

Antisymmetry and Morphology. Prefixes vs. Suffixes*

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revised version

1.

The antisymmetry proposal of Kayne (1994) took the Linear Correspondence Axiom (LCA) to see sub-word-level structure as well as phrasal structure.¹ This integration of morphology and syntax, as far as the LCA is concerned, recalls Greenberg's (1966) Universal 27:

(1) If a language is exclusively suffixing, it is postpositional; if it is exclusively prefixing, it is prepositional.

To the extent that (1) is correct, it, too, supports the idea that morphology is similar to and interacts strongly with phrasal syntax, at least as far as affixes (prefixes/suffixes) and adpositions (prepositions/postpositions) are concerned.²

A specific example of the relevance of the LCA to morphology comes up if we look at the prefix vs. suffix question:

(2) prefix - stem

(3) stem - suffix

The LCA has the immediate consequence that the structural relation between prefix and stem cannot be the same as the structural relation between suffix and stem. A prefix must (setting aside remnant movement possibilities) asymmetrically c-command the associated stem,³ whereas a suffix can never asymmetrically c-command the associated stem, given the LCA.

An antisymmetry-based view of syntax and morphology therefore leads to the expectation that we should find asymmetries between prefixes and suffixes, both language-internally and cross-linguistically. A view of syntax and morphology without antisymmetry would not lead to such an expectation.

¹See especially sections 4.4 and 4.5.

²On the strong relation between morphology and syntax, cf. also Fabb (1984), Baker (1985; 1988), Pesetsky (1985), Halle and Marantz (1993), Cinque (1999), Julien (2002), Ferrari (2005), Starke (2009), Caha (2010), Kayne (2010a; to appear -c) and Leu (2015). An extended argument in favor of greater separation between morphology and syntax, on the other hand, is given in Di Sciullo & Williams (1987).

For a proposal that (a certain instance of apparent) syncretism between dative and locative is best reanalyzed via the use of silent elements, see Kayne (2008a). For a proposal that apparent homophony in the case of English *there* is but apparent, see Kayne (2004; to appear - a); for a similar proposal, again involving silent elements, concerning English *one*, see Kayne (to appear - b), and on English *that*, Kayne (2010b).

³As noted by Di Sciullo (2005, 78), prefixes may differ from one another in how high above the stem they are.

The LCA-imposed structural asymmetry between prefix and suffix finds support, I think, in a simple question, to the extent that answers to it are available in at least some cases. Why are prefixes prefixes and not suffixes, and why are suffixes suffixes and not prefixes? This question can be asked either internal to one language, or cross-linguistically.⁴

For example, we can ask why English has *re-* as a prefix rather than as a suffix. If *re-* is a prefix rather than a suffix in all languages, then we can ask why that is so. If counterparts of *re-* are prefixes in some languages and suffixes in others, we might be looking at a case of irreducible parametric variation unrelated to any other property of the two sets of languages. Alternatively, it might be that prefixal *re-* vs. suffixal *-re* correlates with other properties, in which case the underlying parameter(s) in question would have broader reach.⁵ These kinds of questions about *re-* can and should be asked about any other prefix or suffix.

2.

In this paper, I will focus on negative prefixes such as English *un-* (and *in-*), as in *unintelligent* (and *ineffective*),⁶ where the negative prefix precedes and is associated with an adjective. As far as I can see, English has no corresponding negative suffix that would follow an adjective and have exactly the same interpretive effect as prefixal *un-*.

The following conjecture seems plausible:

(4) That English negative *un-* is prefixed, rather than suffixed, to the associated adjective is not accidental.

If (4) is correct, we need to ask why exactly *un-* could not have been a suffix.

In evaluating (4), we have to take into consideration English *n't*, which might be called suffixal, in sentences like:

(5) John can't solve the problem.

(6) This product isn't effective.

In (5) it seems clear that *n't* scopes over *can*, despite following it. But if so, then why could there not be a suffixal **-un*, as in **intelligentun*, that would scope over *intelligent* in the way that prefixal *un-* happily does?

Part of the answer to this question about *n't* vs. *un-* must lie in the fact that English *n't* is an instance of sentential negation,⁷ as opposed to *un-*. As Edwin Williams (p.c.) has pointed out to me, this distinction between sentential negation with *n't* and non-sentential negation with *un-* can be seen clearly with regard to following adjunct phrases. Consider the following contrast:

⁴As in Di Sciullo (2005, sect. 8.2).

