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Preverbal Elements in Korean and Japanese

1.1 Pre- and post-verbal negation in OV languages.

Dahl (1979) (see also Dryer 1988, 1992) observes that SOV languages evince two typical negation patterns: one where the marker of negation immediately precedes the verb, and one where it follows. Inflected negative markers appear in the latter pattern; preverbal negators are uninflected particles. These two patterns are shown in (1-2) with examples from Korean and Japanese.

(1) Preverbal Negation

a. Mica   ka   hakkyo ey   **an**   ka-ss-ta.   (Korean)

   Mica   NOM   school to   NEG   go-PAST-INDIC

   'Mica didn't go to school.'

b. Tuki   **na**   mi-tamaɸ-i   so!   (Japanese; *Taketori Monogatari* 859)

   moon   NEG   see-HONORIFIC-CONTINUATIVE   PRT

   'Please don't look at the moon!'

(2) Postverbal Negation

a. Mica ka   hakkyo ey   ka-ci   **anh**-ass-ta.(Korean)

   Mica NOM   school to   go-SUSP   NEG-PAST-INDIC

   'Mica didn't go to school.'

b. Yooko ga gakkoo ni   ik-**ana**-katta   koto   (Japanese)

   Yôko NOM school to   go-NEG-PAST that

   'that Yôko didn't go to school.'

The preverbal negation pattern in (1b) is limited to negative imperatives in Old and Early Middle Japanese (8th-12th c.). Dryer (1988, 1992) shows that the SO**Neg**V pattern in (1a) and the SOV**Neg** pattern in (1b) are overwhelmingly the most common patterns in verb-final languages. 39 (15 families) of the 117 verb-final languages in Dryer's (1988) sample show SO**Neg**V, while 64 (19 families) show SOV**Neg**. In contrast, 8 languages (5 families) have **Neg**SOV, while 6 (3 families) have S**Neg**OV (1988: 96).

There is an obvious parallel between the uninflected negative particle in the SO**Neg**V pattern and nonhead negators such as French *pas*. At the same time, there is a parallel between the postverbal negators in the SOVNeg pattern, which may be inflected, and head-type negators such as French *ne*. For a concrete comparison, let us consider Pollock's (1989: 414) analysis of French negation. The nonhead negator *pas* occupies the specifier position of a projection above VP, while *ne* originates as the head of this projection. *Pas* has the properties of a maximal projection: it does not block movement of the verb. *Ne* is analyzed by Pollock as a clitic, which moves with the verb to Tense.

(3) [$_{TP}$ Paul [$_{T'}$ ne mange [$_{NegP}$ pas   t$_{ne}$ [$_{VP}$ t$_{V}$]]]].

"Paul doesn't eat."

Like *ne*, the post verbal negators *anh-* (2a) and *–ana-* (2b) are heads. Korean *anh-* is inflected for tense and selects a verbal complement in suspective *–ci*. It may optionally assign overt case to this complement (Song 1971):

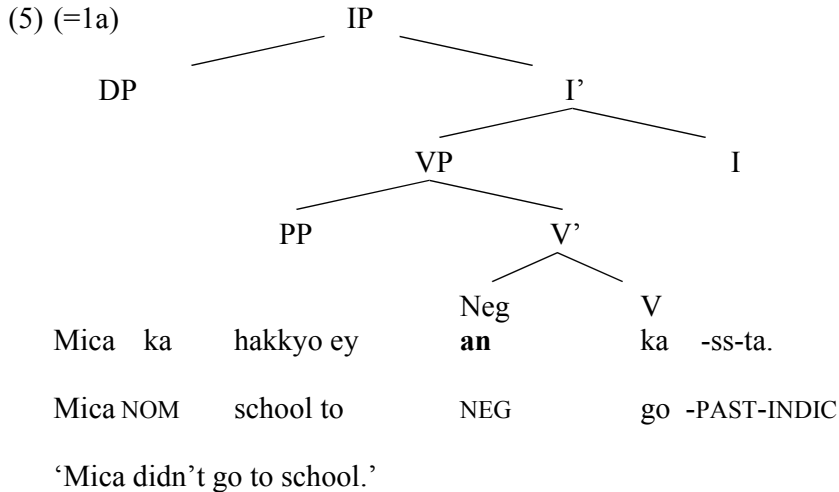(4) Mica ka   hakkyo ey   ka-ci   lul   anh-ass-ta.

