG
 ‘a windowsill’

(32) a. stog-as
 roof.M-NOM.SG
 ‘a roof’

b. pa-stog-ė
 NOMP-roof-NOM.F.SG
 ‘a garret’, ‘a shelter’

(33) pa-sak-a- NOMP-ROOT-NOM.F.SG ‘a tale’



- Nominal prefixes and lexical prefixes are distinct elements. Nouns with nominal prefixes can be turned into verbs. Those verbs can occur with lexical prefixes. Nominal and lexical prefixes can co-occur.⁸

(34) a. pa-sak-a
 NOMP-root-NOM.F.SG
 ‘a tale’

b. pa-sak-o-ti
 NOMP-root-v-INF
 ‘to narrate (about)’

c. pa-pa-sak-o-ti
 PVB-NOMP-sak-v-INF
 ‘to narrate (about), to have narrated (about)’

(35) a. už-darb-is
 NOMP-work-NOM.F.SG
 ‘wage’

b. už-darb-iau-ti
 NOMP-work-*v*-NOM.F.SG
 ‘to earn money for living’

(i) a. *gaul-ė
 root-NOM.F.SG

b. už-gaul-ė
 NOMP-root-NOM.F.SG
 ‘insult’ (n)

c. ap-gaul-ė
 NOMP-root-NOM.F.SG
 ‘deception’ (n)

(ii) a. *pirk-a
 buy-NOM.F.SG

b. iš-pirk-a
 NOMP-buy-NOM.F.SG
 ‘ransom’ (n)

c. į-pirk-a
 NOMP-buy-NOM.F.SG
 ‘bond’ (n)

⁸Additional examples with two types of prefixes:

(i) pa-prieš-tar-au-ti
 PVB-PVB-root-*v*-INF
 ‘to contradict someone from time to time’

(ii) pa-iš-kyl-au-ti
 PVB-PVB-root-*v*-INF
 ‘to have a picnic from time to time’

(iii) pa-at-gail-au-ti
 PVB-PVB-root-*v*-INF
 ‘to repent from time to time’

c. **pa-už**-darb-iau-ti
 PVB-NOMP-work-v-INF
 ‘to earn money from time to time’

- Nominal prefixes lack a perfective meaning which is usually associated with the lexical prefix. In the past tense, the noun-derived verb with the nominal prefix can have a continuous reading and a perfective reading is ruled out (36).

(36) Aš **pa**-sak-o-jau jai apie savo problemas.
 I.NOM NOMP-root-v-PST.1.SG her.DAT about self problems.ACC
 (i) ‘I was telling her about my problems.’ (ii) *‘I have told/told her about my problems.’

- Verbs with lexical prefixes are not compatible with the continuous reading and can obtain a perfective interpretation (37).⁹

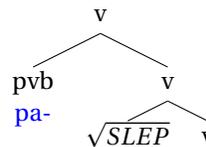
(37) Aš **pa**-slėp-iau skėtį.
 I.NOM PVB-hide-PST.1.SG umbrella.ACC
 (i) ‘I have hidden/hid an umbrella’ (ii) *‘I was hiding an umbrella.’

- Table 3 summarizes the tests used for the distinction between the two classes of prefixes.

	Nominal Prefixes	Lexical Prefixes
appears outside nominal prefixes	*	✓
has a perfective meaning	*	✓
can be embedded under certain state verbs	✓	*
can be stressed	✓	sometimes

- In my work, I assume that lexical prefixes in Lithuanian are directly merged with a verb. They are not phrasal as has been assumed for Germanic particles and Slavic lexical prefixes (see Appendix 1 for diagnostics).

(38) *Perfective verb*
 a. **pa**-slėp-ti - PVB-hide-PVB - ‘to have hidden’
 b.



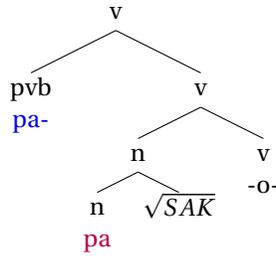
(39) *Noun-derived verbs*
 a. **pa-pa**-sak-o-ti
 PVB-NOMP-root-*v*-INF
 ‘to have narrated about’

⁹One needs to be aware that this test is non-applicable to bi-aspectual verbs. These verbs have a lexical prefix which usually signals a perfective reading. However, despite the presence of this prefix, these verbs can have either perfective or imperfective interpretation as in (i). Thanks to Peter Arkadiev (pc) for bringing this to my attention.

