Remarks on Lithuanian *si* being a second position phenomenon

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, 2022; 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.

Two different generalizations have been made with respect to where *si* appears in a verb. First and most famously, Nevis and Joseph 1993 (hereafter N&J 1993) and Embick and Noyer 2001 (hereafter E&N 2001) claim that Lithuanian *si* has two distributions: it 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 - at the word level. 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.[2] However, another line of research suggests that in prefixed verbs, *si* in fact appears between the last

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

[2] All of these studies (apart from Crysmann and Bonami 2016:267) cite Lithuanian *si* in relation to LD. Some e.g., Adger 2006, Watanabe 2013, discuss the nature of LD and to motivate this movement use the Lithuanian data presented in N&J 1993 and/or E&N 2001. Others e.g., Williams 2007 and Bruening 2019, discuss the disadvantages of employing LD to account for the placement of *si*. What all of these studies have in common is that they assume that *si* always shows second-position effects, which, as I argue, is not the case.

prefix and the root, yielding a *prefix–prefix–**si**–root–v–T order* (e.g., 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 the two generalizations discussed above cannot 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 the data with nominalizations, and verbs with multiple verbal prefixes and nominal ones, some of which exhibit speaker variation and have not been thoroughly examined before. Second, even though it has been observed previously that E&N's analysis of *si* is not sufficient (Korostenskienė 2017; Author 2017; Kushnir 2025), I provide a full account of why E&N's analysis does not work, and suggest that *si* is not a dissociated morpheme, as proposed in E&N 2001, but a valency-reducing morpheme originating in VoiceP, following Author 2017. Even with all potential adjustments in place, LD still cannot fully capture all the data. 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[3] *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) is a transitive clause with a nominative subject and an accusative object. When *si* is added (2), the verb becomes reflexive, no object is present, and the subject is interpreted both as an agent and as a

[3]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 suffixes at the end of a verbal or nominal complex (Geniušienė 1987:16). This is a morpho-phonological alternation that is outside the scope of this squib.

theme. *si* also appears in reciprocal constructions, which lack an accusative object, (3)-(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), which encodes tense, person, and sometimes number, (2-4), and ii) as a prefix in prefixed verbs, (5-6).

(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.'

Thus, the placement of *si* is determined by the morphological shape of the verb rather than the nature of the syntactic construction itself. Morphologically, then both constructions have the same type of *si* because *si* behaves identically in both in terms of its position.

In E&N (2001), *si* is viewed as a dissociated morpheme (similarly to an Agr node) that gets added to the derivation at PF, see (10). However, *si* influences the argument structure of the verb e.g., the object in the reflexive in (2) is eliminated, and thus should be treated as a reflection of Voice above *v*P, similarly to passive morphology (Author 2017, 2022, 2023; also Schäfer 2008; Wood 2015, Paparounas 2023 for other languages).[4]

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).

[4] *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.
Jonas.NOM PFV-open-PST.3 door.ACC
'Jonas opened the door.

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

(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 will argue in Section 3, these examples are not representative of the main pattern.

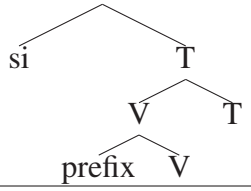
(8) su-si-pa-žin-ti
PFV-RFL-PFV-know-INF
'to become acquainted with'

(9) at-si-pa-sak-o-ti
PFV-RFL-NOMP-sak-TH-INF
'to be restored (as in a tale)'[5]

Relying on N&J's (1993) characterization of *si*, 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 not dominated by other head projections, or Sub-Words (SWds) that are terminal nodes i.e., roots and feature bundles. Specifically, LD adjoins one element to another, which may reverse their order. M-words undergo LD only with M-words and SWds only with SWds. No skipping of adjacent elements is possible.

For E&N, *si* is a SWd and a "dissociated" morpheme. During the derivation, the complex verbal head to which aspectual prefixes are adjoined raises to T. Being a dissociated morpheme, *si* then post-syntactically left-adjoins to the verb, the M-word, as in (10).[6] *si* has one underlying position: it is always linearized as the leftmost element in the M-word as in (11). *si* then undergoes LD with an adjacent SWd, which is a prefix in (12a-12b). This rule derives (5-6) and (8-9).

(10)



(11) After the linearization of (10)
[**si** * [prefix*V*T]]

[5] *sak-* is a bound root whose meaning can be dependent on other elements in the word. The literal translation of bound roots will not be included in the glossing.