   Mica NOM school to   go-SUSP ACC   NEG-PAST-INDIC

   'Mica didn't go to school.'

Japanese *–ana-* also inflects for tense and shares the adjectival inflectional pattern of the independent negative adjective *na-(i)* 'not exist'.

In a standard left-branching analysis of Korean or Japanese clause structure, these parallels are difficult to capture. Postverbal negators in the SOV**Neg** pattern may be straightforwardly analyzed as heads (see Park 1990, Ahn 1991, and Choi 1991 for head analyses of postverbal negation in Korean). But preverbal

negators in the SO**Neg**V pattern may not be analyzed as specifiers.[1] In a base-generated analysis of verb-final word order in an SO**Neg**V sentence like (1a), for example, the negative particle *an* must be analyzed as sister to the verb, in the position of a complement, not a head.[2]

(5) (=1a)

```
                          IP
            _____/       _____
        DP                              I'
                              _____/      _____
                            VP                       I
                      ___/      \___
                  PP                V'
                              ___/      \___
                            Neg             V
```

Mica	ka	hakkyo ey	**an**	ka	-ss-ta.
Mica	NOM	school to	NEG	go	-PAST-INDIC

'Mica didn't go to school.'

The analysis in (5) fails to explain how it is possible for the negative particle to be realized as a complement of V, a position normally reserved for arguments. But more directly to the current point, it fails to capture the parallelism between preverbal negators in the SO**Neg**V pattern and uninflected negative particles like *pas* in VO languages.

This parallelism can be captured under the account of Object – Verb – Infl order in Kayne (1994, §5.5), according to which head final order is derived by movement of VP to the left.[3] Under this approach,
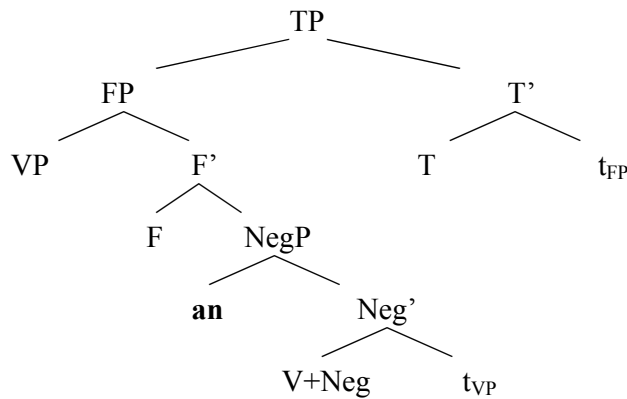
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[1] In an ingenious analysis, Lee (1992) analyzes preverbal *an* in Korean as a right-branching specifier. The surface order in (1a) is then derived by movement of the lexical verb rightward over an. The chief difficulty with Lee's analysis is the lack of independent evidence for specifiers on the right, in Korean or other languages. But in important ways his analysis anticipates the antisymmetric analysis of Korean negation.

[2] Sells (1998) explicitly analyzes preverbal *an* as a complement.

[3] The implications of Kayne's proposal for Dahl and Dryer's typological generalizations are pointed out by Whitman 1995, 2000, which implements an analysis of Korean negation based on the specific proposal in

uninflected negative particles in the SO**Neg**V pattern of (1a) are generated in the specifier of a projection which selects VP as its complement, parallel to *pas* in the specifier of NegP in (3).

(6) (=1a)

```
                          TP
              ┌────────────┴──────────┐
             FP                       T'
         ┌────┴────┐              ┌────┴────┐
        VP         F'            T         t_FP
              ┌────┴────┐
             F         NegP
                   ┌────┴────┐
                  an        Neg'
                        ┌────┴────┐
                      V+Neg      t_VP
```

    [Mica ka   hakkyo ey t_V]   ka-   -ss-ta.