⁵This might be the case for the *un-* of *unpack*, which seems to have a close suffixal counterpart in (some) Bantu languages; cf. Givon (1971, 151).

⁶The proposal to be developed will in all likelihood carry over to negative *a-* and to *non-*; for discussion of these and of the differences between *un-* and *in-* (which will not play a role in this paper), see Horn (1989, sect. 5.1). In what follows I will drop explicit reference to *in-*.

⁷As is well-known, sentential negation can be 'prefixal' in many languages, e.g. in Italian. On this and on other types of sentential negation in Italian dialects, see Zanuttini (1997). Cf. also Cinque (1999, 223, note 52).

(7) He wasn't happy because of anything you said.

(8) *He was happy because of anything you said.

Example (7) is natural, with stress on *you*, whereas (8) is not. In other words, *anything* in (7) is acting as a negative polarity item licensed by *n't*. Williams's point is now seen by comparing (7) with:

(9) *He was unhappy because of anything you said.

Unlike *n't* in (7), *un-* cannot license a negative polarity item within a following adjunct.⁸

Similarly, as Williams points out:

(10) He wasn't happy because of that, but because of this.

(11) *He was unhappy because of that but because of this.

Unlike *n't*, *un-* cannot license a contrastive adjunct pair with *but*. This difference between (10) and (11) holds, too, for adjectival complements paired with *but (only)*:

(12) They weren't able to do this, but only to do that.

(13) *They were unable to do this, but only to do that.

3.

Let us now return to (4) and assume that (4) is correct, i.e. that it is not accidental that *un-* is prefixal and not suffixal. If so, we can wonder why exactly (4) would be correct, given that no comparable restriction holds for sentential *n't*.

On the standard assumption that the scope of negation must be represented syntactically,⁹ there is nothing surprising, from the perspective of antisymmetry, about the fact that *un-* precedes the adjective it has scope over.¹⁰ If *un-* is a head, this is a special case of heads always preceding their complement. If *un-* is a Spec, then it's a special case of Specs always preceding their associated phrase.

If the scope of negation must be represented syntactically via asymmetric c-command, then at some point in the derivation *n't*, too, must precede the (entire) phrase that it scopes over. Yet in (5), *n't* does not precede *can*, despite *can* being part of the phrase that is in the scope of *n't*. A solution widely adopted for *n't* is that *can* in (5) starts out below *n't* and then moves up past it.¹¹ Prior to the movement of *can* past *n't*, *n't* does asymmetrically c-command the entire phrase that it scopes over.

The question that remains for *un-*, however, is why it cannot mimic *n't* and participate in a derivation in which a following adjective would move up past *un-*:¹²

⁸As Klima (1964) had noted, it is possible to have sentences like:

i) They were unable to give anything much of their time.

in which a polarity item is within a complement. As Chris Collins notes (p.c.), this is also possible with strong NPIs, as in:

ii) He is unlikely to get here until midnight.

From the perspective of Collins and Postal (2014), this suggests that *un-* has raised up from within the polarity phrase.

⁹Cf. Collins and Postal (2014, chap. 2) and references cited there. For arguments that scope is a matter of overt syntax, cf. Kayne (1998).

¹⁰Cf. Cinque (1999, 70) and Julien (2002, 191) on tense prefixes.

¹¹And similarly for movement across French *pas* et al.; cf. Pollock (1989) and references cited there.

¹²Cf. also, with a verb stem:

(14) They're unhappy.

(15) *They're happyun.

Starting from 'un happy', why could *happy* not raise, incorrectly yielding (15)? A proposal that comes to mind is as follows. Even though (14) is interpretively close to:¹³

(16) They're not happy.

the phrase minimally containing *un-* in (14) is 'smaller' than the phrase minimally containing *not* in (16).¹⁴ Let us informally call the phrase minimally containing *un-* a 'very small phrase' and let us assume that it contains no subject position capable of remaining filled (or perhaps no subject position at all), as suggested by:¹⁵

(17) What made them unhappy?

(18) *What made un them happy?

Assume further that such very small phrases allow for few or no movement operations (i.e. have few or no possible landing sites) within them. Assume more specifically that such very small phrases do not have enough 'space' for any adjective movement. If so, then the very small phrase reflected in *unhappy* will not allow any instance of adjective movement within it to produce **happyun*.¹⁶

Without antisymmetry, on the other hand, **happyun* (and **intelligentun*, etc.) could undesirably have had a suffixal *-un* asymmetrically c-commanding the adjective without any movement needing to take place.

