

Head Movement from Non-complements: Evidence from Aleut

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Abstract

The nature of head movement has been debated since its discovery (see Dékány (2018) for discussion). While it is generally agreed that head movement (the sort that results in the formation of complex heads) is subject to more stringent locality restrictions than phrasal movement, little else is uncontested. In this article, I will argue that a flexible (but literal) interpretation of Harizanov & Gribanova (2019)’s definition of head movement (more specifically, their “amalgamation”) is needed to account for the movement of suffixal adjectives (As) in Aleut. These As typically suffix to nominals, but under certain conditions surface in verbs between the root and agreement morphology. I show that these As base-generate as adjuncts of NPs and undergo head movement into the verbal complex. I then explore two theories of word-building which would require only phrasal movement on the part of suffixal As—based on ideas put forth in Julien (2002) and Compton & Pittman (2010)—and conclude that phrasal movement alone is too unrestricted to account for the phenomenon, overgenerating As in unacceptable sites. In contrast, previous theories of head movement are too restrictive, only permitting a head and the head of its complement to form a complex head (e.g., Travis 1984, Embick & Noyer 2001); this excludes heads in adjunct positions, like suffixal As, from participating. However, Harizanov & Gribanova’s definition of amalgamation, whereby heads Raise or Lower into the nearest *c*-commanding or *c*-commanded head, uniquely allows head movement to occur out of specifier positions and even adjunct positions. This comparative flexibility correctly permits Aleut suffixal As to form a complex head with verbal morphology, explaining their incorporation deep within the structure of the verbal complex.

Keywords: head movement, phrasal movement, amalgamation, adjuncts, incorporation, Aleut, Unangam Tunuu

1 Introduction

1.1 Theoretical background

Head movement has long been a subject of contention in syntax. Perhaps the two primary disputes concerning head movement (besides whether it exists in the first place) can be summarized as: a) Where does it occur in the course of the derivation? and b) How restricted is it (and why)?

Regarding this first point, Government & Binding Theory classified head movement as a special syntactic phenomenon, but later revisions to this work place head movement in some post-syntactic domain—as a purely (morpho)phonological process (e.g., Chomsky (2000), Boeckx & Stjepanović (2001)). This update, however, has not gone uncontested: Roberts (2010), for instance, replies that head movement occurs in the narrow syntax and can be compared to phrasal movement, while Matushansky (2006) argues that head movement is a complex process with steps taking place in both the syntax and the post-syntax.

Meanwhile, the apparently uniquely restrictive properties of head movement (as compared to phrasal movement) have been previously explained with proposals such as the Head Movement Constraint, which states that an X^0 can only move into the Y^0 which properly governs it (Travis 1984:131). Embick & Noyer (2001) similarly propose that only a head and the head of its complement may participate in the formation of a com-

plex head before Vocabulary Insertion (“Lowering”); however, after Vocabulary Insertion, heads may move depending on their linear adjacency rather than structural constraints (“Local Dislocation”). At the same time, accounts of “long” head movement further complicate these proposals. For instance, Koopman (1984) proposes long head movement of V, which Landau (2006) invokes to explain V movement in Hebrew. Worries about unconstrainedness, including the fact that head movement apparently violates the Extension Condition on Merge (Chomsky 1995), has led some to suggest that head movement is theoretically undesirable and might be replaced by phrasal movement (Mathieu et al. 2017).

More recently, Harizanov & Gribanova (2019) have moved to clarify the confusion surrounding what has been called “head movement” by suggesting that the phenomenon should actually be partitioned into two separate phenomena: one syntactic (which they refer to as “genuinely syntactic head movement”) and one post-syntactic (which they refer to as “amalgamation”). This latter, post-syntactic process is what results in the formation of complex heads, and can be further subcategorized as Raising and Lowering operations. (Note that, because I do not address the former, fully syntactic movement in this article, I use the term “head movement” to refer to amalgamation throughout.) The definitions for Raising and Lowering are given below.

(1) *Raising*

$$[XP \dots X \dots [YP \dots Y [ZP \dots]]] \rightarrow [XP \dots [X Y X] [YP \dots [ZP \dots]]]$$

(where Y and X are heads, X c-commands Y, and *there is no head Z that c-commands Y and is c-commanded by X*)

(adapted from Harizanov & Gribanova 2019:486, (38); emphasis mine)

(2) *Lowering*

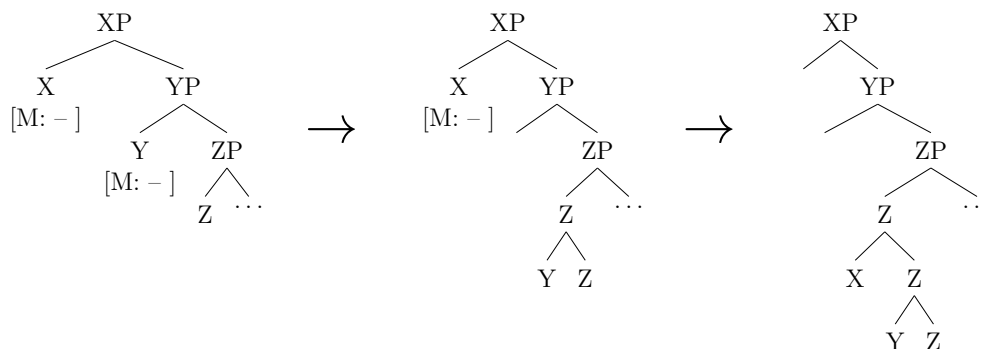
$$[XP \dots X \dots [YP \dots Y [ZP \dots]]] \rightarrow [XP \dots [YP \dots [Y Y X] [ZP \dots]]]$$

(where Y and X are heads, X c-commands Y, and *there is no head Z that c-commands Y and is c-commanded by X*)

(adapted from Harizanov & Gribanova 2019:485, (37); emphasis mine)

Essentially, Raising involves a head and the next highest head in the structure, while Lowering involves a head and the next lowest head in the structure. The movement is triggered by the presence of a feature [M] on the moving head, with [M: +] resulting in Raising, and [M: -] resulting in Lowering. This is a slightly more flexible analysis than has been previously proposed, e.g., in Embick & Noyer (2001), who suggest that a complex head can only be formed with a head and the head of its complement. For example, it allows for derivations like the following (adapted from Harizanov & Gribanova 2019:488, (40)):

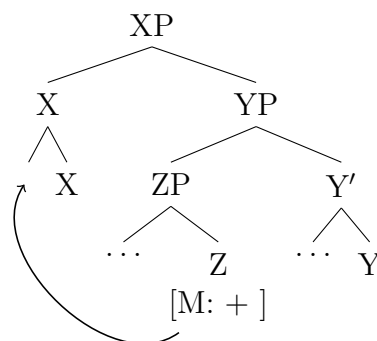
(3)



According to Harizanov & Gribanova, amalgamation proceeds strictly from the lowest head in the structure to the highest. In (3), therefore, the head Y will first undergo head movement (or “amalgamation”) into Z, forming a complex head. Then, X also undergoes head movement—however, because Y has already head-moved into Z, there is no longer an intervening head between X and Z, so X is able to target Z even though Z is not the head of its complement. At a glance, the Lowering of X to Z may appear to be “long distance”, but it is actually incredibly local, as heads are only able to target the next highest or lowest head (as defined by c-command).

The example in (3) technically still applies the Lowering rule to a series of heads and heads of their complements. That is, while Z is not the head of the complement of X, it is the head of the complement of Y, which in turn is the head of the complement of X. However, Harizanov & Gribanova (2019)’s rules, when read at face value, actually apply to a much wider swath of situations than previously envisioned. For instance, nothing about the rules outlined in (1)–(2) prohibits head movement out of specifier positions, even though they have not been applied to such situations. They simply state that a head will move to the next c-commanding head or c-commanded head, disallowing intervention from other heads. Thus, strictly speaking, a derivation such as (4) should also be possible.

(4)



In (4), Z is the head of the specifier of YP, which is in turn the complement of X. However, X is still the next highest c-commanding head from Z, so Z can licitly Raise to X (and, in fact, must Raise to X in response to its [M: +] feature), according to (1). Given this, one might also ask whether it is possible to find head movement out of additional structures, such as adjuncts, which occur in structural configurations very similar to the one in (4).

Harizanov & Gribanova suggest that head movement out of specifier and adjunct positions is prevented “under the standard assumption that specifiers and adjuncts are islands” (2019:507); however, what exactly causes these island constraints is not specified. Recent literature has shed doubt on this assumption. Williams (1990), Truswell (2011), Bošković (2020), Zyman (2022), and McInnerney (to appear), for instance, show exceptions to adjunct islandhood; Bošković (2016) highlights a case in Galician in which a head launches from an adjunct phrase, shown in (5) below.

- (5) De que semana_j traballastede-lo_i [DP t_i luns t_j]?
of which week work.2.pl.PST-the Monday
‘Of which week did you guys work on Monday?’

(adapted from Bošković 2016:58, (93))

In (5), it is the head of the DP adjunct phrase (*lo* ‘the’) which moves, even incorporating into the verb. Bošković (2020) notes that this movement actually permits further movement from the adjunct—that is, *de que semana* ‘of which week’ can additionally move, but only if the D^0 *lo* is extracted. The general potential for extraction from adjuncts, then, appears to be quite flexible, at least much more so than previously imagined.

In this article, I will argue that head movement is possible from adjunct positions, as well as specifier positions, on the basis of novel data regarding a nearly unexamined phenomenon: the appearance of Aleut suffixal adjective heads in verbs. I will show how such a head movement might proceed, and why it should be permitted under the mechanics of amalgamation defended by Harizanov & Gribanova (2019). In § 2, I give a background on the Aleut language and present the data pertinent to this analysis, in which suffixal As normally found on nominals appear in the verbal complex. In § 3, I show why this appearance must be due to movement, and what the initial step of this movement looks like. In § 4, I show why head movement is specifically necessary to account for the data, and outline how precisely such head movement works. I then address an important assumption made in § 4—that words are X^0 s—and explore two alternative analyses in §§ 5 and 6, explaining why they do not adequately account for the data. These alternatives make different assumptions about word-building, but both ultimately fail to account for the empirical observations at hand. In § 7, I conclude with some directions for future research.

1.2 A note on methods

Because the following analysis is based on novel empirical facts from a severely endangered language, a note on the methodology of data-gathering is important. All of the examples, unless otherwise noted, were elicited from native speakers of Western Aleut (also known as *Niiġuġ* or *Niiġuġim Tunuu*), one of the two surviving dialects of Aleut. This particular dialect was chosen because there are considerably more speakers than there are of Eastern Aleut, and because these speakers are generally more comfortable in their usage of the language. The elicitation sessions were conducted primarily through phone and video calls with three speakers from Atka, Alaska (the traditional homeland of *Niiġuġ*, Western Aleut). A few data points were collected via email correspondence, which one speaker preferred, and a fourth speaker contributed via text. The speakers were encouraged to judge the sentences based on how natural they sounded and how likely they might be to say them. Unsurprisingly, because speakers do not use Aleut every day, one or two occasionally changed their minds about acceptability (see § 3.1 for the most prominent example of this). However, speakers generally agreed about what was possible; importantly, they all had strong judgments about the key differentiating data points of this analysis.

While I rely primarily on formal elicitation with these speakers, I supplement data in this article with a) sentences from established lessons in the ongoing revitalization program, and b) notes and observations from Knut Bergsland’s grammar (1997). The former are perhaps the most well-founded data of modern Aleut that are around today, as they have been passed through multiple sessions of monolingual elicitation with a wide variety of Western Aleut speakers. However, as language lessons, they feature relatively simple constructions intended for learners of the language. The latter source is similarly well-founded, as Bergsland spent many decades documenting Aleut with native speakers.

With this background in place, I present the facts of the Western Aleut language.

2 Background on Aleut

2.1 General overview

Aleut is a strongly head-final, weakly ergative¹ language with strict word order spoken originally on the Aleutian Islands of Alaska. As previously mentioned I will use data from Western Aleut exclusively, and refer to this variety as Aleut for brevity.

Like most languages in the Inuit-Yupik-Aleut language family, Aleut verbs can be extended with what are referred to as “postbases”—agglutinative derivational suffixes which can expone mood, aspect, or voice, or function as adverbs, among other things. In (6), these are the various suffixes between the root *adalu-* ‘deceive’ and agreement morphology.

