

The placement of second-position subject clitics in Alsea

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Abstract

This paper aims to spell out the post-syntactic operations involved in the placement of second-position subject clitics in Alsea, an extinct language of the central Oregon coast. It assumes that the subject clitic is a syntactic head that is moved to a complementizer position in syntax, but is linearized in a post-syntactic morphological component in PF; operations in morphology account for the deviation of the subject clitic from its syntactic output position. Based on Buckley (1994), this paper proposes a two-stage post-syntactic derivation to account for the subject clitic distribution in Alsea: (i) *concatenation*, in which the subject clitic adjoins to an adjacent head of the same type to satisfy its suffixal requirement, (ii) *prosodic readjustment*, whereby a clitic whose morphological host is non-overt, leans rightward to procliticize to the first prosodic constituent.¹

1 Introduction

Post-syntactic movement has been shown to be necessary to account for the mismatch between syntax and morphophonology, particularly in the placement of second-position clitics (Marantz (1984, 1988); Halpern (1992); Schütze (1994); Embick and Izvorski (1996); Legate (2008), among many others). But such movement is argued to be strictly restrained; morphological merger observes locality condition and relates only heads of the same type (Marantz (1988); Embick and Noyer (2001); Embick (2007)). The study of the placement of second-position subject clitics in Alsea supports this position. It shows that post-syntactic movement is morphologically triggered to satisfy the suffixal nature of the subject clitics, and in suffixation, subject clitics are only adjoined to an adjacent head of the same type. Furthermore, prosodic factors also play a role in the placement of subject clitics. When the morphological host of the subject clitic is phonologically null, the phonological dependence of subject clitics triggers the prosodic readjustment of subject clitics to lean on an adjacent phonological host Buckley (1994)).

Alsea is an extinct language of the Oregon coast often classified as Penutian (Sapir (1921); Buckley (1987)). The data in this study comes from Frachtenberg (1917, 1920). And the morphemic analysis is based on Buckley (1986, 1994, 2007), Kroeber (2005), and Frachtenberg (1920). It is a tentative analysis and is subject to further examination.

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Subject clitics in Alsea exhibit second-position properties, but this ‘second-position’ is not the absolute sentential second, either syntactically or phonologically (Buckley (1994)). This paper proposes that the position of the subject clitics is relative to a complementizer head. Subject clitics are adjoined to the complementizer in syntax, when the complementizer host is phonologically overt and no other constituent precedes, the subject clitic surfaces as second after the complementizer head that it adjoins to; if the morphological host placed by syntax is not present, but a constituent precedes the subject clitic, the subject clitic attaches leftward, and may still surface as second; when no potential host exists in the left-adjacency of the subject clitic, the clitic is suffixed to the right-adjacent word, also appears as second in the surface. However, if the complementizer head to which the subject clitic is adjoined to is morphosyntactically present but lacks phonological representation, the subject clitic leans to the following prosodic element and surfaces like a clause-initial proclitic. This paper attempts to spell out the post-syntactic operations that are involved in the positioning of subject clitics and the possible constraints that regulate such operations.

Section 2 presents the distributional properties of the subject clitics in Alsea, and section 3 develops an analysis for the placement of subject clitics within the framework of Distributed Morphology. Specifically, 3.1 proposes that subject clitics are adjoined to a complementizer head in the output structure of syntax. 3.2 demonstrates how the suffixal requirement of subject clitics is satisfied by means of local dislocation and concatenation, and what constraints are in effect to regulate such operations. 3.3 illustrates how a subject clitic whose morphological host is non-overt adjusts its position derived from earlier morphological operations in order to satisfy its phonological dependence.

2 The Distribution of Subject Clitics in Alsea

The paradigm of subject clitics in Alsea is shown in Table 1. Most of the subject clitics consist of consonants only, as a result, epenthetic vowels are often inserted between the host and the clitic in surface representations. The 3rd person singular has a null form. (‘=’ indicates the boundary between the host and the clitic, and ‘-’ indicates the boundary between the stem and the affix.)