(i) Jonas par-ein-a namo.
 Jonas.NOM PVB-go-PRS.3 home
 (i) ‘Jonas is coming home.’ (ii) ‘Jonas (usually) comes home.’

(Arkadiev 2011:74)

b.



2.3.2 Facts with -si-

- In noun-derived verbs with a nominal prefix the reflexive -si- appears at the end (40b! E&N's (2001) analysis will have something to say about this pattern, namely that the nominal suffix, which is a SWd, is invisible to LD.

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(40) a. pa-sak-o-j-au-si
 NOMP-root-<i>v</i>-EP-PST.1.SG-RFL
 'I was narrating about something by myself.'</p> | <p>b. *pa-si-sak-o-jau
 NOMP-root-<i>v</i>-PST.1.SG-RFL
 'I was narrating about something by myself.'</p> |
| <p>(41) a. pa-žint-is
 NOMP-news-NOM.F.SG
 'acquaintance'</p> | <p>b. pa-žin-au-si
 NOMP-news-PST.1.SG-RFL
 'I was getting to know smb/smith'¹⁰</p> |

- When both lexical and nominal prefixes are present, -si- occurs in between the two. Thus, -si- is adjacent to a verbalized complex which contains a nominal prefix.

- (42) **pa-si-pa-sak-o-ti**
 PVB-[RFL]-NOMP-root-*v*-PST.1.SG
 'to have narrated about something by oneself'
- (43) **su-si-pa-žin-au**
 PVB-[RFL]-NOMP-know-PST.1.SG
 'I have become acquainted with' Asp_{Inner}-[si]-Root-*n-v*-T

- Additional examples with multiple prefixes. The same pattern can be observed.

- (44) **ne-pa-si-pa-sak-o-jo**
 NEG-PVB-[RFL]-NOMP-root-*v*-PST.3
 'They were not narrating something about themselves' Neg-Asp_{Inner}-[si]-*n*-Root-*v*-T
- (45) **te-pa-si-pa-sak-o-ja**
 TE-PVB-[RFL]-NOMP-root-*v*-PST.3
 'Let them narrate something about themselves' Mod-Asp_{Inner}-[si]-*n*-Root-*v*-T

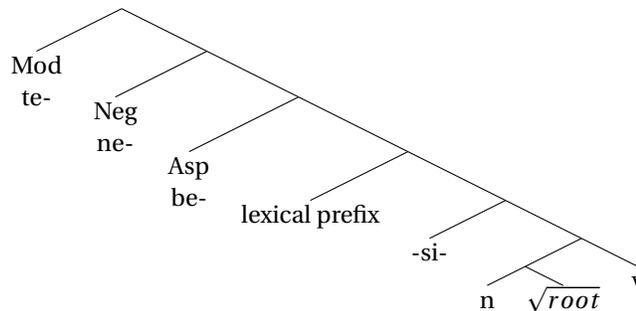
¹⁰There is also some variation. The corpus search shows that some speakers allow instances like (i). This is not surprising because -si- even with regular lexical prefixes in some dialects occurs at the end as in (ii).

- | | |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <p>(i) %pa-si-žin-ti
 NOM-RFL-root-PST.1.SG
 'I was getting to know smb/smith'</p> | <p>(ii) %su-prant-a-si
 PVB-root-PRS.3-RFL
 'they/he/she understand each other' (Endzelins 1971:248)</p> |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

- Table 3 provides an updated list of prefixes that can be found with a noun-derived verb

Super-lexical			Lexical			
Permissive, Restrictive, Affirmative	Negation	Aspectual meaning	Lexical	Reflexive	Nominal Prefix	Root
Te-	Ne-	Be-	į, iš-, per-, su-, ap-, pa-, nu-, pri-, etc	-si-	į, iš-, per-, su-, ap-, pa-, nu-, pri-, etc	Root

(46) denominal verb with -si-



- GENERALIZATION:
 - -si- appears as a suffix if there is no verbal prefix
 - -si- appears as prefix adjacent to a verbalized complex if a verbal prefix is present
- LEFT-LEANINGNESS: -si- needs to have something on its left

3 Syntax of -si-

- -si- has been viewed as a type of dissociate morpheme (e.g., a theme vowel or Agr node) which typically gets inserted late at PF and is left-adjoined to the highest element in the MWd.