    Mica NOM school to   NEG   go   -PAST-INDIC

The verb first raises to the head of NegP. The remnant VP then moves past the negative particle *an* into the specifier of a higher projection,[4] FP in (6); FP then moves to the specifier of TP.[5]
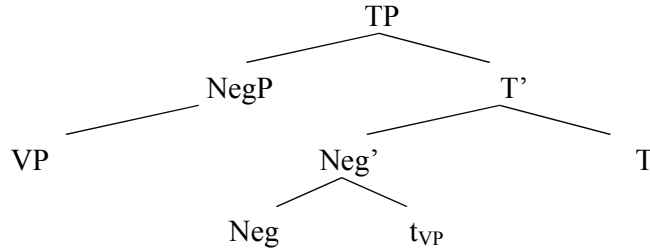

Kayne 5.5, footnote 14. See Hagstrom (2000) as well for a different leftward phrasal movement analysis of Korean negation and Cinque (1999) for a leftward VP movement analysis of the postverbal negative modal *mos*. A modification of Cinque's analysis of *mos* will be presented below.

[4] I assume that movement past an in the specifier of NegP is possible for the same reason that phrasal movement past "adverbial" specifiers is generally possible: the fronted VP and the negative element differ with respect to some crucial feature, thus avoiding a Relativized Minimality violation. See Cinque (1999) for relevant discussion.

[5] As Kayne (1994: 141, footnote 14) notes, head-final languages such as Korean and Japanese must contain some projection with a non-final head to host, e.g. subjects and topics, if these are to c-command the rest of the clause. Whitman (1998, 2001), adopting a suggestion of Kayne's, argues that the nominative markers *i/ka* (Korean) and *ga* (Japanese), head the projections hosting subjects in their surface position. On this view the surface representation of (6) is as follows:

In the Korean SOV**Neg** pattern in (2a), the negative head *anh-* is generated in NegP; the complement of NegP, containing the lexical verb suffixed with –*ci*, moves beyond Neg.[6] Finally the entire NegP moves to the specifier of TP.

(7) (=2a)

```
                              TP
                   _____/    _____
               NegP                      T'
           __/    \__              __/    \__
         VP          Neg'        Neg'         T
                  __/  \__
                Neg      t_VP
```

Mica ka   hakkyo ey ka-ci   anh   -ass-ta.

Mica NOM school to   go-susp NEG   -PAST-INDIC

The Japanese SOV**Neg** pattern in (2b) represents a variation on this basic derivation, where the head of Neg is the bound suffix –*ana-*. In Japanese the lexical verb raises and adjoins to Neg; the rest of the derivation is as in (7).

(8) (=2b)   [$_{TP}$ [$_{VP}$ Yooko ga   gakkoo ni t$_V$] [$_{NegP}$ ik-ana-   t$_{VP}$]   -katta] koto

              Yôko NOM school to   go-NEG-   -PAST that

(i) (=6)   [$_{kaP}$ Mica **ka** [$_{TP}$ [$_{FP}$ [$_{VP}$ t$_{Mica}$ hakkyo ey t$_V$] [$_{NegP}$ an   [$_{Neg'}$ ka-   t$_{VP}$]]]   -ss-ta]]

              Mica NOM   school to   NEG   go-   -PAST-INDIC

    'Mica didn't go to school.'

The phrasal projection kaP in (i) may be identified as an Agreement projection, or perhaps the Finiteness Phrase of Rizzi (1997).

[6] In (7) I have shown Spec, Neg as the landing cite of the complement of Neg^0, and labeled this projection VP for simplicity. But the fact that the complement of Neg^0 takes the supective suffix –*ci* and may be case marked, as we saw in (4), suggest that VP-*ci* has nominal properties, as first pointed out by Song (1971). One possibility is that VP-*ci* moves on to the specifier of projection where accusative (and in certain instances, nominative) case is assigned.

'that Yôko didn't go to school.'