(1) Pronominal clitics in Alsea (Buckley (1994): 3)

	singular	dual	plural
1st person	=n	=x̄an (excl.), =st (incl.)	=ɬ
2nd person	=x̄	=pst	=p
3rd person	=∅	=awx̄	=ɬx̄

Subject clitics form a clitic cluster with the Irrealis complementizer *k=*, which is a proclitic that usually appears clause-initially. Examples are shown in (2) and (3). The representations are in phonemic forms, following Buckley (2007).

(2) *k==st* *x̄ilt-iʔi* *a=stin* *taʔ*
 IRR==1DU.I look-for-IRR.TR DIST=1DU.I.P father
 ‘We two will look for our (dual) father.’ (126.9)¹

¹The data comes from Frachtenberg (1917, 1920) with page and line numbers; ‘j’ refers to Frachtenberg (1917).

- (3) k==**ɬx** ck^w-ay-ɬ^lx-s c-yul-k
IRR==3PLS understand-INCH-RECIP-TR 3P-language-3P

‘They will understand mutually their language.’ (110.27)

The clitic cluster of the Irrealis and the subject clitic may be preceded by a complementizer *mis*, which introduces a subordinate clause (4), or a sentential conjunctive *tm* ‘and’ or *tmɬta* ‘but’ (5).

- (4) tm muhu mis k==**ɬx** ɬiya? nak=ks ckuyt-iyu-sx-m
and now C IRR==3PLS NEG where=ALL escape-TRNL-REFL-IRR.INTR

‘And then when they were not able to escape anywhere(else)’ (108.6)

- (5) (a) tm k==**n** ɬ==?axa=iya? la? wil qxin=ks
and IRR==1sgS NEG=back=NEG how come down=ALL
‘And (now) I do not (know) how to get back down.’ (78.14)
- (b) tm=ɬta k==**ɬx** ɬiya? yayx-stx^ws
and=but IRR==3PLS NEG move-PASS.CMPL
‘And they could not get through (anywhere).’ (94.20)

The Irrealis can be non-overt clause-initially (Buckley (1994)). When the Irrealis is phonologically null, subject clitics procliticize to the following prosodic word (6-7):

- (6) ∅=**ɬ**=qat?a-tx-ay-m ?is cik
IRR==1PLS=shoot.at.target-INTR.INCH-IRR.INTR PREP arrow

‘We will shoot at the target with arrows.’ (44.18)

- (7) ∅=**p**=suwit ɬ-utx-ayu-sx-m
IRR=**2pLS**=WIND TRNL-turn.into-TRNL-REFL-IRR.INTR

‘You will turn into winds.’ (34.1)

The procliticization is suggested by an epenthetic vowel between the subject clitic and the phonological host, which however, does not occur between adjacent consonants at word boundaries (Buckley (1994)). For example, in (8), a schwa is inserted between the 2nd person singular subject clitic and the following consonant-initial word *hika* ‘just’:

- (8) (a) k=hika ɬa?misu x̄m ɬan
IRR=just day owl 2sgP name
‘Thy name will be only Day Owl;
- (b) ∅=x̄ə=hika yac-i ?is ɬwahayu
IRR=**2sgS**=just live-IRR.CMPL in mountain
Thou wilt live in mountains;
- (c) ∅=x̄ə=hika tay? xulm-tx-m ?is qamɬis
IRR=**2sgS**=just only travel-INTR-IRR.INTR in night
Thou wilt travel only at night.’ (50.8)

The phonological host of the subject clitics does not need to be a prosodic word. A following clitic may also serve as a phonological host (9-11):

- (9) $\emptyset == \text{pst} = ?a\dot{x}a \quad \dot{p}i\dot{x}\text{-ay}$
 IRR == **2duS** = back go-INCH

‘You two will go back (to her).’ (122.20)

- (10) $\emptyset == \text{pst} = \text{awk} \quad s\dot{l}\text{-i-x-s}\dot{x}m \quad k^w\text{as kilu}$
 IRR == **2duS** = inside submerge-IRR.TR-REFL-IRR.INTR DET water

‘You two submerge yourselves into the water.’ (74.24)

- (11) $hi?isa?, \emptyset == \dot{x} = \text{aw} \quad ?ih\text{-i-mc-u} \quad \dot{x}m \quad c\dot{i}k$
 friend IRR == **2sgS** = here give-IRR.TR-1O-TRL 2sgP arrow

‘Friend, give me thy arrows!’ (44.21)

