Lithuanian si is not in second position: evidence from nominalizations and denominal verbs

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One of the main case studies that has been used as an example of second-position phenomena is Lithuanian reflexive *si* (Nevis and Joseph 1993; Embick and Noyer 2001). Based on consultation with native speakers and building on previous studies that haven't received much attention in the theoretical literature (Geniušienė 1987; Ambrazas et al. 1997; Arkadiev 2012, Korostenskienė 2017; Author 2017; a.o.), I provide empirical arguments against treating *si* as a second position element and establish a new empirical generalization that raises important considerations for theories of movement. While Author (2017) has already made many arguments against *si* as a second-position element, this squib focuses on the new additional arguments raised by nominalizations and denominal verbs with nominal prefixes, providing a closer probe into the structure of the Lithuanian verbs and nouns.

Two different generalizations have been made with respect to where *si* appears in a verb. Nevis and Joseph 1993 (hereafter N&J 1993) and Embick and Noyer 2001 (hereafter E&N 2001) claim that Lithuanian *si* occurs as an outermost suffix in unprefixed verbs e.g., *root-v-T-**si***[1] and in prefixed verbs, it appears in second position after the left-most prefix e.g., *prefix-**si**-prefix-root-v-T*. N&J (1993) view Lithuanian *si* as a type of mobile affix supporting Wackernagel's Law - a tendency for an element to occur in second position. In Distributed Morphology (DM), E&N (2001) have used this pattern as evidence for Local Dislocation (LD) – a local movement that takes place late in the derivation, at PF. The second-position characterization of Lithuanian *si* has guided linguistic theory and has been discussed in various studies e.g., Adger 2006:629–632; Williams 2007; Arregi and Nevins 2012; Watanabe 2013:479-480; Bruening 2019; Crysmann and Bonami 2016:267; Gleim et al. 2023:148–149. However, another line of research suggests that in prefixed verbs, *si* in fact appears between the last prefix and the root, yielding a *prefix–prefix–**si**–root–v–T* order (Ulvydas 1971:187; Jakaitienė 1976:125; Geniušiene 2007:639-640; Author 2017; Kushnir 2025:2258).

In this squib, I make three contributions. First, I show that neither generalization discussed above can capture the full set of data, and propose a new, more precise generalization: (i) *si* appears as the outermost suffix at the end of the host if there is no verbal prefix or (ii) if one or multiple **verbal prefixes** are present, *si* appears as a prefix immediately preceding **the smallest verbal stem**, i.e., the smallest verbal unit to which a verbal prefix can attach. I show that (ii) applies at all times (with two lexical exceptions) regardless of how many verbal prefixes are present. My generalization accounts for new data with verbal and nominal prefixes in nominalizations and denominal verbs, as well as in examples exhibiting speaker variation, which haven't been examined before. Second, I show that E&N's analysis based on LD cannot fully capture the data supporting my new generalization even with adjustments in place, namely treating *si* as a valency-reducing morpheme originating in VoiceP, as suggested by Author 2017, rather than treating it as a dissociated morpheme, as proposed by E&N. Lastly, I review Kushnir's (2025) Harmonic Serialism analysis of *si*, which employs a displacement operation that faces issues similar to the LD account.

1 Background

Lithuanian[2] *si* is a valency-reducing morpheme with a range of uses e.g., reflexive (non-inherent as in (2) and inherent), and reciprocal as in (4). (1) and (3) are transitive clauses with a nominative subject and an accusative object. When *si* is added as in (2), the verb becomes reflexive, no object is present, and the subject is interpreted both as an agent and as a theme. *Si* also appears in reciprocal constructions, which lack an object, (4).

(1) Ieva praus-ė vaikus.
Ieva.NOM wash-PST.3 children.ACC
'Ieva was washing the children.'

(2) Ieva praus-ė-si.
Ieva.NOM wash-PST.3-RFL
'Ieva was washing.'

(3) Jonas bučiav-o Ievą.
Jonas.NOM kiss-PST.3 Ieva.ACC
'Jonas was kissing Ieva.

(4) Jonas ir Ieva bučiav-o-si.
Jonas.NOM and Ieva.NOM kiss-PST.3-RFL
'Jonas and Ieva were kissing each other.'