- (6) Txin adalu-usa-naaġii-ġuta-aġta-ku-ġ.
2.sg deceive-TR-try-again-PFV-PRES-3.sg
‘He tried to lie to you again.’

Despite prolific suffixing, Aleut is not nearly as polysynthetic as other languages in the family, which exhibit free word order and possess large inventories of light verbs that require incorporation of their internal arguments. While such verbs do exist in Aleut, their prevalence is decreasing, and many have been lexicalized (e.g., *braata-ġta-l* ‘to have a brother’, where the verb *-ġta* ‘to have’ is no longer productive). Perhaps less surprisingly, Aleut is also not polysynthetic in the sense of Baker (1996), where all or most transitive verbs allow the option of internal argument incorporation.

Note also in (6) the verb’s agreement morphology and the capacity for pro-drop. In general, a verb agrees only with the subject, unless there is a null object present in the sentence, in which case it agrees with both subject and object², and subject receives a special case referred to as “relative” case, as shown in (7). This case loosely corresponds to the ergative case; the fact that it surfaces only on subjects with null objects is what makes Aleut “weakly ergative”.

- (7) a. Piitra-ġ Ivaana-ġ kidu-ku-ġ.
Peter-ABS.sg Ivan-ABS.sg help-PRES-3.sg
‘Peter is helping Ivan.’
(Bergsland & Dirks 1981:32)
- b. Piitra-m *pro* kidu-ku-u.
Peter-REL help-PRES-A[sg]:3/3
‘Peter is helping him.’
(Bergsland & Dirks 1981:32)

It is also possible to have both null subjects and objects, in which case the same agreement patterns arise on the verb. However, this can result in number ambiguity, as

¹My designation of Aleut as “weakly ergative” comes from Johns (2017) (and Yuan (2018), citing Johns), who argues that there are varying degrees of ergativity within the family, and who observes that Aleut’s ergative patterns only arise in instances of *pro* objects.

²I use Merchant (2011)’s manner of glossing this type of agreement, where A represents “anaphoric agreement” with number (singular or plural), and the following numerals represent the persons involved in agreement (with sbj/obj). This system is particularly useful in cases of ambiguous number agreement (as in (8)).

Aleut has been said to exhibit “omnivorous” or “promiscuous” number-marking (Merchant 2011; see Sadock (2000) for more on number in Aleut). For instance, in (8), subject, object, or both could be interpreted as plural.

- (8) Kidu-ku-ngis.
 help-PRES-A[pl]:3/3
 ‘He is helping them.’ / ‘They are helping him.’ / ‘They are helping them.’
 (Bergsland 1981:10)

The unusual case-marking and agreement behavior has been thoroughly puzzled over by the literature (as thoroughly as anything is puzzled over in Aleut), and has been termed the “Aleut Effect”. An analysis of the Aleut Effect will become important later in motivating adjectival movement. For now, the crucial observation is that the Aleut Effect only takes place with *pro* objects.

2.2 Suffixal adjectival constituents

Not only can verbs combine with derivational suffixes, but a closed class of derivational suffixes can also appear on nominals. Aleut has no stand-alone adjectives—that is, adjectives which form their own prosodic words—and expresses descriptive adjectival meanings either with these suffixes or with relative clauses (e.g., *aluġiilu-m chidġi-i* ‘the pen that is blue’). Following Compton (2012, 2016)’s analysis of similar modifying suffixes in Inuktitut, I classify these derivational suffixes as adjectives (As); however, their precise categorial label is relatively inconsequential. Examples of these adjectives as they appear on nominals are displayed below.

- (9) a. sla-**chxiiza**- \hat{x}
 weather-**nice**-ABS.sg
 ‘nice weather’
 b. Piitra-**kucha**- \hat{x}
 Peter-**little**-ABS.sg
 ‘little Peter’
 c. txi-**kucha**-an
 2/3-**little**-2/3.ABS.sg
 ‘little you’ / ‘little him/her’

As shown above, adjectives attach immediately following the noun stem, preceding case and number morphology. This can occur with proper nouns, as in (9b), as well as with overt pronouns, as in (9c).

Bergsland (1997:130) states that only a subset of the suffixal As can attach to overt pronouns; these are adjectives pertaining to size, as well as those “expressing the speaker’s attitude” (that is, evaluative adjectives such as *- \hat{x} siida* ‘poor, pathetic’, *-iiklu* ‘damned’, *-na \hat{x} ch \hat{x} i* ‘damned’). One might compare this set to the subset of adjectives which can modify overt pronominals in English (e.g., *poor you*, *little old me*). The fact that only this subset of adjectives can attach to pronouns will later be an important clue in understanding the behavior of adjectives with respect to covert pronominals.

Additionally, multiple adjectives can exist within a nominal, and they can themselves be modified.

- (10) a. hla-**kucha- \hat{x} siida- \hat{x}**
 boy-**little-poor**-ABS.sg
 ‘poor little boy’
- b. hla-**laaya-kucha- \hat{x}**
 boy-**very-little**-ABS.sg
 ‘very little boy’
- c. taya \hat{g} u-**l \hat{g} u-lkiida- \hat{x}**
 man-**big-damn**-ABS.sg
 ‘damn (=very) big man’

In (10a), the noun stem is modified by two separate adjectives. In (10b)–(10c), an adjective itself is modified by adverb-like affixes. The suffixal A(P)s can thus have some level of phrasal complexity.

2.2.1 Structure of nominals

Before moving on to the more interesting examples of adjectives appearing in verbs, I turn to a brief analysis of the structure of the regular nominal+adjective case.

In Aleut, A(P)s show a number of properties characteristic of adjuncts, suggesting that they adjoin to the nominal. First, while complements tend to be selected for in a specific order, adjuncts are not. This results in adjuncts lacking strict ordering requirements with respect to one another, as shown with suffixal As in (11) below.

- (11) a. hla-**kucha- \hat{x} siida- \hat{x}**
 boy-**little-poor**-ABS.sg
- b. hla- **\hat{x} siida-kucha- \hat{x}**
 boy-**poor-little**-ABS.sg
 ‘poor little boy’

In (11), *-kucha* and *- \hat{x} siida* can be reordered with respect to one another, with no discernible semantic or acceptability difference. This suggests that the adjectives are not merged with projections of functional heads in a particular order, as Cinque (2010) posits for “direct modification”, but are rather adjuncts to NP.

Relatedly, Compton (2012) shows for Inuktitut that while some suffixal adjective orders are idiomatically preferable to speakers, the same ordering variability is possible outside of idioms:³

- (12) a. iglu-**ralaa-nnguaq**
 house-**small-pretend**
- b. iglu-**nngua-ralaaq**
 house-**pretend-small**
 ‘pretend small house’

(Compton 2012:60, (156))

³Note that this differs from Mithun (1999)’s conclusions regarding Yupik’s suffixal adjectives, e.g., that *yug-pa-cuaq* ‘little big person/giant’ and *yu-cuar-pak* ‘big little person/dwarf’ differ semantically because of adjective scope. For Compton (2012), the question is not one of scope so much as which adjectives are combining idiomatically with the root noun (see Compton (2012:63), fn. 61).

Once again, the two nominals in (12) have no discernible semantic difference, with both able to refer to a toy house that is small (Compton, personal communication). The word “discernible” is possibly important here; for instance, the potential semantic difference between (11a) and (11b) is admittedly quite subtle—perhaps too subtle to catch in linguistic elicitation. In any case, free ordering is merely a suggestion of structural dispensability (and therefore adjuncthood); e.g., APs in other languages can adjoin to NPs, but for various semantic, pragmatic, idiomatic, or other reasons may find themselves falling into preferred orders. I leave these data here as a mere clue toward the adjuncthood of suffixal As.

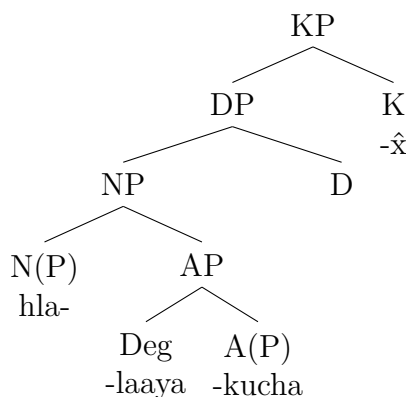
Another core property of adjuncts is that indefinitely many of them can be iteratively attached to a single host (Hornstein & Nunes 2008:60, among many others). While it is difficult to conclusively prove indefinite iterability for any constituent in any language, no descriptive Aleut work has indicated an upper limit, and the lack of ordering constraints suggests that there is no finite hierarchy into which As must merge. For what it’s worth, here are a few particularly derivationally complex nominals.

- (13) txi-na \hat{x} ch \hat{x} i-ilkida-aklu-un
 2/3-damned-darned-clumsy-2/3.ABS.sg
 ‘you clumsy damned one’
 (Bergsland 1997:111)
- (14) aniqdu-chxiiza-laaya-kucha-agamagi- \hat{x}
 baby-nice-very-small-main-3.sg.ABS
 ‘nice, very small, most important child’

That indefinitely many suffixal As can in principle be attached to a single noun stem strongly indicates they are adjuncts.⁴

I suggest a structure like the one below⁵ for an overt nominal modified by an adjective, with AP adjoining at the NP layer. Compton (2012) suggests a very similar structure for Inuktitut suffixal adjectives, with the modifier constituting an adjunct adjoining to NP beneath the DP layer.

- (15) hla-laaya-kucha- \hat{x}
 boy-very-little-ABS.sg
 ‘very little boy’



⁴A reviewer asks whether this might mean that adjectives in all languages are adjuncts. While “adjective” is a somewhat ill-defined term, I do claim that any category which can be iterated indefinitely is an adjunct.

⁵Note that in (15) and in structures throughout this article, “X(P)” denotes a phrase composed of a single head.

While it may be the case that D is not necessary, since Aleut lacks overt determiners, I include it here because I assume that *pro* is a special kind of DP with a null D head that selects for an empty NP, as is commonly thought. For the rest of this article, I will omit the KP layer for simplicity's sake.

I have elaborated on why it seems that these suffixal modifiers should be classified as adjuncts to NP, rather than arguments of some sort. While I strongly believe in the adjuncthood of these elements, since it makes sense both language-internally and in relation to the rest of the Inuit-Yupik-Aleut family, it is not strictly necessary for the novel theoretical claim I am making: That is, regardless of the adjuncthood of these constituents, some sort of head movement from non-complements is necessary to account for the empirical facts.

2.2.2 Appearance in verbs

As noted previously, Aleut is a *pro*-drop language. A subset of suffixal As can in fact be interpreted as modifying (the NP within) *pro*; under this particular condition, these suffixal As appear instead inside the verbal complex. An example of A-incorporation is shown below.

- (16) a. Uchiitila-**kucha**- \hat{x} hla- \hat{x} kidu-ku- \hat{x} .
 teacher-**little**-ABS.sg boy-ABS.sg help-PRES-3.sg
 ‘The little teacher is helping the boy.’
- b. *pro* Hla- \hat{x} kidu-**kucha**-ku- \hat{x} .
 boy-ABS.sg help-**little**-PRES-3.sg
 ‘The little one is helping the boy.’
 (*‘He is helping the little boy.’)

In (16a), dropping the overt subject *uchiitila-kucha- \hat{x}* ‘little teacher’ results in the suffixal A appearing in the verb. The adjective in the resulting sentence (16b) cannot be interpreted as modifying the overt object: suffixal As in verbs are restricted to modifying null arguments.

Interestingly, according to Bergsland (1997:130), the subset of suffixal As which are permitted to appear in verbs is precisely the same subset which can modify overt pronouns. Thus, (17a) shows the suffixal A from (16) (*-kucha* ‘little’) in an overt pronoun; (18) shows a suffixal A which cannot occur in overt pronouns, and therefore also cannot occur in verbs.