A non-overt form is also seen in the first component of a complementizer compound such as Habitual ($k =$)...=c, Resultative ($k =$)=s, and Irrealis ($s =$)=s (Buckley (1994)). Subject clitics always follow the first component of the complementizer compounds. When it is phonologically null, subject clitics stay with the second component and other attaching clitics to form a clitic cluster (12-13):

- (12) (a) $\text{namk } s == \mathbf{n} = s \quad t\dot{q}ay?alt\text{-i}, \quad k == \mathbf{p} = \text{awk} = s \quad \dot{l}\dot{q}\text{-ay-m}$
 when IRR == **1sgS** = IRR want-IRR.CMPL RES == **2plS** = on = RES cross-INCH-IRR.INTR
 kaw = ks
 other.side = ALL

‘(Only) when I shall want it, then shall you cross over to the other side.’ (108.27)

- (b) $\text{namk } \emptyset == \mathbf{t} = s \quad ka?ay\text{-m}, \quad \emptyset == \mathbf{t} = s \quad ka\dot{x}k\text{-ay-m}$
 when IRR == **1plS** = IRR stop-INCH-IRR.INTR RES == **1plS** = RES assemble-INCH-INTR
 $\dot{x}am\text{-t} = ks \quad lahwi$
 one-ADJ = ALL place

‘After we will stop, we will assemble at another place.’ (46.11)

- (13) (a) $qalpay \quad k == \mathbf{t}\dot{x} = c \quad muhu \quad pupnhaw\text{-t}\dot{x}\text{-ay}$
 again HAB == **3plS** = HAB now play.shinny-INTR-INCH

‘They began to play shinny once more.’ (24.13)

- (b) $qalpay \quad \emptyset == \mathbf{t}\dot{x} = c \quad halaci \quad ci\dot{l}\text{-t}\dot{x}\text{-ay}$
 again HAB == **3plS** = HAB similarly split-INTR-INCH

‘Again they began to split as before.’ (118.16)

Without the Irrealis complementizer $k =$ and a complementizer compound in the clause, subject clitics are suffixed to their left-adjacent constituents if available. For example, in (14) and (15), the subject clitics are suffixed to a high complementizer, *mis* and *kus*; and in (16), they are suffixed to a conjunctive *tm* ‘and,’ and *tm\dot{t}a* ‘but.’ This often gives rise to constructions in which subject clitics appear later than the second.

- (14) (a) tm m̥hu mis=**awx̣** ʔ-k^wal-i-ʔ-x̣
and now C=**3duS** TRNL-reach-INCH-3.IO-CMPL
'And when they two reach up to it,' (138.35)
- (b) laʔta mis=**ʔ** mʔan-i-u-x̣
because C=**1plS** know-INCH-2O-CMPL
'Because we know thee.' (40.15)
- (15) (a) tm̥hu mis=**awx̣**=ʔaʔa wil-x̣ nak=ks kus=**awx̣** p̥k-sa-nx̣ kus cick
then C=**3duS**=back come-CMPL where=ALL C=**3duS** place-DIST-3O DET arrow
i^hk=c-camcu-k=**awx̣**
for=3P-sign-3P=**3duP**
'And when they two came back to where they two had placed those arrows for a sign
(to mark their way),' (146.26)
- (b) ʔmista tm kus=**n** qasu-ayu-x̣ nix̣
thus and C=**1sgS** send-TRNL-CMPL you
'That was why I sent thee (along).' (30.20)
- (16) (a) tm=**ʔx̣** x̣icw-x̣ qalpay
and=**3plS** start.out-CMPL again
'They started out again.' (24.9)
- (b) tm=**ʔta**=**awx̣** hika hil-ay-nx̣ hamstiʔ
and=but=**3duS** just miss-INCH-3O each
'But both of them missed.' (186.14)

Without a left-adjacent host, subject clitics are suffixed to the right-adjacent word unselectively, regardless of its syntactic category or structural constituency (17-19):