It is also necessary to exclude the possibility that **happyun* could be derived by raising *happy* out of the minimal phrase containing *un-*. This exclusion might be attributable to some form of locality and/or (again only if antisymmetry holds) it might be understood in reference to an adjective-specific fact, namely to the fact that Italian adjectives cannot be followed by an object clitic, in contrast to past participles, as noted by Burzio (1986). A relevant minimal pair provided by Guglielmo Cinque (p.c.) is:

(19) un apprezzamento espressoci da tempo ('an appreciation expressed to-us from time')

(20) *un apprezzamento inespressoci da tempo

The past participle *espresso* in (19) can be followed by the object clitic *ci*, but the adjectivalized past participle *inespresso* in (20) cannot be.¹⁷ On the assumption that

i) That table is unliftable.

ii) *That table is liftunable.

¹³Though see Horn (1989) on the distinction between contradictory and contrary readings.

¹⁴Cf. De Clercq and Vanden Wyngaerd (2016).

¹⁵Whether an *un-*initial very small phrase is smaller than a classical small clause (cf. Williams (1975)) will depend on whether or not in, say:

i) You don't want them unhappy, do you?

them can be taken to remain within the small clause. For relevant discussion, see Postal (1974).

¹⁶For the impossibility of such adjective movement to be due to a Negative Island effect (cf. Rizzi (1990)), **happyun* would need to be distinguishable from *can't*.

¹⁷For discussion relevant to the question of what 'adjectivalization' amounts to, see Bruening (2014).

verb-clitic order is due to verb raising,¹⁸ (20) highlights Burzio's point that adjectives (here, even one based on a verb) are immune to a certain kind of movement.

That adjectives are limited in their movement possibilities is also seen in English, under the widely shared assumption that English partial VP-deletion of the sort seen in:

(21) They didn't talk to Susan, but they did to Mary.

(22) They didn't invite Susan, but they did Mary.¹⁹

involves prior movement out of the VP of the phrase stranded by VP-deletion.²⁰ If so, then the non-strandability of AP noted by Baltin (2006, 763):

(23) *They didn't become happy, but they did famous.

can be interpreted as reflecting the more limited possibilities of AP-movement as compared with PP- or DP-movement.

In conclusion, then, antisymmetry, combined with limitations on AP-movement and with the requirement that scope of negation must be represented syntactically in terms of asymmetric c-command, is capable of providing an account of the fact that English *un-* is a prefix and not a suffix.

4.

Somewhat closer to *un-* than *n't*, though still not close enough to *un-* to bear directly or indirectly on (4), I think, is the English suffix *-less* in sentences like:

(24) John is clueless about phonology.

This *-less* certainly has something to do with negation, and it behaves like *un-* with respect to (9), (11) and (13), as seen in:

(25) *They were clueless because of anything you said.

(26) *They are clueless because of this but because of that.

(27) *John is clueless about phonology, but only about syntax.

It is again uncontroversial to conclude that *-less* in (24), like *un-*, does not convey sentential negation.

The affixes *-less* and *un-* thus have in common their non-sentential character. For (4) to be correct, it must then be the case that *-less* is not an exact suffixal counterpart of prefixal *un-*, as seems plausible from the interpretation. The suffix *-less* also differs from the prefix *un-* with respect to the category of the stem in question. *Un-* is typically prefixed to an adjective,²¹ while *-less* is suffixal, not to adjectives, but to nouns:

(28) John says he feels strengthless today.

(29) You've been moneyless for years now.

vs.

(30) *John says he feels strongless today.

(31) *You've been richless for years now.

¹⁸Cf. Kayne (1991) for general discussion. For a Romance language/dialect in which object clitics systematically follow even finite verbs, see Tortora (2015).

¹⁹There are speakers who reject the direct object case while accepting to a greater degree the PP one - cf. Williams (1977, 130).

²⁰The movement idea goes back to Jayaseelan (1990); for different interpretations of what sort of movement is involved, see Kayne (1994, 76), Lasnik (1995).

²¹Though not quite always - see Horn (1989, 284).

Let us agree, then, that *-less* is not an exact suffixal counterpart of *un-*, and therefore that the suffixal character of *-less* is in fact compatible with (4), repeated here:

(32) That English negative *un-* is prefixed, rather than suffixed, to the associated adjective is not accidental.