[6] *a*b* means that *a* linearly precedes *b*, and is adjacent to *b*. a⊕b means adjunction of one SWd to another.

(12) 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 because of the ungrammaticality of V-RFL-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, (13). After that, LD applies again moving *si* to the end of the verb, (14).

(13) V*T→ After LD [V⊕T]

(14) [**si** * [V⊕T]] → After LD [[V⊕T]⊕**si**] = (4)

The motivation for E&N postulating this post-syntactic movement is built on the 2PG. However, the 2PG is not the only generalization made about *si*. Another body of literature (Ulvydas 1971:187; Ambrazas et al. 1997:222; Geniušiene 2007:639–640; Korostenskienė 2017; Author 2017; Kushnir 2025:2258) proposes the following generalization:

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

In Sections 2 and 3, I show that the 2PG incorrectly predicts the behavior of *si* in instances with multiple verbal prefixes. The PPG gets the facts with verbal prefixes correctly, but fails to capture data with nominal prefixes. I propose a new, more precise generalization based on the fuller set of data and show that these data cannot be fully analyzed using LD.

2 The Revised Generalization

Building on novel data from native speakers as well as a corpus and previous studies (Author 2017, 2022, 2023), I revise the 2PG and PPG by proposing the following:

(16) *Innermost Prefix Generalization (IPG): 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****.*

According to IPG, 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., consists 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). In Sections 2 and 3, I discuss the predictions that all three generalizations make, showing that only the IPG correctly captures all the facts.

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.[7] In contrast, the IPG and PPG predict that the order should be prefix-prefix-prefix-si-V-T, assuming all prefixes are verbal. Below, I extensively show that the former prediction is not borne out, whereas the latter is (also see Arkadiev 2012; Korostenskienė 2017, author 2017, 2022; Stump 2022).

Two groups of verbal prefixes are found in Lithuanian: super-lexical and lexical ones:

Super-lexical			**Lexical**		
Permissive, Restrictive Affirmative	Negation	Aspectual	Lexical Perfective	Reflexive	
te-	ne-	be-	iš-, pa-, su-, etc	si	Verbal Stem

Table:1 Lithuanian Verbal Prefixes (adapted from 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; also Svenonius 2004 for Slavic). When super-lexical prefixes are present, *si* appears as a prefix adjacent to the verbal stem (and also the root in these cases) regardless of whether there is a single super-lexical prefix

[7] 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. Following Embick 2010, 2015 and others, I view roots as basic atoms of grammar, which inherently have no category and are featureless. I assume that roots combine with category-defining heads like *v* (a verbalizer) or *n* (a nominalizer), which can be null or overt, forming a stem.

(17-19) or multiple ones (20). (21) shows that *si* cannot occur in second position as a prefix, contrary to what is predicted by the 2PG.

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

(18) ne-si-slepi-a
NEG-RFL-hide-PRS.3
'they are not hiding'

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

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

(21) te-(*si)-ne-slepi-a

Lithuanian also has two complex super-lexical prefixes *tebe-* and *nebe-* (not included in Table 1) (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). *Si* in verbs with *nebe-* appears next to V confirming the IPG and PPG, see (22. If *nebe-* is a single unit, then (22) is also compatible with 2PG as *si* appears as a second prefix from the left. However, in instances with multiple super-lexical prefixes, as in (23), *si* still appears as a prefix next to V, rather than as a second prefix from the left as predicted by 2PG.

(22) nebe-si-slepi-a
NEG.CNT-RFL-hide-PRS.3
'they are no longer hiding'

(23) te-nebe-si-slepi-a
PRM-NEG.CNT-RFL-hide-PRS.3
'don't let them no longer hide'

Lexical prefixes like *pa-*[8] realize Inner Aspect and originate inside *v*P: in addition to adding a perfective meaning to a verb, they can also affect the argument structure of the predicate. Only one lexical prefix can be attached to a verb (for exceptions see Section 3). Lexical prefixes follow super-lexical prefixes, but precede *si*, (24)-(25), cf. *ne-(*si)-pa-slepi-a*. According to the IPG and PPG, *si* shouldn't occur right after the super-lexical prefix, which is correct, (25). According to the 2PG, (25) should be ungrammatical.[9]

[8]For a thorough discussion and a full list of these prefixes see Korostenskienė 2017, Author 2018.