- (17) a. ti-**kucha**-ng
 1-**little**-1.ABS.sg
 ‘little me’
- (18) a. ayaga-**chxiiza**- \hat{x}
 woman-nice-ABS.sg
 ‘good wife’
- b. ?? txi-**chxiiza**-an
 2/3.sg-nice-2/3.ABS.sg
 Intended: ‘nice you’, ‘nice him/her’
- c. * *pro* Hla-m kidu-**chxiiza**-ku-u
 boy-REL help-nice-PRES-A[sg]:3/3
 Intended: ‘The boy is helping the nice one.’

While *-chxiiza* ‘nice, good, pleasant’ can modify nominals such as *ayagaâ* ‘woman’, it cannot modify overt pronominals like the 2nd person (as in (18b)), nor can it incorporate into verbs (as in (18c)). This suggests a tight relationship between overt pronominals and the null arguments present in (16b) and (18c)—a crucial generalization that will help found the present analysis. It suggests that pro-drop cases truly involve covert pronominals, which are presumably structurally related to their pronounced counterparts.

As null arguments can appear in both subject and object positions, suffixal As associated with both subjects and objects can undergo incorporation.⁶

(19) *Object pro:*

Uchiitila-m *pro* kidu-**kucha**-ku-u.
 teacher-REL help-**little**-PRES-A[sg]:3/3

‘The teacher is helping the little one.’
 (*‘The little teacher is helping him.’)

(20) *Both subject and object pros:*

Kidu-**lgu-âsiida**-ku-u.
 help-**big-poor**-PRES-A[sg]:3/3

‘The big, poor one is helping him.’ / ‘He is helping the big, poor one.’ / ‘The big one is helping the poor one.’

In (19), the adjective cannot be interpreted as modifying the overt nominal, confirming that adjectives that have incorporated into the verb only correspond to *pro* arguments. The sentence in (20) illustrates an extreme example of this, in which both subject and object are null arguments; in this case, incorporated adjectives can be interpreted as modifying subject, object, or both. The only restriction here is that subject-related As must precede object-related As, meaning that in (20), the subject cannot be poor while the object is big. The otherwise high degree of ambiguity strongly resembles the number ambiguity resulting from multiple *pros* in “Aleut Effect” sentences. Once again, the specialness of *pro* and a suffixal A’s connection to *pro* is apparent.

The behavior of suffixal As within verbs is remarkably flexible, as they can appear at various positions along the clausal spine (21), surface next to other suffixal As in the verb (22), and be accompanied by modifiers (23). In fact, if (21) is biclausal (as its translation roughly suggests), the suffixal A in question may have jumped across clause boundaries, similar to clitic-climbing phenomena. Note that in this example, speakers reported that there was no semantic or pragmatic difference resulting from the different locations of the suffixal A within the prosodic word.

(21) *A occurring at flexibly high positions:*

Aluâi(-**kucha**)-masu(-**kucha**)-naaâi(-**kucha**)-ku-â.
 write-**little**-probably-**little**-try-**little**-PRES-3.sg

‘The little one is probably trying to write.’

⁶Null arguments in other positions, such as PPs, were not investigated for this article.

(22) *Multiple As present:*

Hingama-**na**chxi-**ilkida**-qada-a \hat{x} -t!
do.that-**damned-darned**-stop-OPT-2.sg

‘Quit doing that, you damned one!’

(Bergsland 1997:130; translation from my own elicitation)

(23) *A + modifier present:*

Mika-**laaya**-**kucha**-ku- \hat{x} .
play-**very-little**-PRES-3.sg

‘The very little one is playing.’

These facts appear to indicate that the movement suffixal As undergo into verbs is phrasal, since phrasal movement can often target variably high positions on the clausal spine and affect multiple (potentially complex) constituents in one and the same clause. However, the fact that suffixal As are incorporated into the prosodic constituent corresponding to the verb word also must be accounted for.

One final fact will prove critical to this analysis, and relates to the variable positions exhibited in (21). Despite the flexibility of an A’s appearance around various suffixes in the clausal spine, there are limitations. Besides the fact that a suffixal A must appear somewhere after the root and before tense and agreement morphology, it additionally cannot surface anywhere to the left of Voice. Examples (24)-(25) display the transitive and causative suffixes, both *v* heads, and (26) displays the passive Voice head.

(24) *The transitive suffix -Vsa:*

- a. Uchiitila-m adalu-usa-**kucha**-ku-u.
teacher-REL deceive-TR-**little**-PRES-A[sg]:3/3
‘The teacher lied to the little one.’
- b. *Uchiitila-m adalu-**kucha**-asa-ku-u.
teacher-REL deceive-**little**-TR-PRES-A[sg]:3/3
Intended: ‘The teacher lied to the little one.’

(25) *The causative suffix -chxi:*

- a. Sabaaka- \hat{x} qa-chxi-**kucha**-t ii?
dog-ABS.sg eat-CAUS-**little**-2.sg Q
‘Did you feed the dog, little one?’
- b. *Sabaaka- \hat{x} qa-**kucha**-chxi-t ii?
dog-ABS.sg eat-**little**-CAUS-2.sg Q
Intended: ‘Did you feed the dog, little one?’

(26) *The passive suffix - \hat{g} i:*

- a. Kidu- \hat{g} i-**kucha**-t ii?
help-PASS-**little**-2.sg Q
‘Did you get help, little one?’
- b. *Kidu-**kucha**- \hat{g} i-t ii?
help-**little**-PASS-2.sg Q
Intended: ‘Did you get help, little one?’

Thus, the word-building mechanism allowing suffixal *As* to be incorporated at various positions and in various degrees of phrasal complexity must also account for a suffixal *A*'s inability to appear to the immediate left of *v* and Voice.

In the following two sections, I argue for an analysis involving both syntactic phrasal movement and post-syntactic head movement in a two-step process. In § 3, I show why movement is required at all, and address the phrasal movement characteristics of the data. In § 4 I demonstrate how head movement could explain the presence of suffixal *As* in verbs, and assess how compatible this apparently non-canonical instance of head movement is with Harizanov & Gribanova (2019)'s definition of amalgamation. Finally, in §§ 5 and 6, I explore two possible alternative analyses involving no head movement, showing the shortcomings of each—in particular that neither explain the inability of suffixal *As* to appear before Voice. I ultimately affirm that head movement is necessary to fully account for the empirical facts.

3 Step 1: Phrasal movement

3.1 The necessity of movement

While at first glance the juxtaposition of sentences such as (16a) and (16b) looks to be a very obvious instance of movement, similar phenomena have been explained without movement. For example, quantifier float, whereby quantifiers can appear at multiple locations within a clause (much like this case), has been analyzed by Doetjes (1997) and many others as an instance of adverbials base-generating at multiple positions, rather than being moved there. A similar analysis might be applied here, in which these suffixal *As* are actually adverbs that can adjoin to the verb at multiple points along the clausal spine. If this were true, however, several issues would be left unexplained.

For one, if we presume that suffixal *As* in verbs are in fact base-generated as adjuncts to clausal projections, it is difficult to explain why they would only be permitted to be associated with *pro* arguments; they should be able to modify the overt nominals as well. One would have to posit a special class of adverb that only could modify covert pronominals. An even stronger piece of evidence is the fact that it is precisely the subset of suffixal *As* that can occur with overt pronominals which can appear in verbs, as I showed in (16)-(18). This must be regarded as mere coincidence, unless we assume that at some point in the derivation, the suffixal *A* is adjoined to (the NP within) the null pronominal *pro* (which, I presume, is related to overt pronominals in some way).

Lastly, speaker commentary suggests the above as well. Because Aleut is severely endangered, speakers have inconsistent contact with the language and sometimes produce errors; however, the errors themselves can be informative. For instance, one speaker allowed suffixal *As* in the verbal complex to be associated with *overt* nominals for a few elicitation sessions, before later correcting himself. While the speaker regards this as an error, the idiosyncratic productions nevertheless revealed something about his perception of adjective incorporation; specifically, he treated adjectives in verbs as instances of movement.

- (27) *One idiolect of Western Aleut:*
- a. Hla- \hat{x} mika-**kucha**-ku- \hat{x} .
 boy-ABS.sg play-**little**-PRES-3.sg
 ‘The little boy is playing.’
 (later reported as unacceptable)
- b. *Hla-**kucha**- \hat{x} mika-**kucha**-ku- \hat{x} .
 boy-**little**-ABS.sg play-**little**-PRES-3.sg
 Intended: ‘The little boy is playing.’

The sentence in (27a) shows the speaker producing an adjective (*-kucha* ‘little’) associated with an overt nominal (*hla \hat{x}* ‘boy’) in a verb. In the same session, the speaker asserted the unacceptability of (27b), from which we see that the adjective cannot simultaneously surface in both the noun and the verb. This would be difficult to explain if suffixal As could freely base-generate as adjuncts to clausal projections, but it is precisely what we expect if they originate within nominals themselves. While (27) may not represent a full-fledged grammar, it still demonstrates a strong contrast in acceptability judgments that would be inexplicable without movement.

Given this evidence, I conclude that the presence of suffixal As within the verbal complex is indeed indicative of movement. However, whether this movement is phrasal or head movement remains unanswered. While I will ultimately advocate for an analysis that invokes both, in the following section, I discuss how phrasal movement could account for some of the facts in Aleut suffixal A movement—specifically, the fact that these suffixes can occur at various heights within the structure.

3.2 Deriving flexible heights

One of the most obvious attributes of phrasal movement the patterns exhibit is the adjective’s ability to move to various locations along the clausal spine. This is far too flexible to constitute canonical head movement, of the sort that obeys the Head Movement Constraint. In the following section, I sketch the first step an A takes to incorporating into a verb, which involves its promotion to various heights along the verbal projections.

3.2.1 *pros* as moving above *v*

The fact that only *pro* can launch movement of As, and that *pro* possesses other unique properties in Aleut, is certainly not a coincidence. Specifically, multiple analyses (Boyle 2000, Merchant 2011, Yuan 2018, among others) have made the claim that *pro* (or the equivalent) in Aleut undergoes movement to a structurally high position, resulting in seeming anomalies wherever it is present in a sentence.

For instance, Merchant (2011) invokes upward movement of *pro* to account for the Aleut Effect, depicted in (7) (reproduced below).

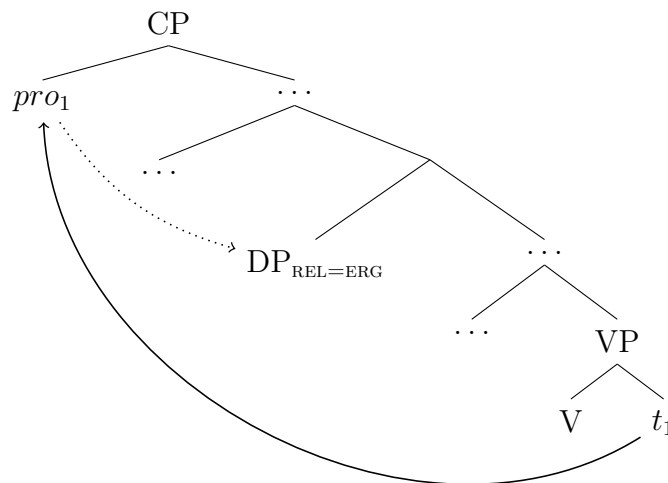
- (28) a. Piitra- \hat{x} Ivaana- \hat{x} kidu-ku- \hat{x} .
 Peter-ABS.sg Ivan-ABS.sg help-PRES-3.sg
 ‘Peter is helping Ivan.’
 (Bergsland & Dirks 1981:32)

- b. Piitra-m *pro* kidu-ku-u.
 Peter-REL help-PRES-A[sg]:3/3
 ‘Peter is helping him.’
 (Bergsland & Dirks 1981:32)

To account for the sudden appearance of Multiple Agree (where T agrees with both subject and object, as in (28b)), Merchant posits that *pro* always moves up to a specifier position of TP—even as an internal argument—as does any overt subject, and that both enter into a spec-head relationship with T and thereby trigger agreement on it. Merchant analyzes *pro* as a sort of clitic whose host is T, resulting in its upward mobility. He adds that the so-called “relative” case appears whenever a nominal occurs beside a null element—thus, the subject in (28b) appears in the relative case.

Yuan (2018, 2022) offers a more concrete rationale behind the appearance of relative case in instances like (28b). Building off of Merchant’s analysis, as well as thorough investigation of other languages in the Inuit-Yupik-Aleut family, Yuan proposes not only that pronominals move high, but specifically that Aleut pronominal D⁰ objects actually move *above* overt subjects. From this position, they assign said subjects downward dependent case (the “relative” or ergative case). This movement is depicted below.