- (17) hayc-ay-nx̣=**n**=ʔaʔa kuham yaha^hciyu kuham taʔ=ks=**ʔx̣**
bring-INCH-3O=**1sgS**=back your gambling-stick your father=ALL=**3pl**
c-qanu-k
3P-sweat.house-3P
'I took back the gambling sticks to the sweat house of thy fathers.' (150.29)
- (18) mulpcnisla=**n** c-qsawa-k
Coyote=**1sgS** 3P-messenger-3P
'I am Coyote's messenger.' (36.17)
- (19) hamstiʔ=**ʔx̣** hika ʔinckis mʔan-x̣
every=**3plS** just something know-CMPL
'They know everything.' (42.1)

The suffixation to the first word may split a syntactic constituent, for example (20):

- (20) (a) ca?ma=**n** sluq^w-cḡ
 very=**1sgS** cold-CONT
 ‘I am very cold.’ (64.10)
- (b) suta?st-t=**awx** s=pick^wm ḡwah-aw
 five-ADJ=**3duS** REF=day climb.up-CONT
 ‘For five days they two kept on climbing.’ (128.11)

In sum, subject clitics are obligatorily hosted by the Irrealis complementizer $k=$ and a complementizer compound when present. When the Irrealis $k=$ is non-overt, which is only observed clause-initially, subject clitics lean to the right-adjacent phonological item, either a clitic or a prosodic word. Without the Irrealis complementizer or a complementizer compound, subject clitics are suffixed to the left-adjacent constituent if available; otherwise, they are suffixed to the right-adjacent word, which may split a syntactic constituent.

3 The Analysis

This paper assumes that the subject clitic is a syntactic head (Kayne (1975) and subsequent work) that is moved to approximately the surface position in the output structure of syntax, and operations in the morphological component are responsible for the distribution of subject clitics that appears to deviate from this position (Embick and Noyer (2001); Embick (2007); Halpern (1992); Schütze (1994); Legate (2008)). The following sections try to spell out the post-syntactic operations involved in the placement of subject clitics within the framework of Distributed Morphology (Halle (1990); Halle and Marantz (1993, 1994); Embick and Noyer (2006), etc).

3.1 The syntactic output position of the subject clitics

A salient pattern in the distribution of subject clitics in Alesa is the invariant suffixation of subject clitics to the Irrealis complementizer $k=$ when the Irrealis is present. Therefore, in order to understand the placement of subject clitics, it is crucial to examine the distribution of the Irrealis.

The Irrealis $k=$ usually occurs clause-initially (21). Only a restricted set of categories appear in its left-peripheral position, such as the complementizer *mis* (22), the sentential conjunctive *tm* ‘and,’ and *tmḡta* ‘but’ (23):

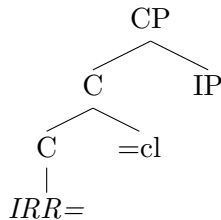
- (21) **k=**ḡiya? qa?ca cqmt^l-iyu-sḡ-m as qu?iḡa
 IRR=NEG long.time finish-TRNL-REFL-IRRLINTR DET counting.stick
 ‘Not long (until) the counting sticks were going to run out.’ (38.13)
- (22) tm mḡhu mis **k=**ḡ-k^wi?-m
 and now C IRR=TRNL-canoe-IRR.INTR
 ‘And as he was about to enter the canoe,’ (92.12)
- (23) tm **k=** ḡika qawa? qa?ukay ḡḡmn -a?a
 and IRR= just all someone kill -IRR.TR
 ‘(Because) everyone was going to (take part in) killing him.’ (56.29)

If the Irrealis complementizer is followed by another clitic, such as an adverbial clitic or a subject clitic, the Irrealis forms a clitic cluster with the clitic instead of procliticizing to the first prosodic word (24):

- (24) (a) **k**=awk hika ca?ma pilsk^wi?st pin kalcu
 IRR==inside just very.much strong 2pl.P mind
 ‘Your hearts shall be very strong.’ (38.25)
- (b) **k**=st hayc=slu ?ay-ay-m
 IRR==1duS here=LOC go-INCH-IRR.INTR
 ‘We two will go in this direction.’ (128.13)