Even though syntactically reciprocals and reflexives may be distinct, *si* has the same linear distribution in each: i) in unprefixed verbs, *si* appears as the final suffix after the

inflectional suffix (i.e., T), (2-4), and ii) as a prefix in prefixed verbs, (5-6). Thus, the placement of *si* is determined by the morphological shape of the verb rather than the nature of the syntactic construction itself.

(5) Ieva nu-si-praus-ė.
Ieva.NOM PFV-RFL-wash-PST.3
'Ieva washed/has washed.'

(6) Jonas ir Ieva pa-si-bučiav-o.
Jonas.NOM and Ieva.NOM PFV-RFL-kiss-PST.3
'Ieva and Jonas kissed/have kissed each other.'

In E&N (2001), *si* is viewed as a dissociated morpheme that gets added to the derivation at PF. However, *si* influences the argument structure of the verb e.g., the object in the reflexive in (2) is eliminated, and thus cannot be present at PF only. Rather, it should be treated as a reflection of VoiceP above *v*P (Author 2017, 2022; also Schäfer 2008; Wood 2015 for other languages).[3]

Regarding the distribution of *si*, the generalization proposed by N&J (1993:95–96) and E&N (2001:579) can be summarized as in (7).

(7) Second Position Generalization (2PG): *In unprefixed verbs, si appears as the outermost suffix. In prefixed verbs, si appears as* ***the second prefix from the left****.*

(2) and (4) are consistent with the 2PG: *si* occurs as a final suffix. In the case of one prefix e.g., an aspectual prefix, *si* appears between that prefix and the verb in (5-6), which is also captured by the 2PG. In the case of two prefixes, N&J (1993:95–96) report that *si* occurs between them as in (8-9). The data (with my own glosses) in (8-9) are correct, but, as I argue in Section 3, these examples are not representative of the main pattern.

(8) at-si-pa-sak-o-ti
PFV-RFL-NOMP-sak-TH-INF
'to be restored (as in a tale)'[4]

(9) su-si-pa-žin-ti
PFV-RFL-PFV-know-INF
'to become acquainted with'

Following the 2PG in (7), E&N (2001) argue that *si* provides evidence for LD – a post-syntactic movement. After linearization, LD manipulates adjacent elements that are M-words i.e., complex heads, or Sub-Words (SWds) that are terminal nodes i.e., roots and feature bundles. LD adjoins one element to another, which can reverse their linear order. Under this approach, *si* is a SWd and a "dissociated" morpheme. During the derivation,

the verbal head to which aspectual prefixes are adjoined raises to T. Being a dissociated morpheme, *si* is post-syntactically inserted and left-adjoins to the verb, the M-word. *Si* has one underlying position: it is linearized as the leftmost element in the M-word: [**si** * [prefix*V*T]].[5] *Si* then undergoes LD with the adjacent SWd, which is a prefix in (10a-10b). This rule derives (5-6) and (8-9).

(10) a. [**si** * [prefix*V*T]] → After LD [prefix ⊕ **si**...V*T] = (5-6)

b. [**si** * [prefix*prefix*V*T]] → After LD [prefix ⊕ **si**...prefix*V*T] = (8-9)

If the same rule is applied to an unprefixed verb, then *si* should appear between V and T, which are two distinct SWds. However, this prediction is incorrect: **V-si-T* e.g., **bučiav-si-o* 'kissed each other,' cf. (4). To derive the correct order, E&N suggest that first V and T undergo string-vacuous LD making them a single SWd, (11). After that, LD applies again moving *si* to the end of the verb, (12).

(11) V*T→ After LD [V⊕T]

(12) [**si** * [V⊕T]] → After LD [[V⊕T]⊕**si**] = (2-4)

The motivation for E&N postulating LD is built on the 2PG. However, another body of literature (Ambrazas et al. 1997:222; Geniušiene 2007:639–640; Korostenskienė 2017; Author 2017; Kushnir 2025:2258) proposes (13), which calls into question the motivation for LD. Nevertheless, I will show that neither 2PG nor PPG can fully capture all the data.

(13) *Postprefixal Generalization (PPG): in unprefixed verbs, si appears as the outermost suffix. In prefixed verbs, si appears* ***between the last prefix and the root****.*

2 The Revised Generalization

Building on novel data from native speakers and a corpus, I revise the 2PG and PPG by proposing the IVPG in (14). According to the IVPG, regardless of how many verbal prefixes are present, *si* always appears as a prefix immediately preceding the verbal stem, which itself may be complex e.g., consisting of a nominal prefix and a root. If no verbal prefix is present, *si* appears as a final suffix, even when the stem includes a nominal prefix.