(29) *Case assignment relationships in Aleut, adapted from Yuan (2018):*



On Yuan’s analysis, dependent case is assigned downward to the lower of two (*v*P-external) nominals in an asymmetric *c*-command relationship within the same domain. Here, the *pro* object asymmetrically *c*-commands the overt subject, so the latter receives dependent (relative/ergative) case.

For Yuan’s picture of Inuit, the movement of these internal arguments is assumed to be the result of targeting by an Agr_O probe (2022:520). In Merchant (2011), Aleut *pros* raise because they must cliticize onto T (206–207); in Boyle (2000), *pros* raise because they (exceptionally) can only be licensed for case by T (228). Whether movement of *pro* is motivated by *pro* itself (“greedy” movement) or by a higher head, all these analyses agree that *pros* move high, with even *pro* objects moving to occupy a specifier position alongside the subject. Assuming subjects base-generate in spec-*v*P, this site would minimally be as high as another specifier of *v*P. Thus, spec-*v*P is the lowest site any *pro*, whether subject

or object, can end up: External arguments base-generate there, and internal arguments move there.

The spec-*v*P position is important in other ways, too. Despite differing initial assumptions about case and agreement, the analyses above depend on *v* as a blocker (i.e., phase head) that prevents either agreement or case assignment from taking place past it. For instance, while Merchant (2011) never explicitly references *v* at all, taking the base-position of the subject to be spec-VP rather than spec-*v*P, he clearly leverages the uniqueness of the subject’s base position in writing his rules for agreement:

- (30) Multiple Agree: T agrees with every DP (or D-element) in its specifier(s) or in spec-VP (or head-adjoined to it)

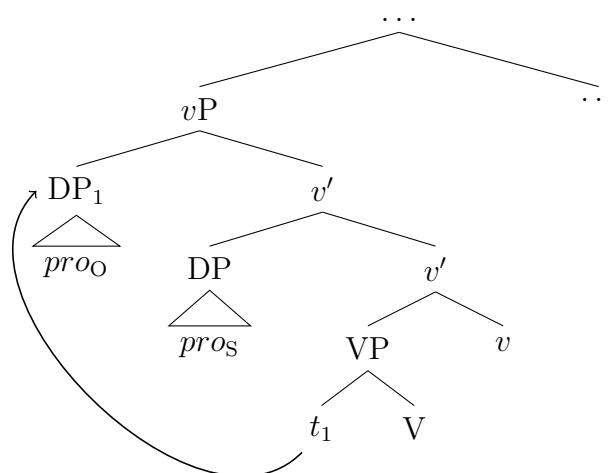
(Merchant 2011:199, (18a))

This rule would be rather ad-hoc if not for a barrier of some sort between the external and internal arguments—i.e., a phase head. Why should a probe on T stop at the base-position of subjects, if it can agree with multiple nominals? The phase head *v* must block its continued probing.

Yuan makes much more explicit reference to the difference between domains above and below *v*, directly stating that “[t]here are two domains of case assignment within the clause, bifurcated by *v*P” (2022:17). Given dependent case assignment, *v* can act as a barrier between the external argument and the internal argument, preventing the c-command relationship between the two from causing a dependent (ergative, or “relative”) case assignment on the internal argument. However, if the internal argument moves upward, minimally above the external argument (base-generated in spec-*v*P), it exists in the same domain as the external argument, and thereby assigns it dependent case.

I have thus far established that *pros* must land (or base-generate) in spec-*v*P, below which is inaccessible to agreement probes and/or external case assignment relations. For instance, in the case of a null subject and object, the derivation will pass through the following step, where subject base-generates in spec-*v*P and object moves above it to a second specifier position.

- (31)



Note that I here suggest the object pronominal moves above the subject, a proposition that comes from Yuan’s work. While Boyle (2000) and Merchant (2011) do not place

pros in this specific arrangement, their analyses allow for it. I adopt the configuration here and show why it might be beneficial for deriving suffixal A surface orders in § 4.2.

I have presented a number of reasons why an object *pro* might undergo the movement in (31), all of which involve *v* being a phase head. In this article, I do not intend to argue for one specific interpretation of object *pro* upward movement; while the exact motivating factor merits further investigation, it is sufficient for my purposes to conclude that movement above *v* is necessary.

Finally, do *pros* need to move higher than spec-*v*P? Merchant and Boyle posit as much, simply due to their assumptions about case assignment (e.g., that it is due to a spec-head relationship with T, as in Merchant (2011)). Yet as just described, Yuan suggests an entirely different system of case assignment, based on the c-command relationships of nominals with respect to one another. I address whether *pro* continues moving upward, to higher specifier positions, shortly (ultimately concluding that it can, but need not).

Because this upward movement and resulting structural height is specific to *pro*, we can leverage its uniqueness in our analysis of adjectival movement, which I have shown is connected to *pro*.

3.2.2 Multiple landing sites

Given that *pros* can move upward and suffixal As surface in multiple locations along the clausal spine, we might reimagine the sites of adjectives as tracking spots through which *pro* has moved. This can be exemplified by considering (32) below.

- (32) Mika(-**kucha**)-atu(-**kucha**)-ku- \hat{x} .
 play-little-DESID-little-PRES-3.sg
 ‘The little one wants to play.’⁷

I have discussed at length object *pro* upward movement in the previous section; object *pros* minimally land in spec-*v*P. The example in (32) shows the potential for even higher movement, which apparently can be undergone by subject *pros* as well (since the suffixal A in (32) is associated with a subject). I propose that this optional further movement is motivated by something different; specifically, that these landing sites are the result of optional structure-building features on various heads in the clausal spine, which target *pro*. By “optional”, I mean that functional heads can either possess or not possess the given feature, much like the optional EPP features which Cable (2012) proposes for Dholuo. This explains facts such as those in (33), where the subject can appear in three different positions.

- (33) *Multiple subject positions in Dholuo:*
 (Ochieng’) ne (Ochieng’) ok (Ochieng’) oneno Onyango.
 O. PST O. NEG O. saw On.

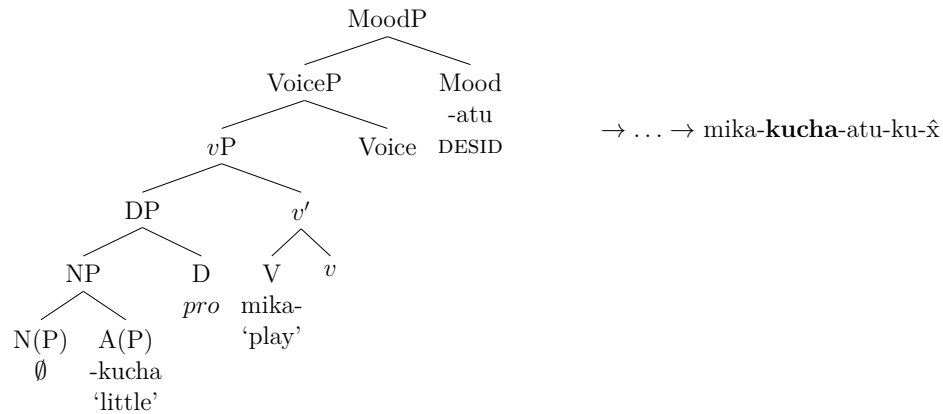
‘Ochieng didn’t see Onyango.’

(Cable 2012:657, (11))

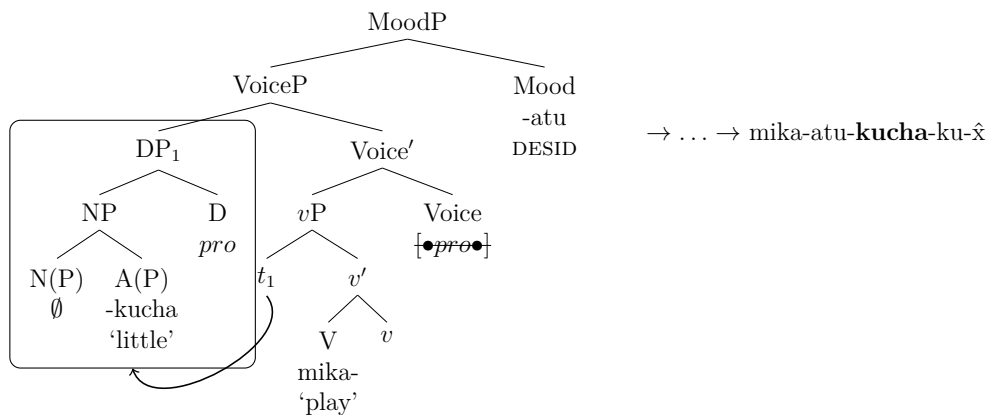
The example in (33) looks strikingly similar to the varying adjective heights in Aleut verbs. In the trees below, I show how the presence or absence of a [\bullet *pro* \bullet] feature on a functional head, in this case Voice, gives rise to the two different structures shown in (32). (Note that the derivational steps after phrasal movement that ultimately lead to the different linearizations will be elaborated on in § 4.)

⁷Note that I use DESID to gloss the desiderative mood.

(34) *No movement:*



(35) *Movement:*



In (34), the Voice head appears with no $[\bullet pro \bullet]$ feature, resulting in no movement and the eventual output *mika-kucha-atu-ku-x*, with the adjective *-kucha* ‘little’ linearizing at a leftward (i.e., lower) position in the verb. In (35), Voice possesses $[\bullet pro \bullet]$, which pulls up *pro* into spec-VoiceP and, over the course of the derivation, outputs a linearization in which *-kucha* occurs in a more rightward (i.e., higher) position in the verb (*mika-atu-kucha-ku-x*). This derives the optional height difference in (32).

Of course, I have left the nature of the derivation following this phrasal movement nebulous. The structures in (34) and (35) are not yet properly linearized—the suffix *-kucha* is still “outside” of the verbal complex. Some sort of additional movement is required to account for the fact that it ultimately surfaces as part of the prosodic word constituting the verb. This additional movement must also result in suffixes such as *-kucha* necessarily landing to the right of *v* and Voice morphemes, as discussed in § 2.2.2.

In moving forward, I present a few potential paths to prosodic word formation. In § 4 I assume that the prosodic words here correspond to complex heads, rendering head movement from adjunct positions necessary. In contrast, in § 5, I assume that prosodic words are the result of idiosyncratic features on morphemes that happen to be linearly adjacent (Julien 2002, Koopman 2005), working out an alternative derivation without head movement. Finally, in § 6, I develop another alternative analysis based on an account for a related language in the family, which takes prosodic words to be reflexes of spelled-out phases or phasal complements (Compton & Pittman 2010). As these latter two derivations predict suffixal As to surface in empirically unacceptable locations within the verbal complex, I conclude that head movement is indeed necessary for the data.

4 Step 2: Head movement

What in the syntax, if anything, results in the creation of prosodic words? Many, such as Baker (1988), Halle & Marantz (1993), and Piggott & Travis (2013), have suggested that the formation of complex heads is one of the paths—if not the only path—for terminal nodes to surface together as words. Under the Harizanov & Gribanova (2019) approach to head movement (amalgamation), this means that heads can undergo Raising or Lowering in response to their [M] features in the post-syntax, resulting in complex X^0 nodes that are mapped to single prosodic words. For Aleut suffixal As, such a process would require head movement from non-canonical positions of the sort I alluded to in § 2.

In the remainder of this section, I assume that head movement is involved in order to flesh out the mechanics of this approach. In §§ 5 and 6, I present alternative analyses not involving head movement, explaining why a head movement approach is preferred for the present data.