The Irrealis complementizer has almost identical placement possibilities as subject clitics except that the Irrealis as a proclitic may appear clause-initially. Assuming that the surface positions of the subject clitic and the Irrealis closely correspond to their syntactic output positions, the subject clitic should be either immediately below the Irrealis complementizer in the syntactic output, and later morphological operations adjoin the subject clitic to the Irrealis, or the subject clitic is at the same complementizer position where the Irrealis is located, that is, the subject clitic is adjoined to the Irrealis complementizer in syntax. However, the Irrealis is unlikely to be lower than the subject clitic, because if that were the case, as a proclitic, the Irrealis would procliticize to the first word of its complement, rather than attach to the subject clitic. The two possible options give identical adjacency relations between the Irrealis and the subject clitic in linearization in the PF. Considering that the subject clitic is never separated from the Irrealis when the Irrealis is present, the first hypothesis will also have to assume no specifier or adjunct position between the subject clitic and the Irrealis heads. Based on this consideration, I assume the latter hypothesis that the subject clitic is adjoined to the Irrealis complementizer head in the output of syntax. The representation is shown in (25):

- (25) The positions of the Irrealis and the subject clitic in the output of syntax



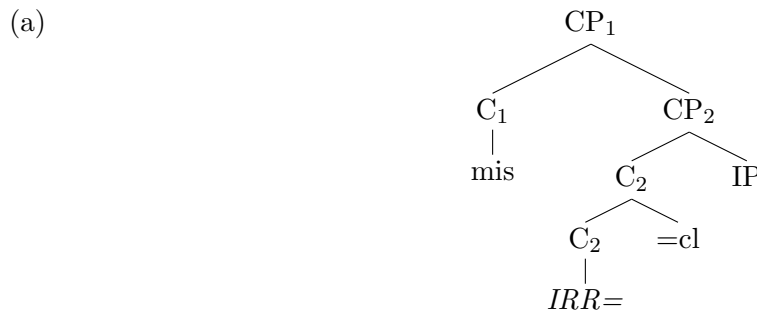
Although the subject clitic is adjoined to the Irrealis complementizer, the movement of subject clitics to this position should not be dependent on the features of the Irrealis, because the Irrealis may be not present in the clause, while the subject clitic attaches to the left-adjacent constituent from the same position as when the Irrealis is present. The underlying assumption of this hypothesis is that the subject clitic is at a complementizer position immediately adjacent to the Irrealis in the syntactic output. One could further postulate that it is the features of the complementizer head that attract the movement of subject clitics to that position. But I am not in a position to argue for the motivation of the movement, except for positing a possible syntactic output position that may generate the necessary adjacency relations for the concatenation of subject clitics. The focus of this paper is to explore the post-syntactic operations involved in the placement of subject clitics in the PF.

3.2 The suffixation of the subject clitics

The subject clitic, being a suffix, needs a morphological host to its left to satisfy its subcategorization requirement. Syntax puts the subject clitic adjacent to the Irrealis complementizer, but they are unordered. Concatenation in the morphological component suffixes the subject clitic to the Irrealis. The derivation is illustrated in (27).

- (26) tm m̩hu mis k==awx̣ ʔay-ay-m
 and now C IRR==3duS go-INCH-IRR.INTR
 ‘And now when they two were (ready) to start,’ (66.24)

- (27) Local dislocation of the subject clitic with the Irrealis²



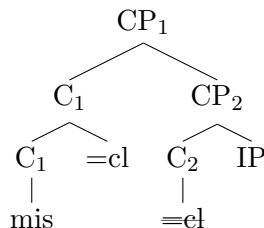
- (b) Syntax output: $[_{CP1} [_{C1} \text{mis} [_{CP2} [_{C2} [_{C2} \text{IRR=}] = \text{cl}] \text{IP}$
 Adjacency: $(_{CP1} \text{mis} * (_{CP2} (_{C2} \text{IRR=} = \text{cl}) * \text{IP} (* = \text{“is left-adjacent to”})$
 Concatenation: $\text{mis} \frown (\text{IRR=} \frown = \text{cl}) \frown \dots$