5.

A subsidiary question is the following. If it is true that *-less* has to do with negation and if the scope of negation must be represented syntactically, which suggests that what ends up as suffixal *-less* must (at some point in the derivation) asymmetrically c-command its associated noun (and therefore, by antisymmetry, precede it), how does this *-less* come to be a suffix, relative to that noun? In the spirit of the earlier discussion of *n't* and the references mentioned there, the obvious proposal is that the noun in question (obligatorily) moves past *-less*:²²

(33) *-less* clue --> clue *-less*

The next question is, why is movement of this sort past an affix allowed with *-less*, but not with *un-*? Probably relevant is the close relation that holds between *-less* and non-affixal *without*,²³ which is illustrated in:

(34) John is without a clue about phonology.

(35) ?John says he feels without any strength today.

(36) You've been without money for years now.

These are very close in interpretation to (24), (28) and (29), with *-less*.²⁴ *Un-*, on the other hand, is not directly paralleled by *without*:

(37) John is unhappy.

(38) *John is without happy.

The close relation between *-less* and *without* means that the negative character of *-less* is now indirectly reflected in the NPI-licensing property that *without* has:²⁵

²²That this movement is obligatory, as shown by **lessclue*, may follow from 'anti-optionality' of the sort considered by Chomsky (1986); and similarly for *writer* vs. **erwrite* and other cases mentioned by Di Sciullo (2005, 13).

²³Thinking of German *-los*, it seems unlikely that English suffixal *-less* is closely related to English non-affixal comparative *less*, from which it differs in pronunciation (at least in my English, where the vowel of suffixal *-less* must be reduced and the vowel of comparative *less* must not be).

²⁴In addition, Chris Collins (p.c.) points out the following, which is surprisingly close to acceptable:

i) ?He has been neither money- nor power-less for years.

recalling, as he notes:

ii) He has been neither without money nor power for years.

²⁵The locus of negativity in *without* may be *out* (assuming that *without* = *with+out*; cf. *within*), whose negative character is arguably reflected in:

i) out of; off of

vs.

ii) *in of; *on of

with the *of* of (i) in turn related to that of:

iii) They emptied the glass of its water.

(39) We know that you left without any money.

(40) We would have been better off without any of you on our side.

English *without* is readily taken to be a preposition whose counterpart in many languages is a postposition. Now English is itself decidedly more prepositional than postpositional, but there is reason to think that English actually does have some postpositions. Examples are:²⁶

(41) the *-ce* of *once, twice*

(42) the *by* of *whereby*; the *-fore* of *therefore*; the *with* of *wherewithal*

(43) the *about* of *whereabouts*

(44) in a more complex way, the *a-* of *two months ago*

The proposal now is that English *-less* is an affixal postposition, whose complement (for example, *clue* in *clueless*) comes to precede it in the general manner of complements of postpositions.

It is to be noted that since *-less* arguably scopes over *clue*, and since by earlier assumption, (negative) scope must be represented in terms of asymmetric c-command, it must be the case that at some point in the derivation *-less* asymmetrically c-commands *clue*. Given antisymmetry, *-less* must therefore precede *clue* at that point in the derivation. Consequently the derivation-final order whereby *clue* in fact precedes *-less* must come about via leftward movement.

This leftward movement of *clue* past *-less* is, however, not necessarily local complement-to-Spec movement,²⁷ and might in fact be phrasal movement.²⁸ (Whether or not there are languages with a prefixal counterpart of *-less* is a question that needs to be looked into.)

That *-less* can be an affixal postposition, in effect a suffix, is made plausible, as just discussed, by the close link between *-less* and the non-affixal adposition *without*. The postpositional status of *-less* might appear to clash with the adjectival character of *clueless*, etc., as in:

(45) a clueless person; a hopeless proposal; an endless discussion

This apparent clash, will dissolve, though, if Amritavalli and Jayaseelan (2003) are correct in taking adjectives in general not to be a primitive syntactic category,²⁹ but rather to be instances of nouns incorporating into Case. (Either *-less* then realizes some Case, or their proposal should be revised to replace Case with adposition.) If Amritavalli and Jayaseelan (2003) are on the right track, there is no need, as far as (45) is concerned, to think in terms of any notion of category change. Rather, English, like

vs.

iv) They filled the glass with/*of water.