[9]In fact N&J 1993:106 fn. 6 acknowledge that in the examples with negation and a lexical prefix, *si* appears after the two prefixes. According to them, the negation and the prefix are fused and function like one prefix. However, these two elements are definitely not fused because they can occur independently of

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

(25) 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 complex nominalizations that have some verbal structure where *si* originates (Author 2022, 2023, 2025). These nominalizations allow negation, lexical prefixes, and *si*, which appears as a prefix immediately preceding V, and therefore support the IPG and PPG, (26). In the absence of verbal prefixes, *si* surfaces as a final suffix as in (27). While nominalizations can affect that argument structure of a verb (Author 2025), this does not affect the placement of *si*. The placement of *si* is sensitive to the presence/absence of a verbal prefix.

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

(27) daug-in-im-as-is
many-*v*-*n*-NOM-RFL
'reproduction'

To sum up, *si* behaves identically in the examples with one or multiple prefixes. If there is one verbal prefix, *si* appears as a prefix between that verbal prefix and the minimal verbal stem/and also the root. In the presence of multiple verbal prefixes, *si* also immediately precedes the verbal stem, and also the root. The IPG and PPG correctly capture the distribution of *si*, whereas the 2PG doesn't.

The established pattern has important consequences for 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 verbal stem. But, this should be impossible because *si*, according to E&N, can undergo LD with a SWd only once. Alternatively, LD could apply multiple times to turn verbal prefixes into one SWd, and then *si* would undergo LD with that SWd. However, these multiple applications of LD are stipulative.[10]

each other cf. (24) and *ne-si-slepia* 'they are not hiding'. Verbs with lexical prefixes and negation are very productive and should be carefully considered when establishing the empirical generalization.

[10]E.g., how many elements can become an impenetrable unit of this kind? If we can apply LD without any limits to turn multiple elements into one SWd, then how do we draw the difference between M-words and SWds? Furthermore, if *si* itself undergoes LD multiple times, then the question is why it stops preverbally.

PREDICTION 2. The 2PG, PPG, and IPG state that in verbs without prefixes, *si* always appears as a final suffix. This is correct: complex verbs can include a verbalizer, which is a causative suffix *-in*, and a habitual aspect suffix followed by T, and then *si* as in (28a). In nominalizations with a complex verbal structure as in (28b), *si* is the final element (Author 2022). It can never occur between suffixes as in (29).

(28) 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)

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

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

E&N (2001) provide an analysis of how *si* appears as a suffix, recall (13): 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 (28) *si* should appear between the first two SWds (also Korostenskienė 2017, Author 2022, Bruening 2019, Williams 2007), which is ungrammatical (29). If we use LD to derive (28), we need to apply LD multiple times to make not only V+T a single SWd but the entire complex with nominal and inflectional suffixes.

3 Lexical exceptions and nominal prefixes

So far, the IPG and PPG made the same predictions in terms of multiple prefixes and suffixes. I now turn to cases that neither the PPG nor the 2PG capture correctly. (8-9), repeated in (30) and (32), are instances where at first sight it appears as if *si* occurs between two 'canonical lexical prefixes'. These data were the basis for the 2PG and erroneously led N&J (1993) propose that in prefixed verbs *si* appears in second position. These examples have also been treated as lexical exceptions in Korostenskienė 2017 and Kushnir 2025. While (30-31) indeed are exceptions, (32) is not. I demonstrate that (32) represents a distinct pattern with two often homophonous, but distinct prefixes, one verbal (lexical) and the other nominal (NOMP). I will discuss (30-31) first, and then turn to (32).

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

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

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

Lithuanian generally disallows the stacking of multiple lexical prefixes. But there are two exceptions, namely (30-31). It could be that in these instances, the lexical prefix adjacent to the root i.e., *pa-* in (30) and *par-* in (31), is fused with the stem and this verbal complex is treated like an unprefixed stem by the speakers (Author 2017; Stump 2022:198). In (31), the prefix *par-* and the root $\sqrt{duot}$ 'give' form a non-transparent meaning i.e., *to sell*, suggesting that these elements are structurally adjacent and occur in the innermost phase (given Marantz' 2001 theory of inner/outer affixation).[11] Whatever the reason, it is clear that such data should not be used to motivate the distribution of *si*.