The complex head C2 contains two terminal nodes, the subject clitic and the Irrealis. In the notions of Embick and Noyer (2001) and Embick (2007), the complex head of C2 as a head undominated by further head projections is an M-Word, while the two terminal nodes within the complex head are Subwords. The complementizer C1 *mis* is adjacent to CP2 and the complex head C2 in the output of the adjacency operator * “is left-adjacent to” (Embick (2007)). Both the M-Word C1 *mis* and the Subword C2 *IRR=* are potential heads for the suffixation of the subject clitic. However, rather than reach outside of the complex head to concatenate with *mis* the subject clitic is suffixed to the Irrealis, which is a same type of head as the subject clitic. It provides support for the *Typed Linearization Hypothesis* (Embick (2007); Embick and Noyer (2001)), which claims that concatenation relates only elements of like type: an M-Word is related with an M-Word, and a Subword with a Subword. The suffixation of the subject clitic to the Irrealis is an example of a Subword concatenating with a Subword, but not with an M-Word. When the Irrealis is not present, the subject clitic is a maximal head at C, hence an M-Word. If a constituent is available above C, the subject clitic undergoes local dislocation to adjoin to that adjacent head. Otherwise, the subject clitic adjoins to the right-adjacent M-Word. We use the example (28) to illustrate the first situation:

²Based on the split-CP hypothesis (Rizzi (1997)), the complementizer *mis* is most likely to be a C head *Force*, and the Irrealis *k=* is a finiteness complementizer *Fin*, but we only use C1 and C2 in our discussion instead of pinpointing exactly what complementizer heads they are.

- (28) \emptyset =pst= $\dot{p}i\dot{x}$ -ay, \emptyset =pst= \dot{t} - $\dot{?}al$ -aw-i mis=**n**= $\dot{?}axa$ wil- \dot{x}
 IRR=2duS=go.to-INCH IRR=2duS=TRNL-tell-CONT-IRR.CMPL C=**1sgS**=back come-CMPL
 ‘Go you two to him, (and) keep on telling him that I have come back.’ (78.30)

(29) (a)



- (b) Syntax output: $[_{CP1} [_{C1} mis [_{CP2} [_{C2} [=cl IP$
 Adjacency: $(_{CP1} mis * (_{CP2} =cl * IP$
 Concatenation: $mis \sim =cl \dots$

As shown in (29), the subject clitic is adjacent to the higher complementizer C1 *mis*, which is also an M-Word. In order to satisfy its subcategorization requirement, the subject clitic adjoins to C1, and is suffixed to C1 in concatenation. This local dislocation is a string vacuous case, no re-ordering is involved. And the concatenation relates two M-Words.

Besides a higher complementizer and sentential conjunctives, the subject clitic may also be suffixed to a SpecCP constituent such as a topicalized constituent in (30), or a fronted wh-phrase in (31), when it appears to the left-adjacency of the subject clitic. The subject clitics adjoin to the adjacent M-Word of the SpecCP constituent, which is another instance of concatenation between M-Words.

- (30) $\dot{t}as$ $\dot{t}yact$ = $\dot{t}x$ $m\dot{u}hu$ wil- \dot{x}
 DET inhabitant=**3plS** now arrive-CMPL
 ‘(After they came in their boats to that river), they arrived at people.’ (170.38)

- (31) \emptyset = \dot{x} = $\dot{h}ika$ $\dot{x}i\dot{k}$ \dot{t} -yas-i $\dot{?}is$ $\dot{?}inckis$ =**n** $\dot{t}qay\dot{?}alt$ - \dot{x}
 IRR=2sgS=just correctly TRNL-tell-IRR.INTR PREP what=**1sgS** want-CMPL
 ‘Thou shalt tell exactly for what reason I want.’ (34.18)

When no left-adjacent host is available, the subject clitic is suffixed to the right-adjacent word regardless of its syntactic category or structural configuration, which suggests that the movement involved cannot be syntactic, but post-syntactic movement that operates under adjacency. As an M-Word, the subject clitic may only adjoin to another M-Word, it cannot adjoin to a Subword. The example in (32) illustrates this constraint on concatenation.