²⁶On these, cf. Kayne (2014); on *wherewithal*, cf. also Kayne (to appear - d).

²⁷Cf. Kayne (1994, 48-49; 2003, sect. 4.4); on the possible general absence of maximally local complement-to-Spec movement, cf. Abels (2003) and Grohmann (2003).

²⁸Cf. Koopman and Szabolcsi (2000), Kayne (2003, note 5) on noun-incorporation, Jayaseelan (2010), Ott (2016); also Collins (2006) and Kayne (2008b) on derived nominals (with a possible extension to cases like *legalize*).

²⁹Cf. Kayne's (2008b) proposal that there is a basic noun-vs.-verb-like distinction in the syntax, with no real room for any other basic category.

some other languages, has the property that certain noun+postposition combinations can act as pronominal modifiers; there is in fact no primitive category 'adjective' that 'clue+less' could 'change into'.

One final point about *-less* and *without*. There is a difference between them that has to do with the size of the nominal they are associated with, in that *without* is compatible with various determiners, as seen in:

- (46) They were left without any hope.
- (47) They found themselves without a (single) friend.
- (48) Don't leave without the wallet.

while *-less* is not:

- (49) They were left (*any)hopeless.
- (50) They found themselves (*a (*single))friendless.
- (51) Don't leave (*the)walletless.

In this respect, *-less* behaves on a par with what we informally call OV compounds:³⁰

- (52) John is an avid (*the/*a/*any) newspaper reader.

This parallelism extends to ordinary plural *-s*, which in my English at least is excluded from such deverbal OV compounds, as illustrated by:

- (53) John is an avid newspaper(*s) reader.

and similarly for *-less*:

- (54) *hopesless; *friendsless; *walletsless

The parallelism extends further to non-*s* plurals,³¹ which are fairly good both in OV compounds and with *-less*:

- (55) Mary is a real children lover.
- (56) Their marriage is childrenless.

Why exactly compounds and *-less* share these properties remains to be fully understood. Of relevance is the fact that the plural restriction is also sometimes found phrasally, as in the well-known:³²

- (57) something(*s) else

as well as in cases brought to light in Collins (2007), such as:

- (58) Go to bed(*s)!
- (59) They went home(*s) yesterday.

and in a similar vein:

- (60) That poor guy is in the hospital again.
- (61) Those poor people are in the hospital(*s) again.

even in the presence of the definite article. (Example (61) is possible to some degree with *-s* if read with a fully referential use of *the hospitals*.)

³⁰Cf. also a modifier-containing example due to Chris Collins (p.c.):

- i) a chocolate cake-less party.

which recalls:

- ii) a real chocolate cake lover

³¹Cf. Kramer (2016, 548) on Amharic.

³²Cf. the fact that the nominal part of English deverbal OV compounds has a lot in common with the nominals involved in non-word-like pseudo-noun-incorporation - cf. Massam (2001; 2009) and Lyutikova and Pereltsvaig's (2015, 307ff.) use of Pereltsvaig's (2006) 'small nominal', akin to Williams (1975) on small clauses.

Moreover, the restriction concerning determiners seen in (49)-(52) itself recalls one having to do with determiners inside PPs, as arguably illustrated in French by:

(62) *le prix de les maisons ('the price of the houses')

(63) le prix des maisons ('the price of-e houses')

In this particular case (and in some others in French), the /- of the definite article is obligatorily not pronounced. (For a wide range of comparable examples from many languages, see Himmelmann (1998).)

Deverbal compounds of the *newspaper reader* sort have certain properties in common with *-less*, as just seen; at the same time, their word order arguably interacts with ordinary syntax, in particular (but not only) if the following conjectures are (largely) correct:

(64) Deverbal OV compounds are never found in strict V-initial languages.

(65) Deverbal VO compounds are never found in strict head-final languages.

(As (should be) usual, the terms 'V-initial' and 'head-final' are informal, very approximate characterizations of certain derivation-final properties.) These conjectures are akin to Greenberg's Universal 27, mentioned early on in (1), and like his proposed Universal point to the existence of a single 'merge engine' that spans both syntax and what we conventionally think of as morphology.³³

If we now move back from the link between *-less* and compounds to the link between *-less* and *without*, we can note the following discrepancy:

(66) Yours is not a hopeless proposal.

(67) *Yours is not a without hope proposal.