(14) *Innermost Verbal Prefix Generalization (IVPG): In the absence of any* ***verbal prefixes****, si appears as the outermost suffix. In the presence of verbal prefixes, si* ***immediately precedes the smallest verbal stem****.*

In this section, I briefly summarize the incorrect predictions made by the 2PG discussed in Author 2017 and Korostenskiene 2017. I provide additional data from nominalizations that further support these findings. In Section 3, I provide new data with nominal prefixes in nominalizations and denominal verbs as well as some patterns exhibiting speaker variation that are captured by the IVPG but cannot be fully accounted for by the 2PG or PPG.

PREDICTION 1. The 2PG predicts that in the case of three or more prefixes, we should get orders like *prefix-**si**-prefix-prefix-V-T*.[6] The IVPG and PPG predict that the order should be *prefix-prefix-prefix-**si**-V-T*, assuming all prefixes are verbal. The former prediction is not borne out, whereas the latter is (Arkadiev 2012; Korostenskienė 2017; Author 2017).

Lithuanian has two types of verbal prefixes: super-lexical and lexical (Arkadiev 2011a:2). *te-*, *ne-*, and *be-* are super-lexical prefixes. *te-* can have an affirmative, restrictive, or permissive meaning, and can be structurally represented by a high ModalP (Korostenskienė 2017; Holvoet 2021). *be-* has a progressive meaning representing Outer Aspect and follows the negation prefix *ne-*. These prefixes originate outside *v*P since they have a transparent meaning, stack outside lexical prefixes, and do not affect the argument structure of the verb (Arkadiev 2011a,b; Korostenskienė 2017; author 2017). When super-lexical prefixes are present, *si* appears as a prefix adjacent to the verbal stem (and also the root), (15)-17). *si* cannot occur in second position as a prefix, cf. *te-(*si)-ne-slepi-a*, contradicting the 2PG.

(15) te-si-slepi-a
PRM-RFL-hide-PRS.3
'let them hide'

(16) be-si-slepi-a
CNT-RFL-hide-PRS.3
'they hide only a little'

(17) te-ne-si-slepi-a
PRM-NEG-RFL-hide-PRS.3
'don't let them hide'

Lithuanian also has two complex super-lexical prefixes *tebe-* and *nebe-* (Ulvydas 1971; Korostenskienė 2015, 2022), which can add a continuative or discontinuative meaning. These prefixes are treated as a single unit as they can be separated from the verb in certain contexts (Korostenskienė 2015, 2022). Again, in instances with super-lexical prefixes, *si* appears as a prefix next to V, rather than as a second prefix from the left, contradicting the 2PG: *te-nebe-si-slepi-a* (PRM-NEG.CNT-RFL-hide-PRS.3 'don't let them no longer hide').

Lexical prefixes e.g., *pa-*, realize Inner Aspect inside *v*P: in addition to adding a perfec-

tive meaning to a verb, they can also affect the argument structure of a predicate (Korostenskienė 2017, Author 2018). Only one lexical prefix can be attached to a verb (for exceptions see Section 3). Lexical prefixes follow super-lexical prefixes, but precede *si*, (18)-(19), cf. *ne-(*si)-pa-slepi-a*. Based on the IVPG and PPG, *si* shouldn't occur right after the super-lexical prefix, which is correct, (19). According to the 2PG, (19) should be ungrammatical.

(18) pa-si-slepi-a
PFV-RFL-hide-PRS.3
'they are able to hide'

(19) ne-pa-si-slepi-a
NEG-PFV-RFL-hide-PRS.3
'they are not able to hide'

The same behavior of *si* is attested in nominalizations. The placement of *si* in these constructions has not been discussed before. The relevant nominalizations have some verbal structure (Author 2025) and allow lexical prefixes and *si*, which appears as a prefix immediately preceding V, supporting the IVPG and PPG, (20). While nominalizations can affect the argument structure of a verb (Author 2025), this doesn't affect the placement of *si*: the position of *si* is determined by the presence/absence of verbal prefixes.