(47) *Input*: [-si- [Prefix+Prefix+Prefix+V+T]]

(48) *Output after LD*: [Prefix+-si-+Prefix+Prefix+V+T]

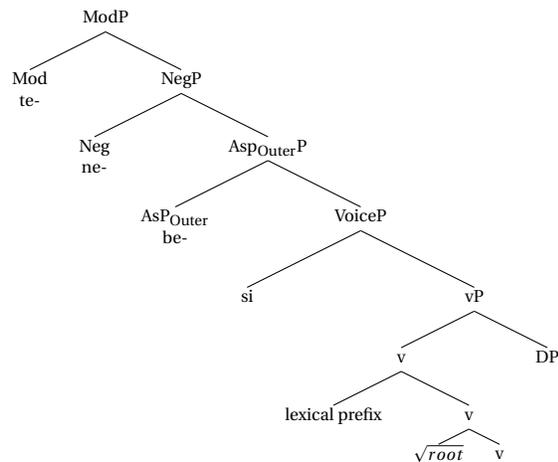
- What is the syntax of -si-?
- What is the underlying position of -si- in the hierarchical structure?
- In this section, I suggest that -si- in fact behaves like a valency reducing clitic that originates pretty low in the structure, roughly VoiceP (see Korostenskienė 2017 for arguing that -si- is in the specifier of *v*P, see Arregi and Nevins 2012 for treating -si- as a *v* category).¹¹

¹¹Regardless of whether -si- is within a *v*P or VoiceP, it will need to be structurally higher than lexical and nominal prefixes. One of the main arguments for treating -si- as *v* in Arregi and Nevins 2012 is the idea that -si- can form a non-transparent meaning together with a verb it is attached to. However, the domains for forming non-compositional meanings are pretty big: sometimes both the lexical prefix and -si- work on the meaning space of a root, see (i-d).

- (i) a. dėti - 'to put' (transparent)
- b. dēt-is - put-RFL - 'to put things by oneself' (transparent), 'to pretend' (non-transparent)
- c. nu-dėti - PVB-put - 'to kill' (non-transparent), 'to misplace' (transparent)
- d. nu-si-dėti - PVB-RFL-put - 'to sin (against)' (non-transparent), *'to kill myself', *'to misplace by myself'

- **-si-** originates in VoiceP, specifically higher in the structure than lexical and nominal prefixes.

(49)



3.1 Domains of -si-

- As correctly observed by Embick 2007, *-si-* does not jump from one MWd to another. Its domain in the verbal clause is a lexical predicate, a single MWd.

- (50) a. Aš slēpi-au-**si**.
 I.NOM hide-PST.1.SG-RFL
 'I was hiding myself.'
- b. *Aš-**si** slēpi-au
 I.NOM-RFL hide-PST.1.SG

- In sentences with a compound tense that consists of an auxiliary *būti* 'to be' followed by an active participle, *-si-* never raises to T where the auxiliary is located. *-si-* is attached to the predicate.

(51) Auxiliary + participle

- a. Jonas čia yra-(***si**) praus-ęs-**is**.
 Jonas here be.PRS.3-RFL wash-PST.PA.NOM.M.SG-RFL
 'Jonas has already washed himself here.'
- b. Jonas čia nėra-(***si**) praus-ęs-**is**.
 Jonas here NEG.be.PRS.3-RFL wash-PST.PA.NOM.M.SG-RFL
 'Jonas hasn't washed himself here.'
- c. Jonas yra-(***si**) dar ne-**si**-praus-ęs.
 Jonas be.PRS.3-RFL still NEG-RFL-wash-PST.PA.NOM.M.SG
 'Jonas still hasn't washed himself.'
- d. Jonas yra-(***si**) dar ne-nu-**si**-praus-ęs.
 Jonas be.PRS.3-RFL still NEG-PVBRFL-wash-PST.PA.NOM.M.SG
 'Jonas still has hasn't washed himself.'