Plausibly, this is a side effect of the difference in word order between postposition-like *-less* and preposition *without*; more specifically, (67) is likely to fall under Biberauer et al.'s (2014) FOFC or whatever the FOFC itself derives from.

6.

If (32) is correct, then English cannot, for the reasons given, have a suffixal counterpart of *un-*.³⁴ The question now arises as to whether other languages could have a suffixal counterpart of *un-*. One consideration has to do with Koptjevskaja Tamm and Miestamo's (2015) saying, if I read them correctly, that even prefixal counterparts of *un-* are relatively rare cross-linguistically. Possibly, this might be related to Davison's (1978) point about negative phrases like *no book being* (relatively) rarer cross-linguistically than one might have expected. Why these might be (relatively) rare needs to be looked into. But let me take the position that there remains an important distinction between '(relatively) rare' and non-existent. This distinction will be of importance to the present paper if the following conjecture is correct:³⁵

(68) No language has an exact counterpart of *un-* that is suffixal.

³³And perhaps also phonology - cf. Kayne (to appear - c).

³⁴Here as elsewhere, I abstract away from the possibility that *un-* is bimorphemic, such that *-n-* is the negative morpheme proposed for the general case in English by Leu (2012, sect. 4.3).

³⁵Cf. the fact that the index of Horn (1989) has an entry for 'prefixes, negative', but none for 'suffixes, negative'.

If (68) is correct, then I would take the earlier account proposed for English to carry over to all languages.³⁶ In which case, the language faculty would have the following properties:

- (69) a) Antisymmetry holds.
b) The scope of negation is represented syntactically, in terms of asymmetric c-command.³⁷
c) An adjective cannot move past *un-* or any counterpart of *un-*.³⁸

7.

I note in passing that the notion of affixal postposition found in the discussion of *-less* is matched by the notion of affixal preposition (*a-*, in this case³⁹) arguably called for in:⁴⁰

(70) They were standing atop the mountain.

(71) They went aboard the ship.

with non-affixal counterparts:

(72) They were standing on top of the mountain.

(73) They went on board the ship.

as well as in Appalachian English:

(74) I knew he was a-tellin' the truth...

Wolfram and Christian (1975, 100ff.), from which this example is taken, note in particular (p. 102), that “A-prefixing does not typically occur following a preposition” and suggest that “This restriction is due to the fact that *a-* prefixing originally derives from the preposition *on* or *at*, prepositions which would be in conflict with other prepositions such as *for*, *from*, *by*, etc.” This seems basically right, especially if we take the (affixal) prepositional status of this *a* to hold in contemporary Appalachian English, too.

8.

In conclusion, a combination of antisymmetry plus reduced movement options for adjectives in the context of very small phrases is capable of providing an account of the fact that English has prefixal *un-*, rather than suffixal *un-*. If English is in this respect typical, then the proposed account will have universal validity.

³⁶Horn (1989) mentions in other contexts the possibility of a ‘Neg-First’ principle that seems, though, to have little plausibility cross-linguistically, in particular given the numerous languages in which the negative element is sentence-final or near to that; cf. for example Amritavalli and Jayaseelan (2005) on Dravidian languages, Shibata (2014) on Japanese, Simpson and Syed (2014) on Bangla (in finite clauses), and Dryer (2009) on Central African languages. From the text perspective, such (near-)final negation must have been moved across, in all likelihood by phrasal movement, on which, cf. Nkemnji (1995) and Biberauer (2008, sect. 3.3).

³⁷Cf. Collins and Postal (2014).

³⁸If the conjecture in question were to turn out to be incorrect, then at least one of (a-c) here would have to be incorrect, presumably (c).

³⁹Cf. Kayne (2016, sect. 10).

⁴⁰In both cases, the formal status of affixal vs. non-affixal needs to be elucidated.

A key component of this account is that antisymmetry extends to what we think of as morphology, leading to a necessary asymmetry between prefixes and suffixes,⁴¹ with the latter unable to asymmetrically c-command an associated stem.

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⁴¹Cf. Newell et al. (2017, 17). Prefix vs. suffix differences imposed by antisymmetry are paralleled by antisymmetry-imposed differences between preverbal and postverbal pronominal clitics; cf. Benincà and Cinque (1990). (The Itelmen prefixes discussed in Bobaljik and Wurmbrand (2001) may be akin to Romance pronominal subject clitics.)

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