(20) ne-su-si-prat-∅-im-as
NEG-PFV-RFL-prat-*v*-*n*-NOM
'a misunderstanding'

In sum, in the presence of one or multiple verbal prefixes, *si* immediately precedes the verbal stem (and also the root): *prefix-prefix-**si**-V-T*. The IVPG and PPG correctly capture the distribution of *si*, whereas the 2PG doesn't. This pattern challenges E&N's analysis of *si*. If *si* is linearized on the left (see ex. (10)), then in verbs with multiple prefixes, it will need to undergo LD more than once to appear next to the stem. But, this should be impossible because *si*, according to E&N, can undergo LD with a SWd only once.

PREDICTION 2. The 2PG, PPG, and IVPG state that in verbs without prefixes, *si* always appears as a final suffix. This is correct: complex verbs can include a verbalizer, e.g., *-in*, and a habitual aspect suffix followed by T, and then *si*, cf. (21a)-(22a). Novel data from nominalizations shows that *si* is even the final element, cf. (21b-22b), when the verb has been nominalized, following the nominal suffix.

(21) a. deg-in-dav-au-si
burn-*v*-HAB-PST.1SG-RFL
'I used to suntan'

b. deg-in-im-as-is
burn-*v*-NMLZ-NOM-RFL
'suntanning' (n)

(22) a. deg-(*si)-in-(*si)-dav-(*si)-au

b. deg-(*si)-in-(*si)-im-(*si)-as

E&N provide an analysis of how *si* appears as a suffix, recall (11): V+T undergoes LD and becomes a single SWd, and then *si* dislocates with V+T becoming a suffix. If *si* undergoes LD from left to right by one SWd (V+T), then in cases with multiple SWds like (21) *si* should appear between the first two SWds (Korostenskienė 2017; Author 2017), which is ungrammatical, (22). So the 2PG fails in both its positional predictions.

3 New Arguments supporting the Revised Generalization

So far, the IVPG and PPG made the same predictions. I now turn to cases that neither the PPG nor the 2PG capture correctly, but the IVPG can easily account for. (8-9) (repeated in (23)-(24)) and (25) are instances where at first sight *si* seems to occur between two 'canonical lexical prefixes'. These data were the basis for the 2PG and erroneously led N&J (1993) to propose that in prefixed verbs *si* appears in second position. Korostenskienė 2017 and Kushnir 2025 treat these instances as lexical exceptions. While (24-25) indeed are exceptions, (23) is not. (23) reveals a pattern involving homophonous, but distinct prefixes, one verbal (lexical) and the other nominal (NOMP). I first discuss (23) and then turn to (24-25), which, as I show, exhibit speaker variation that hasn't been discussed before.

(23) at-si-pa-sak-o-ti
PFV-RFL-**NOMP**-sak-TH-INF
'to be restored (as in a tale)'

(24) su-si-pa-žin-ti
PFV-RFL-PFV-know-INF
'to become acquainted with'

(25) iš-si-par-duo-ti
PFV-RFL-PFV-give-INF
'to sell out'

NOMINAL PREFIXES. (23) has two prefixes, *at-* and *pa-*, which have been viewed as two lexical prefixes by J&N 1993 and E&N 2001. Kushnir 2025 treats (23) as an exception where *pa-* is fused with a root i.e., it is part of a new lexical root, which is non-segmentable.

However, (23) is not a case of fusion and it contains two distinct prefixes: a nominal one and a verbal (lexical) one. Lithuanian nominal prefixes often overlap with lexical prefixes in their form e.g., *pa-* can be a lexical prefix or a nominal one (Author 2018). Nominal prefixes are nominalizing *n* heads: they assign a grammatical category to a root. Merging the nominal prefix *pa-* with a bound root yields a noun as in (26), which can be turned into a verb, as in (27) where VS stands for a verbal stem.

(26) pa-sak-a
NOMP-sak-NOM.F.SG
'a tale'

(27) [[pa-sak]-o]$_{VS}$-ti
NOMP-sak-TH-INF
'to narrate (about)'

Nominal prefixes in Lithuanian behave like *n* heads and unlike roots in that they can determine the gender of a noun (see Author 2018, Authors 2019 for Lithuanian *n*s, see Kramer 2015 for *ns* bearing gender in other languages). Feminine nouns like (28) become masculine when combined with *pa-* as in (29).[7] The opposite pattern also exists: masculine nouns like (30) become feminine when combined with *pa-* as in (31). One and the same root e.g., $\sqrt{lang}$, can also merge with different nominal prefixes, resulting in that noun bearing different genders, feminine with *pa-* as in (31), but masculine with *prieš-* as in (32). I suggest that nominal prefixes are *n* heads that can bear either a [+FEM] or [-FEM] feature (building on Kramer 2015:170). When *n*[+FEM] is added to the root, the noun is feminine. When a *n*[-FEM] is added to the root, the noun is masculine. Both *n* heads can be realized as *pa-*.[8] Whether a root combines with *n* that has [+FEM] or [-FEM] will depend on licensing conditions (Kramer 2015).