A final pattern of variation is presented by the Korean negative potential particle *mos* 'cannot'. *Mos* appears in a preverbal pattern parallel to (6) as well as a postverbal pattern:

(9) a. Mica   ka   hakkyo ey   **mos**   ka-ss-ta.   (Korean)

      Mica   NOM   school to   cannot   go-PAST-INDIC

      'Mica couldn't go to school.'

  b. Mica ka   hakkyo ey   ka-ci   **mos**   hay-ss-ta.   (Korean)

      Mica NOM   school to   go-SUSP   cannot do-PAST-INDIC

      'Mica couldn't go to school.'

The preverbal pattern in (9a) can be derived in the same way as (6): the lexical verb raises to the head of the projection hosting *mos*, and the remainder of the VP moves over *mos* in Spec, NegP. Cinque (1999) suggests a derivation for the postverbal pattern in (9b) where *mos* occupies the head of a modal projection; *mos* blocks raising of the lexical verb to T, which must therefore be supported by insertion of dummy *ha-* 'do'.

The occurrence of *mos* in the preverbal pattern (9a) and the parallelism with negative *an* and *anh-* suggests a slightly different approach. Suppose that *mos*, like *an*, is uniformly a specifier.[7] The heads of the projections hosting *mos* and *an* optionally select a lexical verb suffixed with supective –*ci*. The form V-*ci* is ineligible for head raising, perhaps due to its nominal character (cf. Song 1971). Thus the only licit derivation when V-*ci* is selected is to move the entire projection containing V-*ci* to the left of *mos* or *an*. In the case of *anh-* (7) a lexical head of NegP is available to support Tense, but *mos* occurs with no lexical head of its projection; thus dummy *ha-* 'do' is inserted, as Cinque proposes.

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[7] J.-H. Lee (1992) also analyzes *mos*, together with preverbal *an*, as specifiers.

The co-occurrence possibilities of *an* and *mos* confirm that these items occupy distinct projections and indicate that *an* is in a higher projection than *mos*.[8] Of the four combinations in (10), only the pattern in (d) is acceptable (albeit awkward) to most speakers.

(10) a. *Mica   ka   hakkyo ey   **mos   an**   ka-ss-ta.

        Mica   NOM   school to   cannot NEG   go-PAST-INDIC

      b. *Mica   ka   hakkyo ey   **an mos**   ka-ss-ta.

        Mica   NOM   school to   NEG cannot   go-PAST-INDIC

      c. *Mica   ka   hakkyo ey   **an** ka-ci   **mos**   hay-ss-ta.

        Mica   NOM   school to   NEG go-SUSP cannot do-PAST-INDIC

      d.   ?Mica ka   hakkyo ey   **mos**   ka-ci   **anh**-a-ss-ta.

        Mica   NOM   school to   cannot go-SUSP NEG-PAST-INDIC

      'It is not the case that Mica couldn't go to school.'

(10d) is derivable on the assumption that the projection including *mos* is selected by negative *anh-*. Within that projection, preverbal *mos* is derived as in (9a); the projection containing *mos* is then fronted to the left of *anh-* as in (7). (10a) and (10c) can be ruled out on the assumption that the underlying order of *an* and *mos* is fixed: the projection containing *mos* does not select the NegP projection containing *an*.

Particularly interesting is the unacceptability of (10b). We might expect this pattern to be derivable from the same basic order of negative elements as (10d), that is, *an... mos*, by successive cyclic verb raising to T, followed by fronting of the remnant projection to Spec, TP. This is shown in (11):

(11) (=10b)   *[$_{TP}$ [$_{FP}$ [$_{VP}$ Mica ka   hakkyo ey t$_V$] [$_{NegP}$ an t$_V$ [$_{ModP}$ mos t$_V$ t$_{VP}$]]]   ka-ss-ta]

                        Mica NOM school to   NEG-   cannot   go-PAST-INDIC

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[8] This indicates that *mos* is located in a projection corresponding to Cinque's Mod$_{possibility}$, under Tense and negation, rather than a higher modal projection.