3.2 -si- as a valency reducing clitic

- *-si-* can have a number of different uses including reflexive, reciprocal, anticausative, middle (Geniušienė 1987; Arkadiev et al. 2015; Korostenskienė 2017; Šereikaitė 2017)

- (52) a. Ieva prausi-a-**si**.
 Ieva wash-PRS.3-RFL
 'Ieva is washing herself.'

Reflexive

- b. Jonas ir Ieva bučiuo-ja-**si**.
Jonas and Ieva kiss-PRS.3-RFL
'Jonas and Ieva are kissing.' *Reciprocal*
- c. Durys at-**si**-darė.
Door.NOM PVB-**RFL** open-PST.3
'The door opened.' *Anticausative*
- d. Knyga legvai skait-ė-**si**.
book.NOM easily read-PST.3-**RFL**
'The book reads easily.' *Middle*

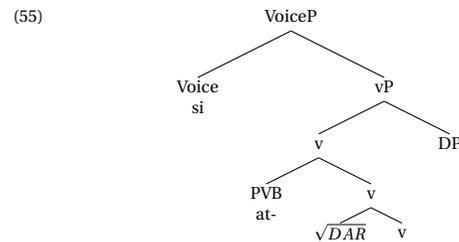
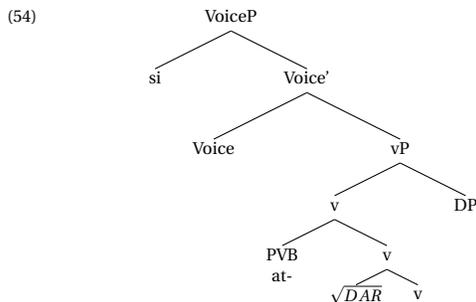
- Characteristic properties of anticausatives¹²:

Properties	Anticausatives
license indirect causers	✓
license causing events	✓
allows the <i>affectedness</i> dative	✓
lacks a thematic/agentive Voice	✓

Table 1: Properties of anticausatives

- (53) a. Ieva atidarė duris.
Ieva.NOM open.PST.3 door.ACC
'Ieva opened the door.' *Transitive*
- b. Durys at-si-darė nuo spaudimo.
door.NOM PVB-RFL-open-PST.3 from pressure
'The door opened from the pressure.' *Anticausative*
- c. Durys at-si-darė nuo kalimo į sieną.
door.NOM PVB-RFL-open-PST.3 from banging in wall.
'The door opened from the banging into the wall.' *Anticausative*

- In Šereikaitė 2017, I argued that anticausatives are unaccusative change-of-state verbs that lack an external argument and whose theme is an internal argument. I follow Wood 2015 and Schäfer 2008 proposing that they have an expletive VoiceP which lacks an external argument θ -role above a *v*P. Schäfer 2008 argues for two logical possibilities for the reflexive marker: i) reflexive is a head of Voice, ii) reflexive is a type of specifier of VoiceP.



¹²I assume that a single argument of anticausatives originates as an internal argument. Unlike unergatives, but like unaccusatives, anticausatives allow the affectedness dative. Furthermore, unergatives can be passivized whereas unaccusatives and anticausatives cannot.

4 Towards an analysis

- MY GENERALIZATIONS:

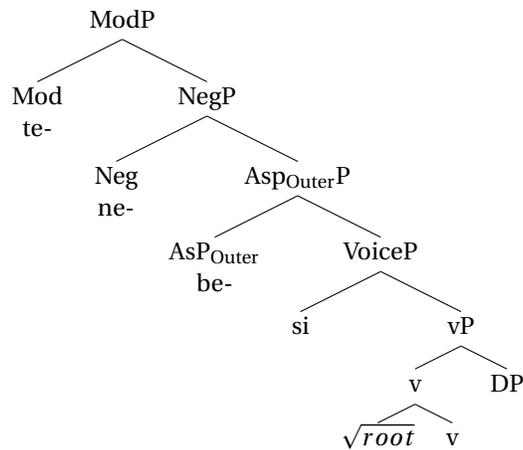
- -si- appears as a suffix if there is no verbal prefix
- -si- appears as prefix adjacent to a verbalized complex if a verbal prefix is present
- -si- acts as a valency reducing clitic located in Voice
- LEFT-LEANINGNESS: -si- needs to lean on something to its left (either a verbal prefix or a verbalized complex)