(28) sien-a – *wall*-NOM.F.SG – 'a wall'

(29) **pa**-sien-is – NOMP-*wall*-NOM.M.SG – 'a boarder'

(30) lang-as – *window*-NOM.M.SG – 'a window'

(31) **pa**-lang-ė – NOMP-*window*-NOM.F.SG – 'a windowsill'

(32) **prieš**-lang-is – NOMP-window-NOM.M.SG – 'a front window'

Nouns with nominal prefixes like (33-35) can be turned into verbs as indicated by the presence of the verbal theme vowel in (34) and the overt *v* head, the suffix *-in*, in (36). The

newly created verbs in (34) and (36) contain a nominal prefix in their structure, meaning that they are not prefixless (contra Kushnir 2025).

(33) pa-sak-a
NOMP-sak-NOM.F.SG
'a tale'

(34) [[pa-sak]-o]$_{vs}$-ti
NOMP-sak-TH-INF
'to narrate (about)'

(35) pa-vidal-as
NOMP-vidal-NOM.M.SG
'a form'

(36) [[pa-vidal]-in]$_{vs}$-ti
NOMP-vidal-*v*-INF
'to form'

Verbs with lexical and nominal prefixes are attested, (38-40) (Author 2018, Peter Arkadiev (pc)). Lexical and nominal prefixes must be distinct elements because they are not in complementary distribution.[9]Kushnir 2025 treats these instances as exceptions where the rightmost prefix is fused with the root, but there is no evidence to suggest this is the case. Rather, nominal prefixes in these verbs are part of the verbal stem, but not fused with the root.

(37) **pra**-naš-as – NOMP-*prophet*-NOM.M.SG – 'a prophet'

(38) **iš-pra**-naš-au-ti – PFV-NOMP-*prophet*-*v*-INF – 'to foretell'

(39) **pra**-mog-a – NOMP-*mog*-NOM.F.SG – 'entertainment'

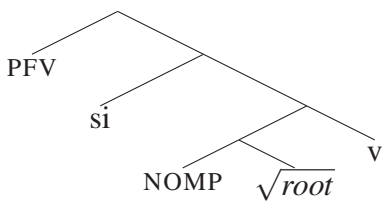
(40) **pa-pra**-mog-au-ti – PFV-NOMP-*mog*-*v*-INF – 'to have a good time'

Turning back to *si*, crucially, the derived verbs in (34-36) can be merged with both a lexical prefix and *si* as in (41-42). (43) introduces the structure of (42) that is built using DM where everything is decomposed, including derivational and inflectional morphemes. *si* is adjacent to a verbal stem that contains a nominal prefix. Unlike lexical prefixes, nominal prefixes must be invisible to *si*, even though they are part of the structure of the verb.

(41) pa-si-[[pa-sak]-o]$_{vs}$-ti
PFV-RFL-NOMP-sak-TH-INF
'to confess, avow'

(42) į-si-[[pa-vidal]-in]$_{vs}$-ti
PFV-RFL-NOMP-vidal-*v*-INF
'to acquire a certain form'

(43) The structure of the complex head in (42)



I suggest that *si* does not follow nominal prefixes in (41-42) because of phases. Category-defining heads like *n* or *v* form a phase and trigger Spell-Out (Marantz 2001). Nominal prefixes are *n*s, thus phasal heads (Author 2018). If we assume PIC 2 (Chomsky 2001), then once the nominal prefix and the root are merged, they form a phase. This complex then is merged with a *v*, a phase head, as in (43), which triggers the Spell-Out of its complement, the nominal complex. This complex is invisible to *si* since by the time *si* is merged, the nominal prefix has already been shipped to PF (for phases and *si* see Korostenskienė 2017).

The PPG cannot account for (41-42) with multiple prefixes. According to the PPG, *si* should appear as a prefix next to the root, yielding e.g., **į-pa-si-vidalinti*, which is ungrammatical. However, (41-42) are compatible with the 2PG (i.e., *si* appears after the first prefix) and can be captured by E&N's analysis. But the 2PG cannot account for cases with multiple verbal prefixes and a nominal prefix as in (44) where *si* is next to the verbal stem.