When a super-lexical prefix is added, *si* remains in the same position, appearing as a prefix next to the minimal verbal stem with prefixes like *pa-* in (33) and *par-* in (34). This

[11] If *pa-* and the verbal stem are reanalyzed by speakers as an unprefixed stem (30), then *si* should appear as a suffix in the absence of other verbal prefixes. However, in these cases, we find variation. My consultants prefer (i), which is not a commonly used verb in Standard Lithuanian. I have also found six examples with this type of distribution of *si* on the Internet. Nevertheless, four examples with *si* occurring immediately after *pa-* as in (ii) are attested in the Lithuanian corpus (https://klc.vdu.lt/). The Lithuanian Language Dictionary (http://www.lkz.lt) provides over thirty different examples with *pa-*[*si*]*-žinti* (some of the examples date back to the late 19th century/early 20th century). This suggests that these instances might be in the process of some kind of reanalysis. In terms of (31), it is grammatical for *si* to occur after *par-* when the lexical prefix *iš-* is absent as in *par-si-duoti* 'to sell one's things', 'to sell oneself'. I hypothesize that verbs like *parduoti* have two structures: (i) *par-* and *duot-* are fused, as in (31), 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 allows for *par-si-duoti*.

(i) pa-žìn-ti-[s]
PFV-know-INF-RFL
'to get to know something'

(ii) %pa-[si]-žìn-ti
PFV-RFL-know-INF
'to get to know something'

For (30), 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 new lexical root *pažin-*. This analysis is compatible with the PPG. Under Kushnir's system, (31) would also be analysed as having a root *parduo-* with the prefix *par-* being part of it. However, as pointed out by a reviewer, it is not clear how his approach would derive cases like *par-si-duo-ti* where *si* intervenes between the prefix and the root, and demonstrates segmentability of the structure. This instance and the speaker variation in (i-ii) are not discussed by Kushnir 2025.

is not predicted by the 2PG. Under the 2PG, *si* should appear after the very first prefix i.e., *ne-*. However, if *pa-* in (30) and *par-* in (31) are fused with the verbal stem, then under the IPG (according to which in prefixed verbs *si* is a prefix standing next to the verbal stem) we capture the facts in (30-31) and (33-34). E&N's analysis cannot account for (33-34), given that *si* in these cases again will need to dislocate with two SWds, namely *ne-* and the lexical prefix, as opposed to one SWd as required by E&N's account.

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

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

(32) is another instance where *si* appears between what looks like two lexical prefixes. These two prefixes have been treated as two instances of the same morpheme by J&N 1993 and E&N 2001. Kushnir 2025 treats (32) as an exception (along with examples like 30) where *pa-* is fused with a root: it is part of a new lexical root, which is a non-segmentable piece. However, (32) is not a case of fusion. (32) contains two distinct prefixes: a nominal one and a lexical one. Lithuanian nominal prefixes often overlap with lexical prefixes in their form e.g., *pa-* can stand for a lexical prefix or a nominal one (Author 2018). Nominal prefixes behave like nominalizing *n* heads: they assign a grammatical category to a root. Merging the nominal prefix *pa-* with a bound root yields a noun, (35-37).[12].

These nouns then can be turned into verbs as indicated by the presence of the verbal

[12]Unlike roots, nominalizing heads across languages bear gender features (Kramer 2015). Nominal prefixes like *pa-* behave like nominalizing heads in that they can determine the gender of a noun (Author 2018, Authors 2019 for Lithuanian *n* heads). For example, the original gender of the noun *sien-a* wall-NOM.F.SG is feminine but when combined with *pa-* its gender is masculine as in *pa-sien-is* NOM.P-wall-NOM.M.SG *'a boarder'*; also *vasar-a* summer-NOM.F.SG vs. *pa-vasar-is* NOM.P-summer-NOM.M.SG '*spring*'. The opposite pattern also exists: some masculine nouns like *lang-as* window-NOM.M.SG get feminine when combined with *pa-* as in *pa-lang-ė* NOM.P-window-NOM.F.SG 'a windowsill', also *stog-as* roof-NOM.M.SG vs. *pa-stog-ė* NOM.P-roof-NOM.F.SG 'a shelter'. Note that one and the same root e.g., *lang*, can combine with different nominal prefixes e.g., *pa-lang-ė* 'a windowsill' NOM.P-window-NOM.F.SG 'vs. *prieš-lang-is* NOM.P-window-NOM.M.SG 'a front window' resulting in these nouns having different genders. Thus, nominal prefixes like nominalizing *n* heads bear gender features in Lithuanian, whereas roots lack these features. Also see Authors 2019 who extensively argue for *n* heads bearing gender features in Lithuanian e.g., nouns like *vakar-∅-as* evening-*n*-NOM.M.SG vs. *vakar-ien-ė* evening-*n*-NOM.F.SG 'supper' consist of the same root but different suffixal *n* heads. The null *n* head bears masculine and the overt *n* head, *-ien*, bears feminine.

theme vowel in (36) and the overt *v* head, the suffix *-in*, in (38), (VS in (36)-(38) stands for a verbal stem). The newly created verbs in (36) and (38) contain a nominal prefix in their structure meaning that they are not prefixless.