4.1 Test Case 1: Super-lexical Prefixes and -si-

- When super-lexical prefixes are present, -si- appears as a prefix adjacent to the verb complex. The left-leaningness principle is satisfied.¹³

(56) **te-ne-be-si-slepi-a**
 PRM-NEG-CNT-RFL-hide-PRS.3.SG
 ‘don’t let them/her/him no longer hide themselves/herself/himself’
 Mod-Neg-Asp_{Outer}-si-Root-*v*-T

(57) a. Hierarchical structure:



b. After Linearization: Te^ˆne^ˆbe^ˆsi^ˆRoot^ˆv^ˆT
 Mod-Neg-Asp_{Outer}-si-Root-*v*-T

- Crucially, in (57), -si- needs to wait until other super-lexical prefixes are merged in order to be linearized as a prefix too. This is especially true for cases where only the highest super-lexical prefix is present.

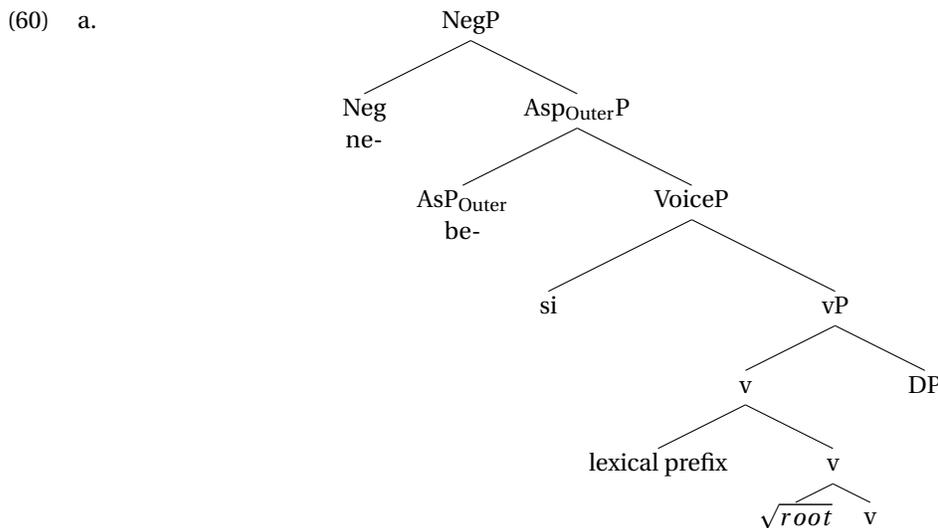
(58) **te-si-slepi-a**
 TE-RFL-hide-PRS.3.SG
 ‘let them/him/her hide themselves/herself/himself’
 Mod-si-Root-*v*-T

¹³One of the main questions would be how the verb complex and -si- get together. If we assume that the verb raises to T and all prefixes are heads but -si- is in the SpecVoiceP, then -si- will be linearized on the left or on the right of the entire MWd, which is problematic for cases where -si- is a prefix. Another possibility would be that -si- is a Voice head. The verb complex raises to Voice, but then -si- will still need to wait for other prefixes to be merged in order to be realized as a prefix.

4.2 Test Case 2: Lexical Prefixes and -si-

- When both lexical and super-lexical prefixes are present, -si- follows the same pattern. It surfaces as a prefix that is adjacent to the verbalized root. However, **-si- is structurally higher than the lexical prefix.**

(59) **ne-be-pa-si**-slėpi-au
 NOT-BE-PVB-RFL-hide-PST.1.SG
 'I was not able to hide myself' Neg-Asp_{Outer}-Asp_{Inner}-si-Root-*v*-T



b. After Linearization: **ne-be-si-pa**~Root~v~T Wrong order!

- The Lithuanian data provides evidence for a **special type** of Local Dislocation between two types of SWds, namely -si- and the lexical prefix *pa-*.¹⁴ LD applies only once.