In (11), the verb –*ka*- 'go' raises first to the head of ModP, then through the head of NegP to adjoin to T. Meanwhile the remant VP moves past *mos* and *an* to the specifier of FP, as in (6). Finally FP moves to Spec, TP. Such a derivation would depend crucially on the ability of the verb to move though NegP, ModP, and other intermediate projections to adjoin to T, a potential derivation for S-O-V-Tense order mentioned by Kayne (1994, §5.5, footnote 14). We have seen evidence in this section that verb movement to the left does occur in Korean and Japanese, specifically in the derivation of the SO**Neg**V pattern. But the unacceptability of (10b) indicates that the verb and Tense suffixes are not composed by head movement and adjunction of the former to the latter. Instead, composition of the verb and Tense affixes is the result of what Kayne calls "pure agglutination": fronting of the projection containing the verb to the specifier of T, followed by a postsyntactic operation that converts the verb and tense suffixes into a single phonological word.[9] This conclusion, combined with the assumption that *an* occupies a position structurally higher than *mos*, accounts for the co-occurrence patterns of these two negators in (11).

Summing up our discussion so far, we have seen that under the antisymmetric account, the SO**Neg**V pattern corresponds to the configuration with negator in Spec, like French *pas*. The SOV**Neg** pattern corresponds to the configuration with a negator in head position. This configuration may either block raising of the lexical verb if the negator is a free morpheme, as in the Korean pattern (7), or host the raised verb if the negator is a bound morpheme, as in the Japanese negation pattern (8).

The basic analysis where negation may be realized either as a specifier or head predicts in principle that there may be two negative morphemes, one in each position. Although neither Japanese nor Korean evinces such a pattern, it occurs in Burmese, a Sino-Tibetan OV language. As predicted by the antisymmetric

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[9] Sakai (1998) argues that verbal affixes in Japanese are composed postsyntactically with the verb by the oepration of Morphological Merger (Halle & Marantz 1993). While Sakai's conclusion seems correct for the particular case of tense suffixes discussed in this section, we have seen that a stronger conclusion – that Korean and Japanese lack verb movement altogether – is not supported.

analysis, the preverbal negative particle in Burmese is in immediate preverbal position. The postverbal negative suffix immediately follows the verb and precedes discourse modal suffixes:

(12) a. K'inbya ma thwà bù là.   (Burmese)

           you   NEG goNEG Q

           'Are you not going?"

      b. Diné   ma thwà   néh.

           today   NEG goNEG.IMPERATIVE

           'Don't go today.'

The Burmese pattern is naturally analyzed with the negative particle *ma* in the specifier of NegP, and the negative suffix (matrix nonimperative *bu*, negative imperative *néh*) in the head of NegP. Derivation of (12a-b) proceeds as in (8): the verb raises and adjoins to the negative heads *bù* or *néh*.

Thus far in this section I have shown that an antisymmetric analysis of SOV negation can account for the following facts:

- OV languages attest both preverbal and postverbal negation.

- Preverbal negators are typically immediately preverbal.

- Preverbal negators are always uninflected.

- Postverbal negators may be inflected.

- OV languages may have "bipartite" negation; when they do, the preverbal negator is immediately preverbal and uninflected.

I have also shown that the preverbal SO**Neg**V pattern is not straightforwardly accounted for under base generated left branching (symmetric) analysis. In the remainder of the section I will adduce further evidence from Korean and Japanese for the antisymmetric analysis of OV negation.

1.2 Preverbal negation in Korean periphrastic causatives

Bratt (1993), citing Lee (1988) and Sells & Cho (1991/2000), observes that Korean periphrastic causatives are ambiguous when the preverbal negative particle *an* precedes the embedded verb and the causee argument is marked with accusative case.[10]

(13) Emeni kkeyse ttal ul   an mek-key ha-si-ess-ta.   (Bratt 1993:245)

      mother NOM   daughter ACC NEG eat-COMP do-HON-PAST-INDIC

      'The mother made the daughter not eat.' OR

      'The mother didn't make the daughter eat.'