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

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

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

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

These derived verbs then can be merged with lexical prefixes and *si* as in (39-40).(41) introduces the structure of (40) that is built using DM where everything is decomposed, including derivational and inflectional morphemes. Lexical and nominal prefixes must be distinct elements because they are not in complementary distribution.[13][14] Crucially, *si* is

[13]Verbs with lexical and nominal prefixes are attested: *iš-pra-naš-au-ti* 'to foretell', *iš-pra-kait-uo-ti* 'to sweat out', *pa-už-darbi-au-ti* 'to earn for living for a little bit', *pa-pra-mog-au-ti* 'to have a nice time', *pa-pa-taikauti* 'to toady to' (Author 2018, 2023). I thank Peter Arkadiev (pc) for discussing these examples with me. Kushnir 2025 treats these instances as exceptions where the rightmost prefix is fused with the root, whereas I suggest that they should be analyzed as instances with two distinct prefixes. Nominal prefixes in denominal verbs e.g., (36) and (38), are part of the verbal stem, but they are not fused with a root (see fn. 12 and Section 4). It is not justified to assume that any prefix that appears after *si* is a nominal prefix, given the exceptions in (30) and (31).

[14]Author (2018:193) provides additional arguments for the distinction between nominal and lexical prefixes. Nominal prefixes lack a perfective meaning associated with lexical prefixes. The noun-derived verb with the nominal prefix has a reading of an ongoing event rather than a perfective reading, see (i). To form a perfective meaning with a verb, a lexical prefix is added as in (ii). Thus, unlike nominal prefixes, lexical prefixes add a perfective meaning (apart from bi-aspectual verbs like *par-eina* 'to come' (see Arkadiev 2011b)).

(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)'I was telling her about my problems.' (ii) *'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) 'I have told/told her about my problems.', (ii) *'I was telling her about my problems.'

Perfective verbs cannot be embedded under predicates like *to start*, whereas imperfective verbs can (Borik 2002). Predicates with a nominal prefix can be embedded under such a verb (iii). In contrast, when the lexical prefix is added to the verb, the verb has a perfective meaning and is infelicitous in this context.

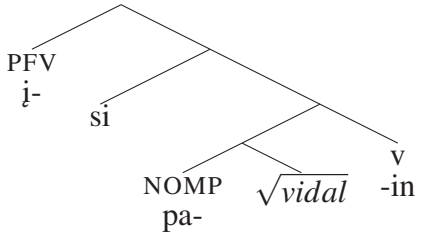
(iii) Aš pradėj-au pa-sak-o-ti apie save/#pa-pa-sak-o-ti apie save.
I.NOM start-PST.1.SG NOMP-root-v-INF about myself/PFV-NOMP-sak-TH-INF about self
'I started to tell about self/#have told about myself.'

adjacent to a verbal stem that contains a nominal prefix. Unlike lexical prefixes, nominal prefixes are invisible to *si* (40), even though they are part of the structure of the verb.

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

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

(41) The structure of the complex head in (40)



The PPG cannot account for the facts with nominal prefixes in (39-40). According to the PPG, *si* should appear as a prefix next to the root, yielding e.g., **į-pa-si-vidalinti*, which is ungrammatical. Notice that (39-40) are compatible with 2PG: *si* appears after the first prefix. This pattern can easily be captured by E&N's analysis as discussed in Section 2, ex. (12). However, this cannot be used as a primary example to form a generalization. The 2PG cannot account for cases with multiple verbal prefixes and a nominal prefix as in (42) where *si* appears in the same position next to the verbal stem as predicted by the IPG.

(42) 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'

If *si* cannot access the structure where the nominal prefix is located, then in cases with a single prefix that is nominal, *si* should appear as a suffix. The 2PG and PPG predict the opposite: *si* should appear after this prefix. (43-46) show that *si* becomes a suffix in these cases supporting the IPG. This pattern also indicates that nominal and lexical prefixes are distinct. *si* is a suffix in the presence of a single prefix that is nominal. But recall that it appears as a prefix when the lexical prefix is present, (24).[15]

[15]I suggest that *si* does not follow nominal prefixes because of phases. Category-defining heads like *n* or *v* form a phase and trigger Spell-Out (Marantz 2001). Lithuanian nominal prefixes are *n*s (see fn. 12), 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* as in (41), which is also a phase head. *v*

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

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

(45) *pa-[si]-sak-o-ti

(46) *pa-[si]-vidal-in-ti

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.