- (32) $\dot{t}qux^w$ - $\dot{?}y$ -ay-n \dot{x} = $\dot{t}x$ a=c-qasint-k= $\dot{t}x$
 bet-ITER-INCH-3O=**3plS** DIST=3P-younger.sister-3P=3plP
 ‘(The travelers) placed their sister as their stake.’ (24.6)

In (32), the right-adjacent word of the subject clitic is a verb with inflectional suffixes. The subject clitic is attached outside of the inflectional suffixes of the verb. However, when the subject

clitic undergoes local dislocation to adjoin to a host, the first head to its right is the verb root, a Subword. In the syntactic output, the functional heads corresponding to the inflectional suffixes are maximal heads in their own projections. After they are adjoined to the verb head through cyclic local dislocation in the morphological component, both the functional heads and the verb head they adjoin to become Subwords within a complex head. As an M-Word, the subject clitic cannot adjoin to a Subword, nor may it intervene between the inflectional suffixes, which are all Subwords. The first adjacent M-Word for the subject clitic to adjoin to is the undominated complex verb head, therefore, the subject clitic are suffixed to the outside of the inflectional affixes of the verb. The concatenation of the subject clitic with the complex verb head is shown in (33):

- (33) The suffixation of the subject clitic to a right-adjacent inflected verb
 Adjacency: $(_{CP}(C =cl * (_{CP}(BET * v * y * x) * DP$
 Concatenation: $(BET \frown v \frown y \frown x \frown =cl \frown DP$

In (33), x and y represent the various inflectional heads that adjoin to the verb root. Upon adjunction, they turn into Subwords. These Subwords and the verb root are concatenated as Subwords within the complex verb head, and the complex verb head as the M-Word closest to the edge of IP concatenates with the subject clitic.

Another example of the subject clitic concatenating with a complex head is shown in (34), where the proclitic preposition *hak*= ‘from’ is adjoined to its complement, which is also a complex head, before the suffixation of the subject clitic. The cyclic local dislocation of heads within the complement of the preposition as well as the adjunction of the preposition to the complex complement head results in an internally complex M-Word. The constituents within the M-Word are concatenated as Subwords. The subject clitic as an M-Word may not intervene between the constituent Subwords of this complex head, instead, it can only adjoin to an M-Word, namely, the complex head consisting of the preposition and its complement. The two types of concatenation are shown in the concatenation statement in (35).

- (34) $hak=ʔ-mclax-xmt=ʔ=ʔaxa$ $yalas-aw$
 from=TRNL-dance.the.murder.dance-INF=**1plS**=back return-CONT
 ‘We are returning from a war dance.’ (128.28)

- (35) The suffixation of the subject clitic to a preposition and its complement
 Adjacency: $(_{CP}(C =cl * (_{IP}(PP hak= * (ʔ-mclax-xmt)) * =ʔaxa * VP$
 Concatenation: $(hak= \frown ʔ \frown mclax \frown -xmt)) \frown =cl \frown =ʔaxa \frown \dots$

3.3 Procliticization

Besides requiring a morphological host to its left, subject clitics being phonologically dependent also require a phonological host. The two requirements are often satisfied simultaneously if the morphological host has phonological representations. But when the morphological host is phonologically non-overt, the subject clitics undergo prosodic readjustment to attach to an adjacent phonological host. Under such a circumstance, the phonological host of the subject clitic is different from its morphological host. This point is illustrated by the examples in (36).

- (36) (a) $\emptyset=ʔst==u$ $ʔawit-x-sx-m$ $caʔwa$
 IRR==**2duS**=here near-IMP.INTR-REFL-IRR.INTR more

- ‘You two shall come nearer here.’ (73.24)
- (b) \emptyset =**pst**= $\dot{x}i\dot{?}i\dot{k}ka$ $\dot{?}$ -hayan-aw-s \dot{x} -m
 IRR=2du**S**=carefully TRNL-look-CONT-REFL-IRR.INTR
 ‘You two shall take good care of yourselves.’ (216.22)
- (c) $\dot{k}q$ -ay- \dot{x} = $\dot{?}x$ = $\dot{?}axa$ $m\dot{u}hu$ $\dot{?}icays$ =ks
 come.ashore-INCH-CMPL=**3plS**=back now house=ALL
 ‘Then they came ashore (and went) into the house.’ (132.17)

In (36a) and (36b), the host of the subject clitic is a non-overt Irrealis complementizer. When the subject clitic is followed by another clitic, they form a clitic cluster and stand alone; without a following clitic, the subject clitic procliticizes to its following word. In contrast, when the Irrealis is absent and there is no left-adjacent host available either, as in (36c), the subject clitic along with its following clitic is suffixed to the right-adjacent word, which acts as both the morphological and the phonological host. The contrast between (36a) and (36c) also suggests that a clitic may serve as a phonological host, but not a morphological host.