(61) Output After LD: **ne-be-pa**~si~Root~v~T Mod-Neg-Asp_{Outer}-si-Root-*v*-T

4.3 Test Case 3: Lexical and Nominal Prefixes and -si-

- Recall that -si- needs to be adjacent to the verb complex. Structurally, nominal prefixes are inside the verbal complex, thus LD will not apply and -si- will appear between a lexical prefix and a nominal prefix.¹⁵

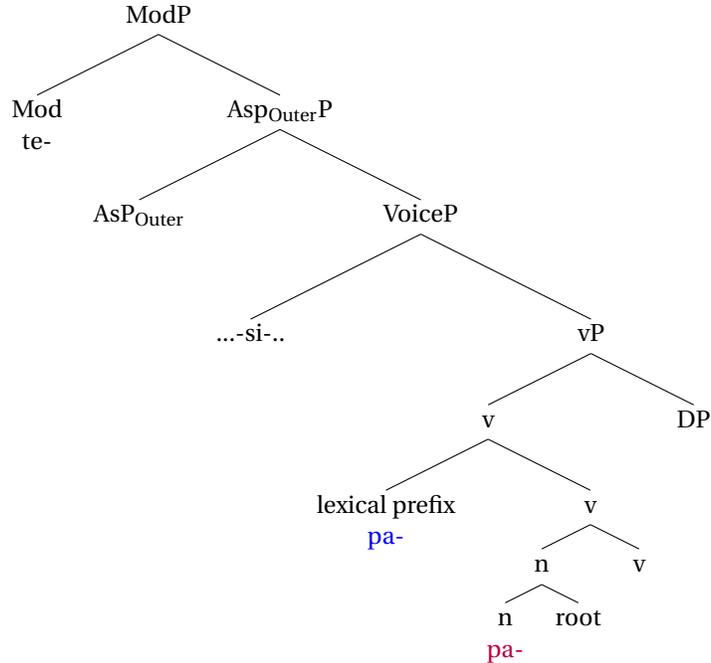
(62) **te-pa-si-pa**-sak-o-ja
 TE-PVB-RFL-NOMP-root-V-PST.3
 'Let them narrate something about themselves' Mod-Asp_{Inner}-si-*n*-Root-*v*-T

¹⁴The question is whether multiple lexical prefixes can be present in the structure and whether -si- would undergo LD more than once to satisfy its requirement to be adjacent to the verbalized complex. In E&N's (2001) analysis, LD can apply only once. Unlike in some Slavic languages, in Lithuanian, it is not possible to stack multiple lexical prefixes. One exception to this is the verb 'to sell' which is built by adding the prefix *par-* and the verb 'to give' (Korostenskienė 2017:459). In this case, we can see that LD applies only once.

(i) iš-par-duo-ti PVB-PVB-give-INF 'to sell out'	(ii) iš-si-par-duo-ti PVB-RFL-PVB-give-INF 'to sell out'	(iii) ??iš-par-si-duoti PVB-PVB-RFL-give-INF 'to sell out'	(iv) par-si-duo-ti PVB-RFL-give-INF 'to sell himself/herself'
--------------------------------------------------------	----------------------------------------------------------------	------------------------------------------------------------------	---------------------------------------------------------------------

¹⁵For those speakers who allow -si- to occur between a nominal prefix and a root, we could say that LD applies in those cases too.

(63) a.



b. Output after LD: **te-pa-si-pa-root-v-T**

- LD applies only once and *-si-* appears between the lexical prefix and the nominal prefix. Hierarchically, *-si-* is adjacent to the verbalized complex, hence its requirement is satisfied.

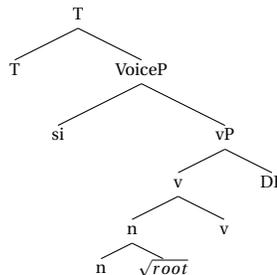
4.4 Test Case 4: -si- as a suffix

- *-si-* surprisingly appears as a suffix when no verbal prefix is present. Merging *-si-* as a suffix at the end of an MWD satisfies its LEFT-LEANINGNESS requirement to have something to lean on to its left. But as I argued, this cannot be an instance of LD.