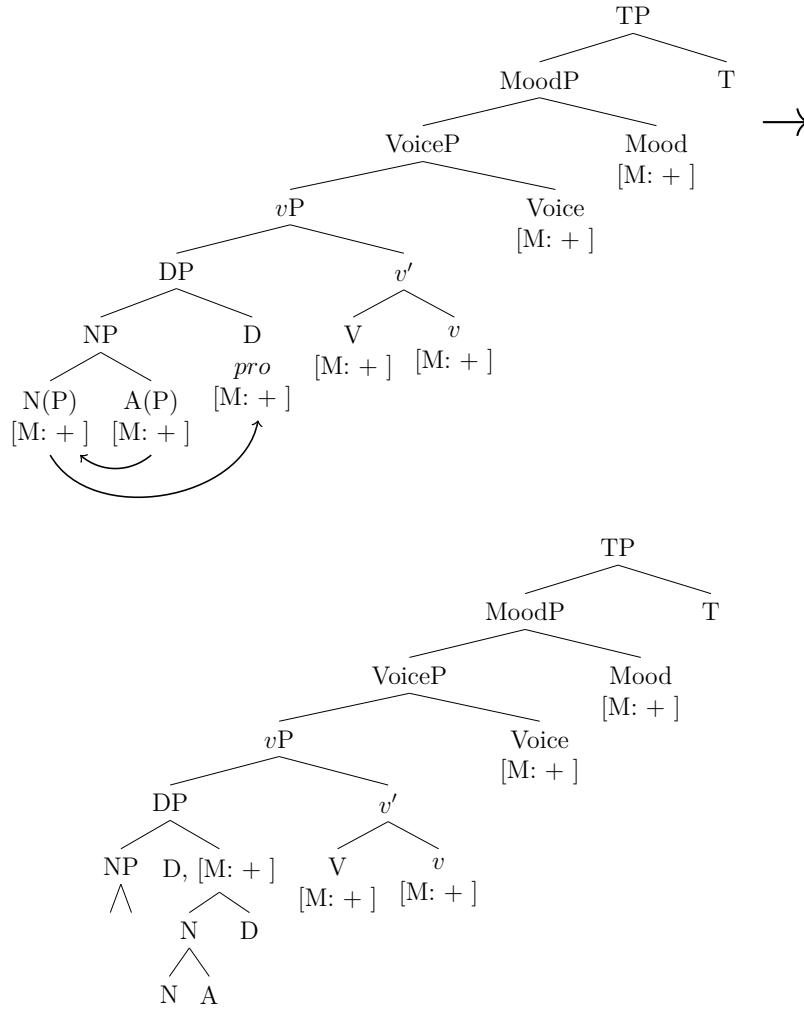
4.1 The mechanics of head movement

Recall that up to this point in the derivation, all *pros* are minimally as high as spec-*vP*—subject *pros* have base-generated there, and object *pros* have moved there by any of the mechanisms suggested by Boyle (2000), Merchant (2011), or Yuan (2018) to account for the Aleut Effect. These *pros* may additionally move higher, depending on the presence of optional EPP-like features on higher heads, or they may remain in spec-*vP*. At this juncture, word formation has not occurred; this will take place in the post-syntax. As stated previously, I turn to post-syntactic head movement as the first option for word-building.

Assuming that a head movement analysis is preferable for the facts in Aleut, it is necessary to outline what precisely this head movement might look like, given that it involves a non-canonical step with an adjunct. In § 2, I proposed a very particular reading of Harizanov & Gribanova (2019), in which heads with [M] features incorporate upward or downward into the most local head, as measured by c-command. This reading has the consequence that, all else being equal, heads of adjunct phrases may also possess [M] features and Raise or Lower. Likewise, heads outside of the adjunct can undergo Raising or Lowering into the adjunct, forming a complex head, and heads in specifier positions can participate in similar processes.

In this environment, I suggest that N, A, and D each have an [M: +] feature, such that they undergo Raising into the next highest (c-commanding) head in the structure in the post-syntax. According to Harizanov & Gribanova, post-syntactic head movement proceeds bottom-up, starting from the structurally lowest heads. In this manner, A incorporates into N, and the complex N head subsequently incorporates into D. The derivation proceeds as follows:

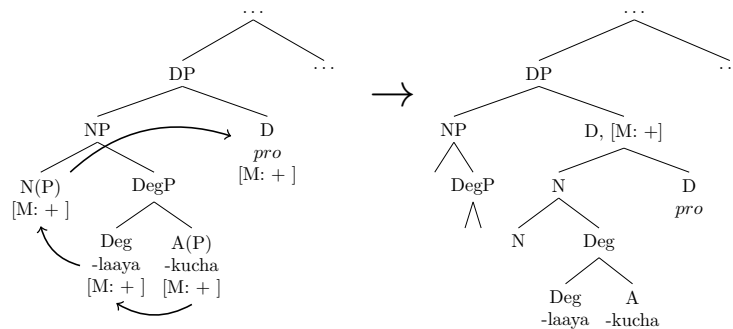
(36) *Base generation* → *Head movement from A to N, N to D*:



In (36), A(P) base-generates as an adjunct to N(P). Therefore, the next highest head above A is N, and the next highest head above N is D.⁸ The two steps of Raising depicted

⁸One reader points out that since A and N appear to c-command each other in (36), it is not clear which one is lower and therefore which one will, according to Harizanov & Gribova (2019), undergo post-syntactic head movement first. Technically speaking, either order results in the proper surface linearizations. Curiously, the issue disappears if we factor in the potential phrasal complexity of N(P)'s modifier. For instance, if the A head *-kucha* 'little' is modified by *-laaya* 'very', which I have labeled Deg, the structure might be something like the following:

(i)

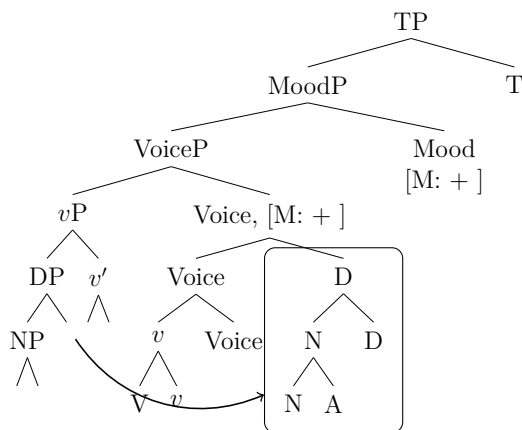


In (i), the head of the complement to Deg (A) undergoes head movement into Deg, which subsequently

above result in a complex D head with a feature [M: +]. If my analysis of suffixal As as adjuncts is correct, then what has taken place involves head movement from an adjunct position.

The next highest head above D is Voice.

(37) *D to Voice head movement:*



Because Voice is the closest c-commanding head to the complex D head, D incorporates into Voice—either before or after *v* (see below for a note on this). This involves head movement from a specifier position (DP in spec-*v*P) to a site outside the specifier—another “non-canonical” instance of head movement.

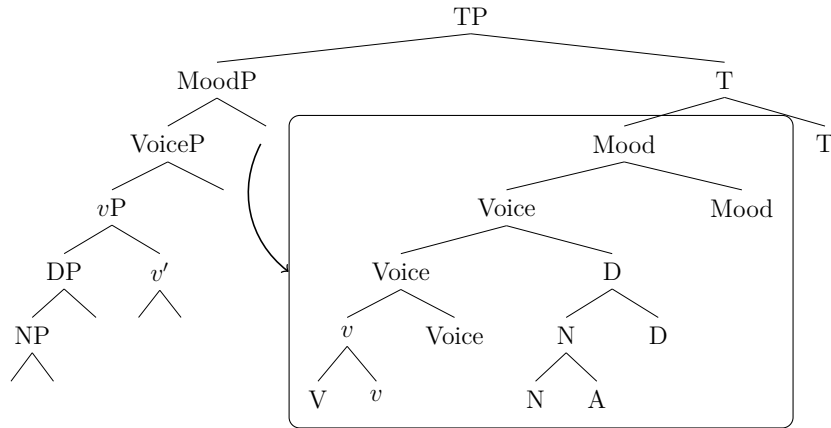
It can be observed that the D head right-adjoins to Voice, something not seen elsewhere in the language, but I appeal to Harley (2013)’s notion of affix-specific linearization, in which ordering is specific to morphemes. In this case, head movement of a complex D (*pro*) head uniquely results in a head-initial complex head. The combination of complex D heads bearing [M: +] and affix-specific linearization means that a D head (along with any suffixal As it contains) will always surface to the right of the most local head that c-commands it.

Note also that in (37), *v* has undergone head movement into Voice first, followed by D; however, it is unclear whether the complex *v* head or the complex D head should undergo head movement into Voice first, since both must incorporate into Voice. In fact, for our purposes, this ordering turns out to be inconsequential. Whether D right-adjoins to the Voice head first or second, both result in the linearization V-*v*-Voice-N-A-D, which ultimately produces the proper order.

This structure “rolls up” to Mood and T, resulting in the following:

undergoes head movement into N. The configuration still requires head movement out of an adjunct position (DegP). Perhaps DegP is always present, or some other principle motivates A’s move to N (or vice-versa), or perhaps there is simply ambiguity with respect to the order of these steps. The main point here is that regardless, the A head must evacuate the adjunct via head movement to end up in the verbal complex.

(38) *Voice to Mood, Mood to T head movement:*



Finally, the above undergoes linearization:

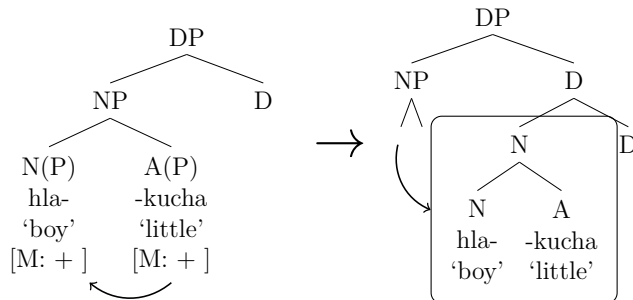
V-*v*-Voice-N-**A**-D-Mood-T
mika- \emptyset - \emptyset - \emptyset -**kucha**- \emptyset -atu-ku \hat{x}
play- \emptyset - \emptyset - \emptyset -**little**- \emptyset -DESID-3.PRES.sg
‘The little one wants to play.’

which is the proper ordering. As stated above, the generalization is that a suffixal A will surface to the right of the most local head that *c*-commands the *pro* it modifies. Because *pros* are always minimally as high as spec-*v*P, this means that the next-highest *c*-commanding head will be Voice, and that suffixal As will necessarily surface to the right of Voice. This captures the empirical data discussed in § 2.2.2.

The above allows for the modifiers of suffixal As (e.g., *hla-laaya-kucha-x̂* ‘very little boy’) to incorporate in precisely the same way, as long as the head of the modifier also bears an [M: +] feature. The only difference in the derivations will be an additional step in which A and the head of the modifier form a complex head; see fn. 8 for a tree diagram. Subsequent steps in the derivation will then proceed exactly as outlined in (36)-(38).

To differentiate between As that appear in overt nominals and those that appear in verbs, I once again appeal to the uniqueness of *pro*. The direct motivating factor behind adjectives incorporating into verbs is not from a property of the adjectives themselves at all, but rather from the [M: +] feature on *pro* (D). Overt nominals, on the other hand, are the complements of a different null D, which does not possess this feature. Thus:

(39)



Because D does not have an [M] feature, the entire complex D head will remain in situ, preventing the A (and indeed, the N) from appearing within the verbal complex.

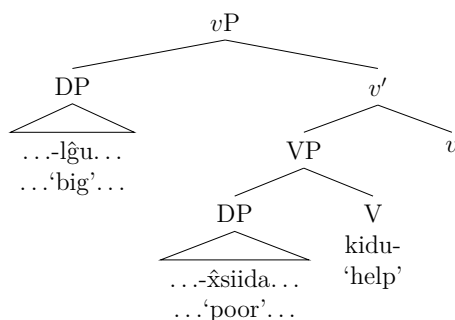
4.2 Other cases

The examples above illustrate overt N-A and subject *pro*-A combinations. The cases of object *pro* and double subject/object *pro* are very similar. As I have shown, *pro* objects move high; because *pro* objects *must* move to a position at or above spec-*v*P, where subjects base-generate, they can be treated in precisely the same way as *pro* subjects. The *pro* argument's position above the phase head *v* allows a higher T probe to agree with it, producing the Aleut Effect previously described.