The division between the morphological host and the phonological host is proposed in Buckley (1994). He argues that it is the morphosyntactic properties of the Irrealis that qualify it as a morphological host of the subject clitic, so even if the Irrealis is not pronounced, its morphosyntactic feature bundle satisfies the morphological subcategorization requirement of the subject clitics, as a result, the subject clitic simply leans rightward to a phonological host in order to be syllabified. The present analysis is built on the basis of Buckley (1994). In the notions of this paper, the local dislocation of subject clitics is only morphologically triggered, post-syntactic operations are distinguished as either morphologically or phonologically motivated, and prosodic readjustment is a late repair strategy. The procliticization of subject clitics requires a two-stage derivation, which is laid out in (37).

- (37) \emptyset = $\dot{x}\dot{a}$ = $\dot{c}i\dot{?}$ -a $\dot{?}a$ kus tqaw $\dot{h}i\dot{c}$
 IRR=**2sgS**=split-IRR.TR DET pitch-wood
 ‘Thou shalt split this pitch-wood.’ (j70.4)

- (38) The two-stage post-syntactic derivation in the procliticization of subject clitics
- | | | |
|-----------|------------------------|---|
| Stage I: | Adjacency: | $(_{CP} (C \text{ IRR}==\dot{x}) * (_{IP} (\dot{c}i\dot{?}-a\dot{?}a) * DP$ |
| | Concatenation: | $(\text{IRR}=\dot{\wedge}=\dot{x}) \dot{\wedge}(\dot{c}i\dot{?} \dot{\wedge}-a\dot{?}a) \dot{\wedge} \dots$ |
| Stage II: | Prosodic projection: | $\emptyset==\dot{x} (_{PrWd} \dot{c}i\dot{?}a\dot{?}a) \dots$ |
| | Prosodic readjustment: | $\emptyset= (_{PrWd} \dot{x}=\dot{c}i\dot{?}a\dot{?}a) \dots$ |
| | Vowel insertion: | $\dot{x}\dot{a} \dot{c}i\dot{?}a\dot{?}a$ |

Concatenation and prosodic readjustment feature the two stages of the derivation. The prosodic readjustment in stage II applies only when the morphologically host is non-overt. Since it occurs after concatenation, it cannot trigger local dislocation.

4 Conclusion

The placement of subject clitics in Alesa distinguishes two types of post-syntactic operations, local dislocation and prosodic readjustment. Local dislocation is only morphologically triggered to satisfy

the suffixal nature of the subject clitics. Prosodic readjustment applies when the morphological host may not also serve as a phonological host. They minimally adjust the position of the subject clitics after the syntax component.

The local dislocation of the subject clitic is constrained in that the subject clitic may only be suffixed to a head of the same type. When the subject clitic is an M-Word, it adjoins to an M-Word host; when it is a Subword, it adjoins to a Subword host. This case study provides support for the Typed Linearization Hypothesis (Embick and Noyer (2001); Embick (2007)).

The phonological host of the subject clitic in procliticization differs from the morphological host. A two-stage post-syntactic derivation is necessary to account for such mismatch. When the morphological host of the subject clitic is phonologically null, the subject clitic undergoes prosodic readjustment to lean rightward and align with the adjacent phonological element. Because prosodic adjustment occurs after concatenation, it may not trigger local dislocation.

The discussion in this paper has only dealt with the distribution of subject clitics with respect to the Irrealis complementizer, the positioning of subject clitics with respect to complementizer compounds and the other clitics in a clitic cluster awaits future examination.

5 Abbreviations

The abbreviations used in this paper include: ADJ adjectival, ALL allative, C complementizer, CMPL completive, CONT continuative, CSTR construct, DET determiner, DIST distributive, ERG ergative, INCH inchoative, INTR intransitive, IRR Irrealis, ITER iterative, LOC locative, MULT multiplicative, NEG negative, PREP preposition, Q interrogative, RECIP reciprocal, REFL reflexive, RES resultative, TR transitive, TRNL transitional. For pronouns: 1, 2, 3 first, second, third person; I inclusive, E exclusive; sg singular, du dual, pl plural; S subject, O object, IO indirect object, P possessive.

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