This ambiguity disappears when the causee is marked nominative:

(14) Emeni kkeyse ttal i   an mek-key ha-si-ess-ta.   (Bratt 1993:245)

      mother NOM   daughter NOM NEG eat-COMP do-HON-PAST-INDIC

      'The mother made the daughter not eat.'

The ambiguity in (13) can be explained by two distinct derivations. In the derivation in (15) below, the complement of the matrix causative verb *ha-* (labeled CP in (15)) contains the negative specifier *an*, which therefore takes embedded scope. Word order internal to the complement is derived as in (6), by raising the embedded verb to Neg and raising the remnant VP past *an*. The entire complement clause then raises past the matrix causative verb *ha-*.

(15) Emeni kkeyse [$_{CP}$ [$_{VP}$ ttal ul t$_V$] an   mek-key t$_{VP}$]]   ha- t$_{CP}$.

      Mother NOM   daughter ACC   NEG eat-COMP   do

      'The mother made the daughter not eat.'

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[10] Not all speakers accept this ambiguity. Some speakers report only an embedded scope interpretation for (13). Such speakers presumably disallow raising of the embedded verb suffixed with *–key*.

In the derivation in (16), the negative specifier *an* is in the matrix clause and therefore takes scope over the matrix causative verb. This derivation proceeds as in (15), except that following raising of the complement CP, the embedded verb (suffixed with –*key*) raises on and adjoins to causative *ha-*.

(16)   Emeni kkeyse [$_{CP}$ [$_{VP}$ ttal ul t$_V$]   t$_V$ t$_{VP}$]   an mek-key + ha-   t$_{CP.}$
                                          |_____|

            Mother NOM   daughter ACC   NEG eat-COMP + do

            'The mother didn't make the daughter eat.'

The analysis in (15-16) is based on the assumption that head raising and adjunction of the embedded verb to matrix causative *ha-* is optional, thus predicting that the derivation in (16) could proceed without raising of embedded 'eat', producing the reverse order of the embedded verb and negative *an*. This is indeed the case (17); as predicted, (17) is unambiguously interpreted with matrix scope for negation.
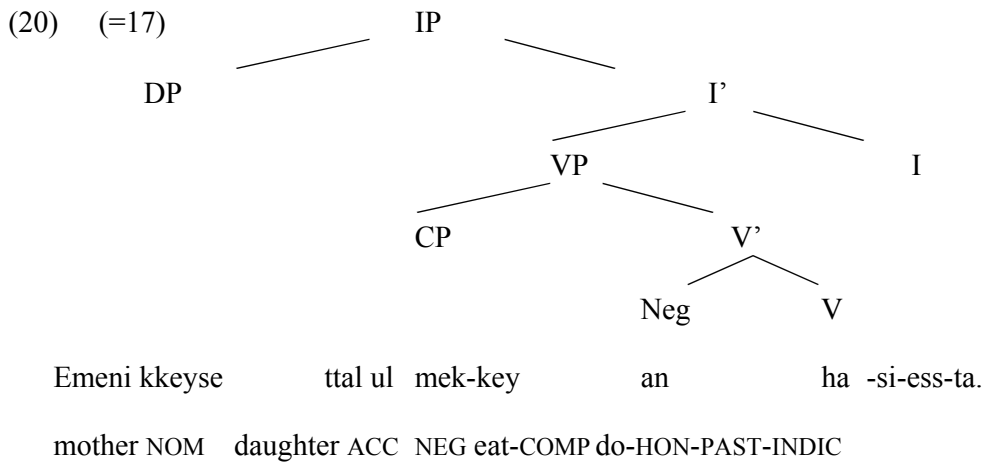
(17)   Emeni kkeyse ttal ul   mek-key   an ha-si-ess-ta.

            mother NOM   daughter ACC eat-COMP   NEG do-HON-PAST-INDIC

            'The mother didn't make the daughter eat.'