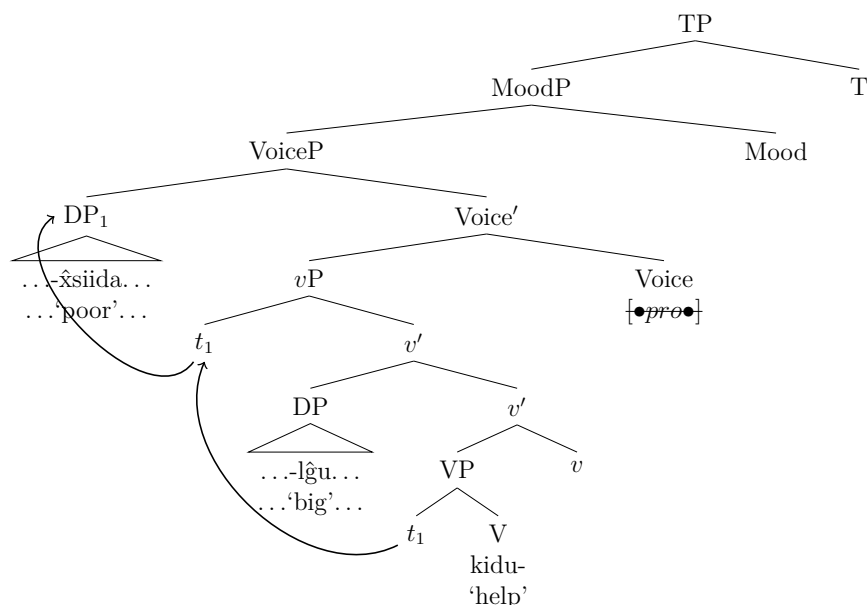
As I showed earlier, As from both subject and object can undergo movement into the verb within the same clause. My analysis, which allows optional structure-building features on numerous heads above *v*, permits this. For instance, the sentence in (20) (reproduced below in (40)) has the following derivation:

- (40) Kidu-**lġu**-**ġsiida**-ku-u.
 help-**big**-**poor**-PRES-A[sg]:3/3
 ‘The big one is helping the poor one.’

- (41) *Base-generation:*



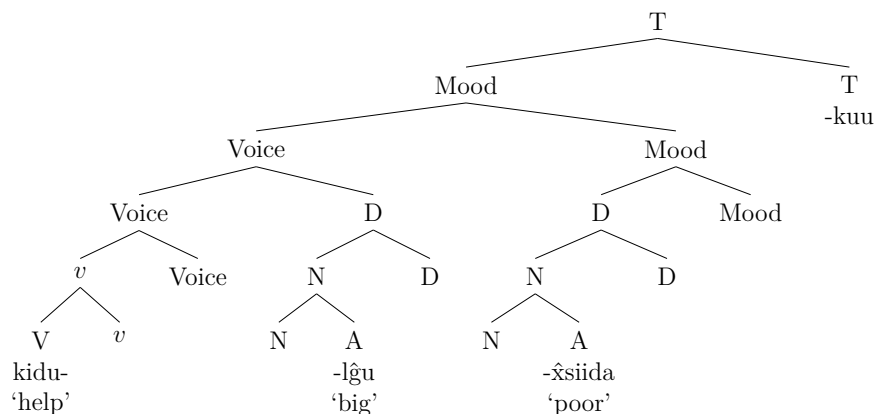
- (42) *Object moves to spec-*v*P, then to spec-VoiceP:*



From (41), we see that the two DP_{*pro*}s—whose only overt elements are the As *-lġu* ‘big’ and *-ġsiida* ‘poor’—land in their respective positions in (42). I take it that objects move to a position above subjects, following Yuan (2018, 2022) (see § 3.2.1). From here, the complex D heads are formed post-syntactically, once again with the adjectives being their

only overt component. The D heads undergo movement into the next highest head: in the case of *-âsiida* ‘poor’, this head is Mood, whereas *-lġu* ‘big’ moves into Voice. The result of these (and other) applications of Raising is the following complex T head structure:

(43)



Following linearization and Vocabulary Insertion, the output is what we see in (40).

It may be noticed that as long as subject *pro* is structurally lower than object *pro*, the A corresponding to the subject will always head-move first into a lower position than the A corresponding to the object. This corresponds to the subject-associated A always linearizing to the left of the any object-associated A. As mentioned in § 2.2.2, preliminary evidence strongly suggests that this is the case, with one speaker explicitly stating, “Subject before object.”

My analysis additionally predicts that adjectives from subject and object should be able to be separated in the verbal complex by other material, as the two *pros* can be promoted to disparate heights in the structure. This is indeed possible:

- (44) Kidu-**lġu**-naaġi-**âsiida**-ku-u.
 help-**big**-try-**poor**-PRES-A[sg]:3/3
 ‘The big one is trying to help the poor one.’

Finally, both subject- and object- associated adjectives can be raised, as in (45).

- (45) Kidu-naaġi-**lġu**-**âsiida**-ku-u.
 help-try-**big**-**poor**-PRES-A[sg]:3/3
 ‘The big one is trying to help the poor one.’

Since I am positing the existence of optional [\bullet *pro* \bullet] features on higher functional heads that promote *pros*, a natural approach accounting for (45) would be to posit that functional heads can have two such features, with object-over-subject structure preserved via tucking-in. Alternatively, different functional projections might be pulling up each *pro*, with the higher object promoted first. The issue merits further investigation, but certainly various approaches are conceivable.

5 An alexist analysis

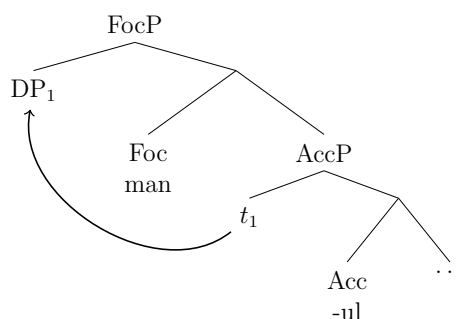
Thus far, I have taken prosodic wordhood in this case to follow from the creation of complex X^0 nodes. This method of word formation is argued for in works such as Baker (1988), and some (e.g., Piggott & Travis (2013)) have even argued that it must be the only path to word formation. However, as Mathieu et al. (2017) point out in their reply to Piggott & Travis, this need not be the case; for instance, they argue that (similarly morphologically complex) Ojibwe words can be derived in a much more straightforward fashion with phrasal movement rather than with head movement. If we likewise abandon head movement as the path to wordhood, is it possible to derive the facts of Aleut suffixal A movement? What other mechanism might be responsible for the formation of prosodic words? While Mathieu et al. don't go into immense detail building an alternative system, I highlight a prominent possibility below.

The process of word formation may not, for example, make reference to hierarchical structure at all, but rather may depend on linear adjacency. One such approach, which I pursue here, holds that prosodic words are the result of idiosyncratic features on various morphemes in a syntactic structure, which dictate whether a morpheme should “lean” left or right on an adjacent morpheme post-linearization. This is the sort of analysis developed by Julien (2002) and also put forth by Koopman (2005) (among others), which undercuts the necessity of complex heads in the process of word-building. In the words of Julien (2002:3):

A necessary condition for two morphemes to form a word is that they are linearly adjacent and that this adjacency is a recurrent pattern in the language in question. My claim is that this is also a sufficient condition: when two morphemes regularly appear immediately adjacent to each other, the two morphemes will tend to be seen as one grammatical word.

While the formation of a complex head is one way in which two morphemes may surface as adjacent, it is not the only way. For instance, Koopman (2005) suggests that in Korean, the accusative case marker *-ul* has a requirement that forces it to “lean” leftward on overt phonological material within its domain, thereby joining other morphemes in one prosodic word without undergoing head movement.

(46)



(adapted from Koopman 2005:629, (62))

Note that I mark morphemes with a phonological dependency feature with a hyphen, where $-H$ is a head that must lean leftward onto the adjacent morpheme, and $H-$ is a head that must lean rightward. In (46), the accusative case marker *-ul* possesses the

former feature, and thus forms a prosodic word with the closest morpheme to the left post-linearization. Typically, this will be the rightmost morpheme within DP, but in (46) where DP has raised to spec-FocP, the leftward morpheme is the focus marker *man* instead.

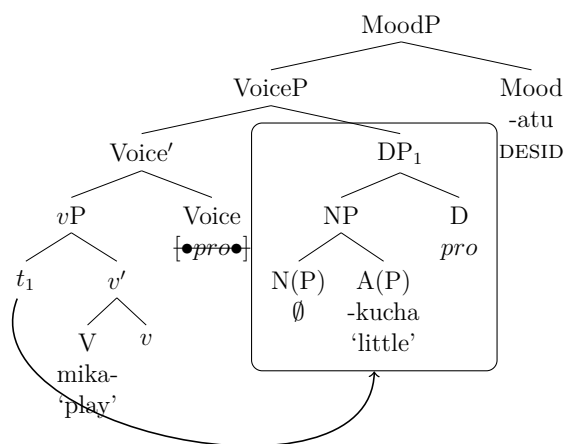
The principal difference between this (which Svenonius (2018:2) has termed the “alexist” position, a label which I adopt here) and a purely head movement analysis is the role of syntax and post-syntax in producing the proper linear order of morphemes. While head movement allows a post-syntactic operation to alter the linear order of morphemes that the syntax eventually gives rise to, an alexist approach supposes that some prosodic words corresponding to multiple syntactic heads come about without this step. That is, in these cases, the syntax is solely responsible for deriving morpheme order.

Turning to Aleut, I discuss how an advocate of such an approach might explain the phenomenon of suffixal As.

5.1 The mechanics of an alexist approach

Under the alexist analysis, the syntax itself yields the appropriate morpheme order, rather than a post-syntactic operation like head movement. Since adjectives surface to the right of V, it may be posited that the entire DP (containing *pro* and adjectives) is promoted to a rightward specifier position rather than a leftward one. In this way, we can tweak (35) to be:

(47)



This is all that is necessary to achieve the proper linearization of the various components of the verbal complex, such that:

V-*v*-Voice-N-**A**-D-Mood-...
 mika-∅-∅-∅-**kucha**-∅-atu-...
 play-∅-∅-∅-**little**-∅-DESID-...

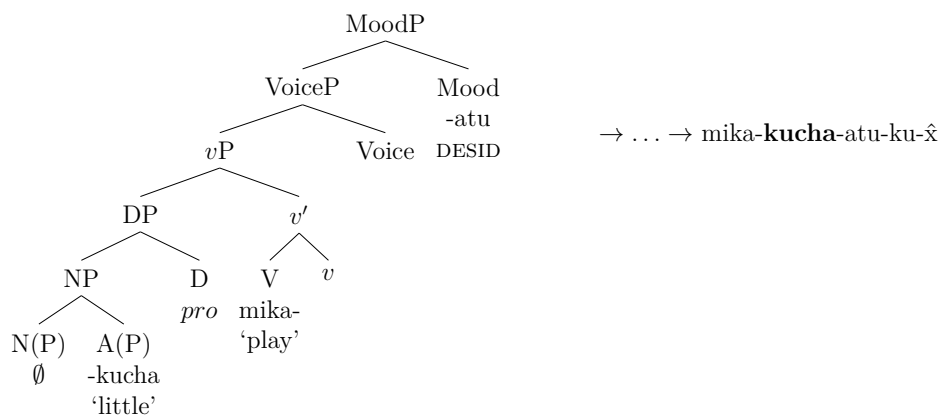
If we assume that *-kucha*, along with the other affixes, possesses features that cause them to lean onto the nearest morpheme to the left, then in the post-syntax they will, together with V, form the prosodic word *mika-kucha-atu-ku-ê*, the target word for this example. This hypothesis stipulates that the specifiers of Voice and other clausal functional heads for some reason linearize to the right in Aleut. Although there is, to my knowledge, no

independent evidence for rightward specifiers in the language, the stipulation is not so extreme as to rule out the alexist approach entirely.⁹

5.2 The challenges of an alexist approach

However, a few other issues significantly undermine the alexist approach. For instance, in the head movement analysis, the optionality of [*•pro•*] features on the various functional heads along the clausal spine allowed *pro* to remain in situ, as in (34) (reproduced below). This permitted adjectives to surface to the immediate right of verbal stems.

(48)



Obtaining the same result without head movement requires stipulating that *pro* is a rightward specifier of *vP*. Because overt subjects linearize to the left of the verb, it must be claimed that DP_{pro} s are special in that they are always linearized to the right. Thus, *vP* might at times have both rightward and leftward specifiers, which appears somewhat unusual.