(44) nebe-į-si-[[pa-vidal]-in]$_{VS}$-a
NEG.CNT-PFV-RFL-NOMP-vidal-*v*-PRS.3
'they are no longer able to acquire a certain form'

Along similar lines, in cases with a single prefix that is nominal, *si* appears as a suffix. The 2PG and PPG predict the opposite: *si* should appear after the prefix. (45-46) show that *si* becomes a suffix in these cases cf. **pa-si-sak-o-ti* and **pa-si-vidal-in-ti*. (45-46) also indicate that nominal and lexical prefixes are distinct: *si* is a suffix in the presence of a single prefix that is nominal, but is a prefix when a lexical prefix is present, recall (18).

(45) pa-sak-o-ti-s
NOMP-sak-TH-INF-RFL
'to narrate smth about oneself'

(46) pa-vidal-in-ti-s
NOMP-vidal-*v*-INF-RFL
'to get a form'

Only the IVPG can capture this data, as it predicts *si* to appear immediately prefixal to the smallest verbal stem when there is a verbal prefix, and as a suffix otherwise.

LEXICAL EXCEPTIONS. I now discuss the data in (24-25), repeated in (47-48).

(47) **su**-si-**pa**-žin-ti
PFV-RFL-PFV-know-INF
'to become acquainted with'

(48) **iš-**si**-par**-duo-ti ‘to sell out’

PFV-RFL-PFV-give-INF

Lithuanian disallows multiple lexical prefixes, with exactly and only two exceptions in (47-48) where it looks like two lexical prefixes (highlighted in the examples) are present. It could be that the lexical prefix adjacent to the root i.e., *pa-* in (47) and *par-* in (48), is fused with the stem, and so this verbal complex is treated like an unprefixed stem by speakers (Author 2017; Stump 2022:198).

If *pa-* and the verbal stem are reanalyzed as an unprefixed stem in (47), then *si* should appear as a suffix in the absence of other verbal prefixes. However, in these cases, we find variation. My consultants prefer (49), which is not a common verb in Standard Lithuanian. Six instances of examples like (49) are attested on the Internet. Nevertheless, four examples with *si* occurring immediately after *pa-* as in (50) are attested in the Lithuanian corpus (https://klc.vdu.lt/). The Lithuanian Language Dictionary (http://www.lkz.lt) provides over thirty such examples (some of which date back to the late 19th/early 20th century). Thus, these instances might be in the process of some kind of reanalysis.

(49) pa-žìn-ti-s

PFV-know-INF-RFL

‘to get to know something’

(50) %pa-si-žìn-ti

PFV-RFL-know-INF

‘to get to know something’

Turning to (48), the prefix *par-* and the root $\sqrt{duot}$ ‘give’ form a non-transparent meaning i.e., *to sell*, suggesting that these elements are structurally local. Notably, it is grammatical for *si* to appear after *par-* when the prefix *iš-* is absent e.g., *par-si-duoti* ‘to sell one’s things’, ‘to sell oneself’. I hypothesize that *parduoti* has two structures: (i) *par-* and *duoti* are fused, as in (48), which is also confirmed by the ungrammaticality of **iš-par-si-duoti*, and (ii) *duoti* can also function as an independent verb combining with the lexical prefix *par-*, which yields *par-si-duoti*.

For (47), Kushnir 2025 suggests that the prefix *pa-* is fused with a root, which in fact was first proposed by Author 2017, and treats *pa-* as part of a lexical root *pažin-*. This analysis is compatible with the PPG. Under his system, (48) would also be analysed as

having a root *parduo-* with the prefix *par-* being part of it. However, Kushnir is unable to account for the variation in (49-50) and examples like *par-si-duoti*.

When a super-lexical prefix is added to (47-48), *si* still appears as a prefix next to the verbal stem as in (51-52). This is not predicted by the 2PG. Under the 2PG, *si* should appear after the very first prefix i.e., *ne-*. But if *pa-* in (24) and *par-* in (25) are fused with the verbal stem, then under the IVPG (according to which in prefixed verbs *si* is a prefix adjacent to the verbal stem) we capture the facts in (47-48) and (51-52).