The question is whether E&N's analysis can derive complex examples like (42). (42) contains the superlexical prefix *nebe-*, 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 (47), which is the syntactic structure of (42).

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

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

After (47) is linearized as in (48), *si* will appear as a prefix between *nebe-* and *į-*. This is possible under the type of 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 *su-*. To derive this order, LD applies between two types of SWds i.e., *si* and *į-*. LD is restricted and can only apply once, which correctly derives the surface order of morphemes when prefixes are present (cf. 42-48). But, it is 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 PREDICTION 2, pp 8-9) because it is problematic for cases with multiple suffixes. Can *si* be placed as a final suffix through a special type of inversion, metathesis, or Morphological Merger? This question requires further research.

triggers the Spell-out of its complement, the nominal complex. This complex is not visible to *si* since by the time *si* is merged, the nominal prefix has already been shipped to PF. Thus, the nominal prefix is introduced as part of the structure of the verb, but is invisible to *si* because of the timing of operations. Korostenskienė (2017:482-483) also ties the placement of *si* to phases, though she does not discuss nominal prefixes.

Kushnir 2025 offers a Harmonic Serialism analysis of *si*. He assumes that *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 (49), *si* is added to the derivation before the lexical prefix (here referred to as Prev), and super-lexical prefixes (Cont and Σ) are added. All prefixes form a prosodic subdomain ω_1 inside a prosodic word ω.

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

In prefixless verbs e.g., V-T-*si* in (28a), *si* undergoes a displacement operation with V-T which is a result of LeftLeaningness[16] constraint that disallows *si* to appear as an initial element of a prosodic subunit ω_1. This operation moves *si* to the end of the verb. In the presence of a lexical prefix e.g., (24), *si* is placed first, and then the lexical prefix is added to the left of the reflexive resulting in *lexical prefix-si-V-T*. Lexical prefixes in this system originate above VoiceP (49), but no empirical evidence is provided for this proposal. Both the prefix and *si* are in the same ω_1. *Si* is not the initial element in ω_1, which is compatible with LeftLeaningness.

The first issue with Kushnir's approach is that his structure in (49) does not reflect the syntactic hierarchy in (47) where the lexical prefix *¡-* is in the *v*P. Lexical prefixes affect the argument structure and thus, must be generated inside *v*P (see Section 2). Based on (47), the lexical prefix should be attached to the verb first, before *si* is. Thus, 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 (28a) or only a lexical prefix in prefixed verbs like (24) or (47).

Second, it is unclear how Kushnir's system would derive the facts with nominal prefixes. Kushnir doesn't distinguish nominal prefixes from lexical prefixes. The instances with nominal examples like (32) (along with lexical exceptions like (30)) are treated as

[16]Kushnir 2025:2271 here builds on Author 2022 who proposes a more general version of this constraint.

parts of a new lexical root. However, this analysis misses a major generalization in the language. Nominal prefixes bear gender features in Lithuanian (see fn. 12), and thus they pattern like *n* heads, which must be distinguished from roots that lack gender features. Furthermore, these prefixes can be separable from roots: one and the same root can combine with different nominal prefixes (see fn. 12). These facts suggest that nominal prefixes are neither roots nor are they part of a lexical root.

Third, like verbal prefixes (see Kushnir 2019), nominal prefixes can be assigned stress (e.g., ***pã****-sak-o-ti-s* in (43)), and therefore, may constitute a prosodic subdomain together with them, 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 (43-44)? The displacement operation would need to ignore the nominal prefix and place *si* at the end of the word. Hence, 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 due to the lack of data with multiple prefixes and suffixes. I have provided a wide range of examples showing that neither 2PG nor PPG are correct. The 2PG states that *si* is an outermost suffix in unprefixed verbs, and in prefixed verbs, it appears as a second prefix from the left. The PPG states that in prefixed verbs, *si* appears between the last prefix and the root. I have proposed the IPG 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. I have argued that LD, while still being a useful tool, cannot fully 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. The new findings show that *si* is not in second-position, questioning the existence of these types of affixes. Lastly, Kushnir's (2025) analysis based on a displacement operation is incomplete as it still needs to explain why only certain elements are visible to it.

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Notes