Note that if DP_{pro} is a rightward specifier of *vP* in (48), it will surface to the left of Voice in the prosodic word constituting the verb. This was, however, shown to be ungrammatical. I reproduce an example from § 2.2.2 below, with the passive voice head *-ĝi*.

- (49) a. Kidu-ĝi-**kucha**-t ii?
 help-PASS-**little**-2.sg Q
 ‘Did you get help, little one?’
 b. *Kidu-**kucha**-ĝi-t ii?
 help-**little**-PASS-2.sg Q
 Intended: ‘Did you get help, little one?’

If we consider an analysis in which *pro* is *forced* to move up the tree, and can strand its AP adjunct at any position it occupies along the way,¹⁰ it may be possible to appeal to

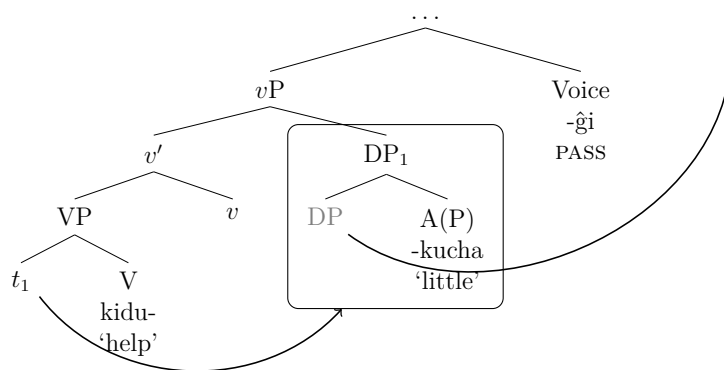
⁹In fact, it might be possible to remove the problem of rightward specifiers by replacing them with leftward ones and positing additional movements to generate the correct morpheme orders, as Kayne proposes to comply with Antisymmetry (1994). This issue will be set aside here, because, as we are about to see, the alexist analysis faces a number of difficulties independent of the fact that it must posit either rightward specifiers or possibly complex and under-motivated leftward movements.

¹⁰Note that, on this analysis, the AP would have to be adjoined to the DP itself, so that the *pro*-containing structure could strand its AP adjunct while continuing up the tree.

a notion put forth by Bošković (2004): that adjuncts cannot be stranded in θ -positions. This gives a rationale behind the impossibility of *pro* stranding its adjective in a base position like spec-*v*P, as in (48). That is, because external argument DPs receive a θ -role in spec-*v*P, they cannot strand their adjective adjuncts in that position, ruling out any external argument-associated A surfacing before Voice.

However, by parity of reasoning, internal argument *pros*, which do not receive a θ -role at spec-*v*P, *should* be able to strand there. That is, there should be an internal/external argument distributional asymmetry. Yet this is not the case, as example (49) with the passive suffix *-ĝi* shows. In (49), the subject, along with its A(P) adjunct, base-generates in the internal argument position. The alexist analysis predicts that the following should be possible:

(50)



In (50), the object DP raises to a rightward spec-*v*P position and is able to strand its A(P) adjunct because it does not receive a θ -role there. This leads to the following linearization:

V-*v*-**A**-Voice-...
 kidu- \emptyset -**kucha**-ĝi-...
 help- \emptyset -**little**-PASS-...

This indicates that the alexist analysis, even with an additional restriction based on Bošković (2004), overgenerates. Crucially, a head movement analysis predicts precisely the judgment difference in (49). Because spec-*v*P is the lowest site from which head movement can be launched, and because a Raised D head is linearized to the right of the head it raises to, it should be impossible for an A head to surface to the left of Voice. The leftmost position in which an adjective can surface post-linearization is to the immediate right of Voice.

Perhaps it is spec-VoiceP to which *pros* minimally raise, and not spec-*v*P? I discussed in § 3.2.1 the key behavioral differences in external and internal arguments evidenced by both agreement and case behavior. Whether *v* blocks agreement with objects in cases when they do not move upward (cf. Merchant (2011)), or prevents dependent case assignment under the same circumstances (as in Yuan (2018)), it is necessarily an important barrier which Voice cannot replace. As a phase head, *v* should not allow *pro* to bypass it without stopping first in its specifier. Even if *pro* also obligatorily moves to spec-VoiceP for some reason, nothing prevents it from stranding its adjunct beforehand, i.e., in spec-*v*P.

These facts lead me to conclude that the head movement approach is a more empirically adequate solution to the puzzle of Aleut suffixal *As*. In this account, the Aleut verbal complex corresponds to an X^0 formed post-syntactically, rather than a series of morphemes that happen to linearize adjacently and depend on each other prosodically.

It is important to note that while the alexist approach does not appear to adequately account for Aleut adjective movement, its central idea is by no means disproved as a whole. While I ground the analysis in thoughts proposed in Julien (2002), Julien herself grants the need for head movement as a mode of word-building in addition to frequent linear adjacency (i.e., the tendency for a given morpheme to “lean” on another). Indeed, Ershova (2020) shows how the presence of both paths to word-building in West Circassian is actually necessary to explain why verbal polysynthesis and nominal polysynthesis behave so differently—the former involves word formation via head movement, and the latter does not. Thus, while this particular case in Aleut appears to require head movement, it may well be that elsewhere in the very same language, words are formed in other ways.

6 A Compton-style analysis

Yet another take on the formation of words can be found in Compton & Pittman (2010) on Inuit, further developed in works such as Compton (2012, 2016).¹¹ According to this analysis, word formation can be carried out at the PF-level, with phrases headed by phase heads mapping to words.¹² In Inuit, the only phase heads are D^0 and C^0 , so only DPs and CPs correspond to words, leaving their internal contents—including, for instance, adjectival adjuncts to NP—to be realized as part of larger nominal- or clause-sized words.

In the words of Compton (2012:201), the basic intuition is that, for Inuit:

...the locus of word-formation is the PF interface, i.e. it is the mapping of syntactic structure to phonological domains—not a series of feature-driven syntactic movements whose purpose is to yield the correct surface order of morphemes.

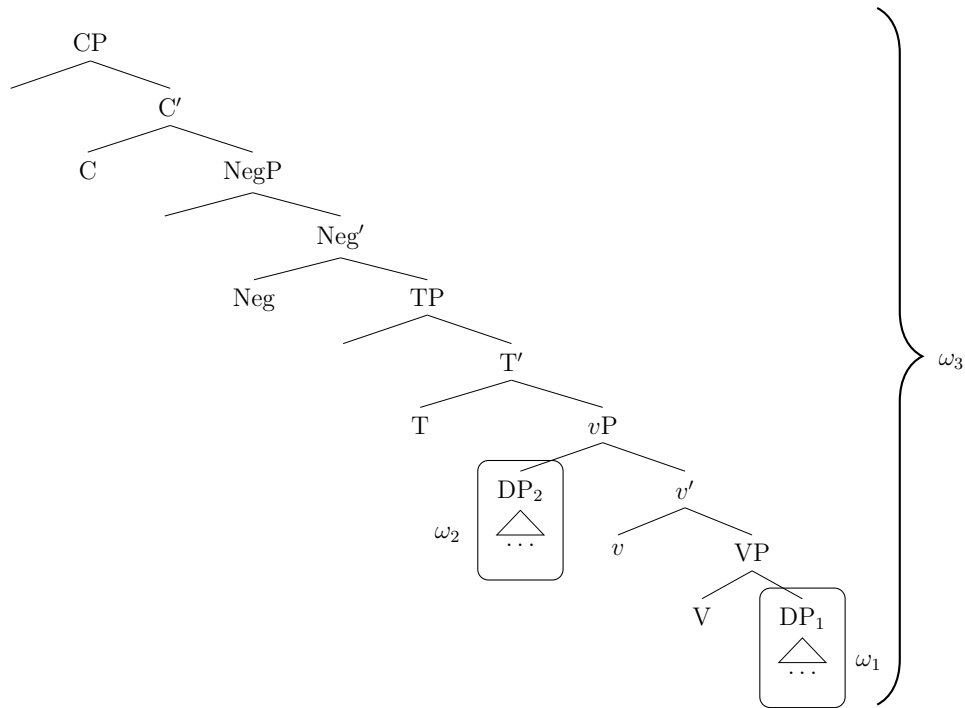
6.1 The mechanics of a Compton-style analysis

In practice, this results in the following schema for an Inuit sentence, adapted from Compton & Pittman (2010:8, ex. (10)):

¹¹A similarly phonologically based analysis can be found in Branigan, Brittain, & Dyck (2005) and Dyck (2009) for Algonquian and Iroquoian languages, respectively. While these analyses do differ from that proposed by Compton & Pittman (2010), I focus on Compton & Pittman here because it was developed for languages directly related to Aleut.

¹²Or with complements to phase heads mapping to words; see Compton & Pittman (2010:8-9) for some brief discussion of this. They argue that their data does not distinguish between an analysis where, for example, CP maps to a word or the complement to C^0 maps to a word, since phase heads are not phonologically overt in the language.

(51)



In the schematic example above, ω_1 is the first prosodic word formed, because the contents of DP₁ are the first to be sent to PF; subsequently, the subject nominal, DP₂, is mapped to a prosodic word (ω_2). The next phase to be spelled out is headed by C, and forms the third prosodic word (ω_3). However, because ω_1 and ω_2 have already been spelled out, they are excluded from ω_3 . The result is that only the DP arguments of the verb and CP (excluding its DP arguments) form words.

Because Inuit is related to Aleut, and because it also has suffixal As of the same sort as the ones discussed here, the Compton-style approach seems promising for Aleut too. DPs and CPs could be the only constituents mapped to prosodic words, explaining why suffixal As incorporate into nominals in the first place (rather than forming free-standing words themselves). Indeed, this is precisely how Compton (2012) explains why suffixal As appear within prosodic words in Inuit: suffixal As are adjuncts to NP, and therefore both are spelled out as part of a single word along with any other subconstituents of DP. (Note that Compton only addresses suffixal As modifying overt nominals.)

6.2 The challenges of a Compton-style analysis

At the same time, Aleut is notably different from the other languages in the family, diverging from the Inuit-Yupik side some 5–6,000 years ago (Berge 2010). Its syntactic structure and word-building strategies may similarly diverge.

The phase heads in Aleut, for example, cannot be the same as those in Inuit; specifically, *v* must additionally be a phase head in order for the locality-based account of the Aleut Effect present in Merchant (2011) and Yuan (2018) to work.

Despite evidence that *vP* is a phase in Aleut, neither it nor *v*'s complement can form an independent prosodic word, contrary to Compton's predictions. Perhaps in Aleut it is not all phases which are mapped to prosodic words, but only CP and DP, while *vP* is

exceptionally ignored. While this might require further conceptual motivation, it at least resolves the issue at the empirical level.

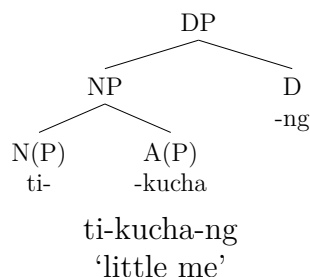
However, deeper issues underlie the analysis. In fact, because Compton & Pittman (2010)'s analysis is a type of alexist approach—that is, an approach in which terminal nodes can affix to one another to form prosodic words simply by virtue of linear adjacency—it ultimately has the same point of weakness as an analysis based on leaning. A DP_{pro} with an A(P) adjunct may base-generate as a subject in *spec-vP*, where it linearly precedes Voice. Yet we know empirically that no suffixal As can precede Voice. Thus, we must postulate that *pro* is compelled up the clausal spine, just as in our analysis involving suffixal As leaning right or left. In this way, subject *pros* will not remain in their base-generated position of *spec-vP*.

In the last section, I discussed Bošković (2004), according to which a DP_{pro} moving up the tree can only strand its adjunct in a position where the DP does not receive a θ -role. I showed why this would predict that an object DP_{pro} should be able to strand its adjunct in *spec-vP*, while a subject DP_{pro} should not. This meant that the adjunct to an object *pro* should be able to linearize just before a Voice morpheme, after *v*. The data demonstrated that this was not the case; no suffixal A of any kind can appear to the left of Voice in a verbal complex. The leftmost position in which suffixal As can be realized is rather to the right of Voice, indicating that they must raise minimally above *spec-vP*. (See § 5.2 for a more detailed explanation with tree diagrams.)