(51) ne-su-si-pa-žin-o
NEG-PFV-RFL-PFV-know-PST.3
'they didn't become acquainted with'

(52) ne-iš-si-par-dav-ė
NEG-PFV-RFL-PFV-give-PST.3
'they didn't sell out things'

4 Alternative analyses and concluding remarks

I now demonstrate that even with all potential adjustments in place, LD still cannot account for the placement of *si*. I then show that Kushnir's (2025) analysis also faces similar issues.

Let's consider whether E&N's analysis can derive the new data in (44), repeated in (53).

(53) nebe-į-si-[[pa-vidal]-in]$_{vs}$-a
NEG.CNT-PFV-RFL-NOMP-vidal-*v*-PRS.3
'they are no longer able to acquire a certain form'

(53) contains the superlexical prefix *nebe-* and the lexical prefix *į-*, followed by *si* and the nominal prefix *pa-*. Recall that I treat *si* as a reflection of VoiceP. Under this approach, *si* originates lower than *nebe-*, which is above Voice, but higher than the lexical prefix *į-* and nominal prefix *pa-*, which are inside a *v*P as in (54), which is the syntactic structure of (44).

(54) [[$_{AspP}$ nebe- [$_{VoiceP}$ si [$_{vP}$ į- [$_{v}$ [$_{n}$ [pa-] [$\sqrt{root}$]] v]]]] T]

(55) nebe*si*į*pa*root*v*T→ after LD nebe*į⊕si*pa*root*v*T

After (54) is linearized as in (55), *si* will appear as a prefix between *nebe-* and *į-*. This is possible under the analysis where *si* is a Voice head and the complex verb undergoes head movement by raising to Voice, Asp, and so on (Author 2023). However, *si* needs to occur *after* the lexical prefix *į-*. To derive this order, LD applies between two SWds i.e., *si* and

ɟ-. LD can only apply once, which correctly derives the surface order of morphemes when prefixes are present (cf. 44-55). But, it is now unclear how to derive cases where there are no verbal prefixes and *si* ends up being a suffix. This cannot be an instance of LD (see p. 7) because it is problematic for cases with multiple suffixes. Can *si* appear as a final suffix through metathesis or Morphological Merger? This question requires further research.

Kushnir 2025 offers a Harmonic Serialism analysis of *si* where *si* is a Voice head (following Author 2022) that is always base-generated to the left of the root. In verbs with multiple verbal prefixes as in (56), *si* is added to the derivation before the lexical prefix (referred to as Prev), and super-lexical prefixes (Cont and Σ). All prefixes form a prosodic subdomain ω_1 inside a prosodic word ω.

(56) $[_{\omega}\ [_{\omega_1}$ Σ-Cont-Prev-Voice] V-...]] (Kushnir 2025:2265)

In prefixless verbs e.g., V-T-*si* in (21a), *si* undergoes a displacement operation with V-T which is a result of LeftLeaningness constraint (see again Author 2022) that disallows *si* to appear as an initial element in a prosodic subunit ω_1. This operation moves *si* to the end of the verb. In the presence of a lexical prefix e.g., (18), *si* is placed first, and then the lexical prefix is added to the left of *si* yielding *prefix-si-V-T*. Kushnir assumes that lexical prefixes originate above VoiceP in (56), but no empirical evidence is provided for this proposal. *Si* is not the initial element in ω_1, thus compatible with LeftLeaningness.

The first issue with Kushnir's approach is that his structure in (56) does not reflect the syntactic hierarchy in (54) where the lexical prefix *ɟ-* is in the *v*P. Lexical prefixes affect the argument structure and thus, must be generated inside *v*P (see Section 2). Based on (54), the lexical prefix should be attached to the verb first, before *si* is. Hence, under Kushnir's system, *si* would need to undergo a specific type of displacement operation within ω_1 for it to follow the lexical prefix. But, it is not clear what the nature and limitations of this operation are given that it would need to target either a full verbal complex (V-T) in unprefixed verbs like (21a) or only a lexical prefix in prefixed verbs like (18) or (54).

Second, it is unclear how Kushnir's system would derive the facts with nominal prefixes. Kushnir doesn't distinguish nominal prefixes from lexical prefixes. Nominal prefixes

like that in (23) are treated as parts of a new lexical root. However, this analysis misses a major generalization in the language. Nominal prefixes bear gender features in Lithuanian (see Section 3), and thus pattern like *n* heads, which must be distinguished from roots that lack gender features. These prefixes are separable from roots: one and the same root can combine with different nominal prefixes. These facts suggest that nominal prefixes are neither roots nor are they part of a lexical root.