(64) **slepi-a-si**
 sleep-PRS.3-RFL
 ‘they/she/he are/is hiding’

(65) **pa-sak-o-TIS**
 NOMP-root-V-INF-RFL
 to narrate about something by oneself’

(66) Hierarchical structure of (65)



(67) After Linearization: **n-root-v-T-si**

- I have argued that *-si-* has one underlying position: it originates in Voice. I have provided a number of arguments from complex verbs with multiple suffixes showing that *-si-* cannot simply undergo LD with a verb complex. The question then remains how *-si-* ends up as a suffix surfacing at the end of the verb.

- Special kind of inversion?
- Morphological Merger?
- Metathesis Arregi and Nevins 2012
- Perhaps there are two underlying positions as I suggested in Šereikaitė 2017

5 Conclusion

- In this study, I established various arguments showing that E&N's (2001) analysis cannot account for the Lithuanian data which has been misrepresented in the literature.
- LD is not a generalized operation that can blindly manipulate any two adjacent SWds. LD applies in Lithuanian in a very specific instance to satisfy *-si-*'s requirement to be adjacent to a verbal complex.

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6 Appendix 1

- While perfective prefixes have been argued to be parts of the complement of a VP, I argue that they are directly merged with a verbalized root.

6.1 Comparison with Small clauses

- If a lexical prefix is part of a VP complement, then it should pattern in a similar manner to small clauses.
- Small clauses can be modified, while lexical prefixes attached to a verb cannot.

(68) Jonas nudažė sienas per tamsiai.
Jonas.NOM paint.PST.3 walls.ACC too dark.ADV.
'Jonas has painted the walls too dark.'

(69) Ji (??tiesiai) į-nešė daiktus (tiesiai) į kambarį.
He.NOM (straight) PVB-carry.PST.3 stack (straight) in room.ACC
'He carried the stack right into the room.'

- Prefixes do not allow coordination, while small clauses do.

(70) Ji nu-spalvino dramblių juodai ir raudonai
She.NOM PVB-colour.PST.3 elephant black.ADV and red.ADV
'She coloured an elephant black and red.'

(71) *Ji į- and iš-nunešė obuolius.
She.NOM PVB and PVB-carry.PST.3 apples.ACC
'She carried the apples in and out.'

6.2 Evidence from German particles

Lexical Prefixes, unlike German particles¹⁶, lack phrasal properties.¹⁷

- **Topicalization.** German particles can be topicalized, while Lithuanian lexical prefixes cannot.

- (72) a. **An** der Haltestelle stiegen hübsche Frauen ein. **Aus** stiegen nur Männer.
 at the bus.stop climbed pretty women in. out climbed only men
 ‘At the bus stop, pretty women got on. Only men got off’ (Zeller 2001:89) *German*
- b. Į autobusą į-lipo gražios moterys. ***Iš** tiktai vyrai lipo.
 In bus.ACC PVB-climbed pretty women.NOM PVB only men.NOM climbed

Lithuanian

- **Focus Scrambling.** German particles can be scrambled, while Lithuanian prefixes cannot.

- (73) a. Ich weiß, daß, die Sonne **AUF** im Osten und **UNTER** im Westen geht.
 I know that the sun up in.the East and down in.the West geht.
 ‘I know that the sun goes up in the East and down in the West.’ (Lüdeling 2001:50)
- b. *Upė į- vakaruose teka ir iš- rytuose teka.
 River PVB West flows and PVB East flows.

Lithuanian

- **Gapping.** Prefixes cannot be stranded by gapping, while particles can.

- (74) a. weil Peter ein-steigt und Hans **aus**-(steigt)
 because Peter in-climbs and Hans out-climbs
 ‘because Peter climbs in and Hans (climbs) out’ (Zeller 2001:85)
- b. Jonas į-lipo, o Petras **iš**-(lipo).
 Jonas.NOM PVB-climbed, and Petras.NOM PVB-(climbed)
 ‘Jonas got in, and Petras got out.’

- Not every prefix introduces a new argument. Unaccusative verbs (75) take a perfective prefix while their argument structure does not change.

- (75) Jonas nu-mirė.
 Jonas.NOM PVB-die.PST.3
 ‘Jonas died.’

¹⁶The German data used in these tests are accepted for speakers only under special discourse environments

¹⁷The diagnostics used in this section are taken from Svenonius’ paper (2008:533-534) where he argues that Russian lexical prefixes are in fact phrasal.