One substantial problem I have been overlooking is the fact that DP_{pro} itself should be realized as a separate prosodic word, no matter where it raises to. This might be resolved by adjusting the structure of the pronoun I have been assuming, but as we will see, this adjustment also comes with its difficulties.

Incorporated nouns are commonly believed to have less structure than their unin-
 corporated counterparts; we might take the incorporation of suffixal As into the verbal
 complex as a similar case. Perhaps the pronominals that incorporate are actually NPs,
 rather than full DPs, and an A(P) can adjoin to them. Such an NP may or may not be
 the complement to a D head; when it is, it remains in situ as an overt pronominal, as in
 (52) below.

(52)



When no D head is present, the pronominal is sent up the tree, presumably attracted by a structure-building feature on some higher head, and the N(P) strands its adjunct somewhere along the clausal spine. Without the D phase head, both the A(P) and N(P) become part of the prosodic word corresponding to the next highest domain encompassing them, which is CP. Thus, pronominals which raise are incorporated into the prosodic word constituting the verb; those which do not, do not incorporate.

This has the pleasing side effect that an overt pronominal is now present in a structurally high specifier position and can actually be pronounced there, as suggested by Sadock (2000). That is, C (or T, or an Agr head) does not enter into an agreement

relationship with the pronominal argument; rather, the pronominal cliticizes onto C (or T, Agr, etc.). This analysis is largely inspired by Bergsland’s (1997) grammar and the Eastern dialect of Aleut (*Qawalangiġ*), closely related to the Western dialect I have been examining here.

(53) *Overt pronoun (in both Eastern and Western dialects):*

ti(-kucha)-ng

1(-little)-1.sg

‘(little) me’

(54) *Western Aleut:*

qa-ku-q

eat-PRES-1.sg

‘I am eating’

(55) *Eastern Aleut:*

qa-ku-qi-ng

eat-PRES-1-1.sg

‘I am eating’

Bergsland (1997:57) suggests that *qakuqing* ‘I am eating’ is underlyingly *qakuġ-ting*; Western Aleut is said to have the same underlying form, but with more phonological reduction. Eastern Aleut is thus taken to be a more obvious instantiation of the fact that “agreement” in Aleut is not agreement after all, but the result of cliticization of an overt pronominal onto the highest head of the verbal complex.

However, if the final morphemes of the predicate in (54)-(55) have the same internally complex structure as in (53), it is difficult to say they have undergone incorporation because they are structurally impoverished nominals. Somehow, too, an A(P) adjunct must escape from in-between two morphemes which ultimately cliticize onto the right edge of the verbal complex, and itself be stranded among the verb’s various derivational suffixes. This is not possible, at least not with the assumptions made so far about how adjuncts can be stranded.

I conclude that, in Aleut at least, suffixal As that incorporate into verbs are indeed base-generated as adjuncts within covert pronominals, rather than overt pronominals. Parallels to noun incorporation in the style of Baker (1996) subsequently become less appealing. That is, the difference between overt and covert pronominals and their (in)ability to incorporate cannot be the result of the presence or absence, respectively, of a D head (or K head).

These issues ultimately render the Compton-style analysis less appealing for Aleut than for Inuit. As previously mentioned, these two languages—although related—vary considerably in their degree of polysynthesis and agreement inflection, so it would be unsurprising for their methods of word formation to differ as well. As it stands, a head movement analysis in the style of Harizanov & Gribanova (2019) remains the best approach to explaining Aleut suffixal As and their flexible distribution.

7 Conclusions

This article has explored the possibility of head movement, usually regarded as a highly restricted form of movement, from adjunct and specifier positions. I have investigated Aleut suffixal *As* as a case study of this phenomenon, constructing a two-step analysis that invokes both phrasal movement and head movement in order to derive the seemingly contradictory patterns observed. This analysis not only properly accounts for the flexible heights at which suffixal *As* can occur, but also the fact that suffixal *As* can appear within the prosodic word corresponding to the verb.

In constructing this analysis, I have appealed to a particular interpretation of Harizanov & Gribanova (2019)’s formulation of amalgamation, a type of head movement in which complex heads are formed. Technically speaking, no adjustments must be made to the definition of amalgamation in order to accommodate these highly unusual movement patterns. Harizanov & Gribanova’s approach is already flexible enough to permit the movement of the head of a non-complement into the next highest or lowest head according to *c-command*. While this is a significant departure from previous head movement literature, and indeed, a departure from the original intentions of Harizanov & Gribanova (who only depict examples of relations between heads and the heads of their complements), it succeeds in accounting for the empirical facts of Aleut suffixal adjective movement. Crucially, it appears to be more successful than alternative approaches, in which no head movement is necessary for word-building.

7.1 An empirical hiccup

This analysis naturally opens many questions, and it should be noted that there are some lingering issues in Aleut that it does not resolve in its present form. For instance, left undiscussed in this article are the following data:

- (56) a. Uchiitila-**âsiida**-*â* hla-**âsiida**-*â* kidu-ku-*â*.
teacher-**poor**-ABS.sg boy-**poor**-ABS.sg help-PRES-3.sg
‘The poor teacher is helping the poor boy.’
- b. *Kidu-**âsiida**-**âsiida**-ku-u.
help-**poor-poor**-PRES-A[sg]:3/3
Intended: ‘The poor one is helping the poor one.’
- (57) a. Taya^âu-**l^âu**-*â* hla-**kucha**-*â* kidu-ku-*â*.
man-**big**-ABS.sg boy-**little**-ABS.sg help-PRES-3.sg
‘The big man is helping the little boy.’
- b. *Kidu-**l^âu**-**kucha**-ku-u.
help-**big-little**-PRES-A[sg]:3/3
Intended: ‘The big one is helping the little one.’

According to the above, certain combinations of adjectives are banned within the verbal complex—even if they originate from different arguments and can exist in the same clause when they do not incorporate into the verb. In (56), it appears that the same adjective cannot undergo head movement into the verbal complex twice, even from two separate *pros*; in (57), conversely, antonymous adjectives are banned from undergoing such movement together. As of yet, the analysis I have developed involving a step of phrasal movement and a post-syntactic step of complex head formation cannot account

for this data. Similarly, alternative analyses, in which prosodic words do not necessarily correspond to complex heads, cannot explain it either; thus, some other mechanism must be required (in addition to those argued for here).

While future elicitation work will have to elucidate the causes of the patterns exemplified in (56)–(57), the current analysis accounts for the vast majority of the data with minimal adjustments to previously proposed grammatical architecture. Head movement and adjunction remain nebulous in the current theory, but the present analysis suggests that they are not mutually exclusive phenomena.

7.2 Why so rare?

Up till now I have focused almost exclusively on the Aleut data, attempting to build the most compelling analysis for the empirical facts in this language alone. However, if the analysis is on the right track, it is well worth asking where else (if anywhere at all) we might find this kind of head movement. What does it predict cross-linguistically?

A first concern is that allowing this sort of head movement will result in overgeneration, particularly in languages with noun incorporation. For instance: Why, if head movement is possible from non-complements, don't agents incorporate as readily as themes do cross-linguistically? One of the main aims of research on noun incorporation has been to explain this puzzle of argument behavior asymmetry. Baker (1988), for instance, argues that N^0 undergoes head movement to V^0 in noun incorporation; however, because the trace of N^0 must be properly governed, noun incorporation can proceed from internal, but not from external, argument positions.

However, the linguistic landscape is more complicated than this generalization would lead us to expect. For one, incorporation of agents (Myhill 1988, Zavala 2000, Phillips 2016), of adjective-like modifiers (Massam 2001, Wojdak 2005), and even of oblique arguments (Phillips 2016) are all attested. While the analyses of some of these languages class the phenomena observed as “pseudo-noun-incorporation” (Myhill 1988, Massam 2001), this is not the case for all. “Non-canonical” incorporation in other languages has been argued to involve the same mechanism as classic object incorporation (Zavala 2000), or some mechanism akin to the post-syntactic process argued for here (Phillips 2016). The apparent rarity of these languages might be attributed to the semantics and pragmatics of noun incorporation; e.g., internal arguments are more likely to convey background information or be idiomatically connected to a verb, two semantic effects associated with incorporation (Mithun 1986:33), resulting in some general dispreference on agent incorporation. Additionally, it might simply be that such languages are actually not so rare after all—perhaps they have not yet been discovered or adequately documented. In any case, noun incorporation is hardly a unified characteristic cross-linguistically, and we should not expect all languages to derive it in quite the same way. In the Inuit-Yupik-Aleut family itself, noun incorporation presents quite differently than in Mohawk or Mapudungun, since it proceeds only with a closed-class of verbs and is obligatory with these verbs.

The deeper question behind such typological concerns is whether the relative complexity or simplicity of a grammatical process is responsible for the likelihood of its own appearance cross-linguistically. That the theory of UG should be able to account for the probability patterns in typology has been an implicit assumption for many since Chomsky (1965): that is, more complicated derivational processes should be cross-linguistically uncommon. However, this assumption has been called into question. One obvious issue, as Comrie (1989) points out, is “establishing a representative sample of human

languages...that is both manageable in practical terms and likely to be free from bias from concentrating unduly on a single language or group of languages” (9). For instance, in Indo-European languages, which have historically been the basis for much linguistic theory, noun incorporation is not so common. Additionally, while generative grammarians can sometimes view language as existing in a vacuum, historical considerations—e.g., human migrations, colonization, the modern linguistic mass extinction, and resulting language contact—play a huge role in what ends up being common or uncommon in the languages we study. Thus, a biased picture of noun incorporation (and other phenomena) emerges.

Aside from these statistical concerns, we might even question whether more derivationally complex processes should indeed be less likely; see, for instance, Comrie (1984, 1989), and Newmeyer (2005). Newmeyer (2005) in particular “launch[es] a frontal assault...on the very idea that it is the job of Universal Grammar *per se* to account for typological generalizations” (73); he rather suggests that while UG may play some role, it is, in the end, “conventionalized performance preferences” (that is, cognitive or psycholinguistic considerations) that dictate what we might find as cross-linguistic tendencies. Among the implications of this idea is the generalization that “simpler grammars are not necessarily more common grammars” (113).

A thorough investigation of this approach to the cross-linguistic (in)frequency of grammatical phenomena is well beyond the scope of this article. I rather intend to cast doubt on the notion that the apparently flexible head movement argued for here should be cross-linguistically common, just because it is derivationally simple. We likely do not have a full picture of the cross-linguistic possibilities, and there is much more to explaining typology than the complexity of proposed steps in syntactic and post-syntactic derivations. Worries about a lack of similar analyses in the past literature need not force us to reject the present proposal—not when it is the only one to adequately account for the empirical data thus far gathered.

7.3 The big picture

Stepping back from these issues, I want to highlight the major theoretical implications of the present analysis. Certainly, conspiracies between syntactic phrasal movement and head movement are not novel proposals: Matushansky (2006), Zyman & Kalivoda (2020), and others have considered the possibility, although not necessarily with Harizanov & Gribanova (2019)’s definitions in mind.

What I wish to push forward here is that, all else being equal, there is no obvious reason to believe that Harizanov & Gribanova’s definition of amalgamation, or truly any definition of post-syntactic head movement, should apply to some structures (i.e., complements) and not to others (i.e., specifiers and adjuncts). Raising and Lowering operations triggered by [M] features on the heads involved are only sensitive to c-command, and specifiers and adjuncts are syntactically related to other parts of a structure via c-command. That is, until a theoretically well-grounded mechanism is in place to prevent these kinds of constituents from participating in head movement, the derivations I’ve proposed here involving post-syntactic head movement from adjunct and specifier positions should be perfectly plausible. And, given that (in this case, at least) the empirical evidence is better accounted for in this way, these derivations should also be *preferable*. Any alternative analysis where head movement from adjunct and specifier positions is categorically banned must not only explain how such a ban can be derived in a principled

way, but also how the data for Aleut is explained without head movement.

The questions raised doubtless require much more contemplation to satisfactorily answer. My hope is that future investigations will not take for granted that there are positions from which head movement is categorically unable to launch.

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