Third, like verbal prefixes (Kushnir 2019), nominal prefixes can be assigned stress (e.g., ***pã****-sak-o-ti-s* in (45)), and therefore, may constitute a prosodic subdomain together with other prefixes, that is separate from the subdomain of where a lexical root is present. If nominal prefixes are in the separate subdomain, then why does *si* ignore the nominal prefix, and appear at the end of the verb in (45-46)? The displacement operation would need to ignore the nominal prefix and place *si* at the end of the word. It needs to be stipulated why this movement applies in some cases but not in others, rendering this analysis incomplete.

To sum up, the distribution of *si* has been misinterpreted in the literature. I have argued that that the two previous generalizations regarding *si* are incorrect and proposed the IVPG, according to which in the absence of any verbal prefixes *si* appears as the outermost suffix, and in the presence of verbal prefixes, *si* immediately precedes **the smallest verbal stem**. LD cannot derive the distribution of *si* even if we treat *si* as a reflection of Voice. N&J treat *si* as evidence for the existence of second-position affixes, but the new findings show that *si* is not in second-position. Lastly, Kushnir's (2025) analysis based on a displacement operation is incomplete: it still needs to explain why only certain elements are visible to it.

Notes

[1] *v* stands for a verbalizer, T stands for tense/agreement node.

[2] The reflexive marker appears either as *si*, *s* or *is*. When it is a prefix, then its phonological exponent is *si*. The allomorphs *s* and *is* tend to occur as final suffixes (Geniušienė 1987:16). This is a morpho-phonological alternation that is outside the scope of this squib.

[3] *si* also has an anti-causative use as in (ii). Author (2017) argues that in (ii), *si* originates in an expletive VoiceP, which is a type of non-agentive Voice that lacks an external

argument. The sole overt argument *door* is an internal argument base-generated inside a *v*P: it is not possible to add the reflexive anaphor in object position (cf. (i)-(ii)).

(i) Jonas ati-dar-ė duris. (ii) Durys at-si-dar-ė (*save).
Jonas.NOM PFV-open-PST.3 door.ACC door.NOM PFV-RFL-open-PST.3 self.ACC
'Jonas opened the door. 'The door opened.'

[4] *sak-* is a bound root.The literal translation of bound roots will not be included.

[5] *a*b* means that *a* linearly precedes *b*. a⊕b means adjunction of one SWd to another.

[6] V here stands for a verbalized root (i.e., [root *v*]), which is also a verbal stem – the smallest verbal unit to which the verbal prefix can attach. Roots are basic atoms of grammar, which have no category and are featureless (Embick 2010, 2015, a.o). They combine with category-defining heads like *v* or *n*, which can be overt or null, forming a stem.

[7] I assume that nouns without an overt *n* affix have a null *n* that bears gender features (see Authors 2019, Kramer 2015).

[8] *n* heads with different features can have the same surface forms: *n*[+FEM] and *n*[-FEM] can be realized as null in Lithuanian (see Authors 2019; Authors 2021). Other nominal prefixes like *už-* can also bear either [+FEM] or [-FEM]: *sien-a* 'wall-F' vs. *už-sien-is* NOMP-wall-M 'abroad', *stalas* 'table-M' vs. *už-stal-ė* 'NOMP-table-F.

[9] Author (2018:193) provides arguments for the distinction between nominal and lexical prefixes. The noun-derived verb with the nominal prefix has a reading of an ongoing event rather than a perfective reading, (i). To form a perfective meaning with a verb, a lexical prefix is added, (ii). Thus, unlike nominal prefixes, lexical prefixes add a perfective meaning.

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

(ii) Aš pa-pa-sak-o-jau jai apie savo problemas.
I.NOM PFV-NOMP-sak-TH-PST.1.SG her.DAT about self problems.ACC
'I have told/told her about my problems.', *'I was telling her about my problems.'

Predicates with a nominal prefix can be embedded under predicates like *to start* (iii). The

lexical prefix makes the verb perfective and infelicitous in this context.

(iii) Aš pradėjau pa-sak-o-ti/#pa-pa-sak-o-ti apie save.
I started NOMP-root-th-INF/PFV-NOMP-sak-TH-INF bout myself/
'I started to tell/#have told about myself.'

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