     The unavailability of matrix scope for negation in (14), where the embedded subject (causee) is marked with nominative case, can be accounted for by applying the generalization expressed by Baker's (1988) Government Transparency Corollary. The GTC permits a raised head to inherit the case assigning properties of the X^0 category it raises and adjoins to. In (16), the embedded verb raises through Infl in the embedded clause to adjoin to matrix *ha-* 'do'. Under the GTC, embedded Infl (more precisely, the trace t$_{V+Infl}$) thus inherits the ability to assign accusative case. However when embedded Infl assigns nominative case, as in (14), the embedded verb has not raised. In such cases the only available derivation is the non head-raising one in (15), associated with embedded scope of negation.[11]

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[11] The Government Transparency Corollary (or its successor) cannot account for all instances of accusative case assignment to the embedded causee in periphrastic causatives. As we see in (18-19) below, accusative case may be assigned to the causee even when raising of the embedded verb is blocked. Lee (1992) argues

More generally, the analysis in (15-16) predicts that if verb raising is blocked, embedded scope of negation must result. Verb raising in the periphrastic causative construction is blocked by insertion of an association with focus particle between *ha-* and its complement, as noted by J.-S. Lee (1992):

(18) Emeni kkeyse ttal ul   an mek-key to   ha-si-ess-ta.

     mother NOM   daughter ACC   NEG eat-COMP also   do-HON-PAST-INDIC

     'The mother also made the daughter not eat.'

(19) Emeni kkeyse ttal ul   an mek-key kkaci   ha-si-ess-ta.

     mother NOM   daughter ACC   NEG eat-COMP even   do-HON-PAST-INDIC

     'The mother even made the daughter not eat.'

As predicted, (18) and (19) have unambiguous embedded scope for negation.

Bratt (1993), working with an HPSG framework, accounts for the contrast in (13-14) by claiming that the periphrastic causatives with an accusative marked causee are monoclausal, while the same causatives with a nominative marked causee are biclausal. In the monoclausal case (13), the embedded verb and causative *ha-* form a compound verb; negative *an* may attach either to the entire compound, resulting in matrix scope, or to the first verb in the compound, resulting in embedded scope. In the biclausal case (14), negative *an* preceding the embedded verb must be in the embedded clause.

Examples like (18-19) show that even with an accusative-marked causee, the embedded verb and the matrix causative verb cannot always be analyzed as a compound verb. However the problem posed by the periphrastic causative facts for a movement-based analysis based on a left-branching tree such as (5) is even more severe.

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that accusative case can be assigned to the causee under a mechanism of Exceptional Case Marking. Lee's mechanism cannot explain the matrix scope interpretation of negation in (10), but it is possible that ECM is responsible for accusative case assignment to the causee in other contexts, when verb raising does not occur and only an embedded interpretation is available for negation.

(20) (=17)

```
                                    IP
          DP                                       I'
                               VP                           I
                        CP              V'
                                   Neg       V
```

Emeni kkeyse   ttal ul   mek-key   an   ha -si-ess-ta.

mother NOM   daughter ACC NEG eat-COMP do-HON-PAST-INDIC

'The mother didn't make the daughter eat.'

(20) shows negative *an* in the sister-of-V position of (5). This representation accounts for the matrix interpretation of *an* in (17). But it is unclear how to derive (13), where *an* precedes the embedded verb, on the matrix interpretation of *an*. A derivation where the embedded verb *mek-* 'eat' in (20) incorporates into causative *ha-* would run counter to the generalization that incorporation occurs from complement, not from specifier position. Alternatively, *an* might be analyzed as a (V^0) internal prefix rather than a complement of V. Incorporation of the embedded verb would then take the form of infixation from complement position, as in (21):

(21)

```
                V'
        CP              V
    … mek-key       an(i)-   ha
        |_____|

      eat-COMP     NEG-   do
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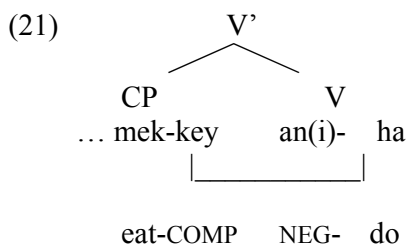
However such an account would have to explain why the raised verb is infixed after *an*, in a language which otherwise lacks infixation.

In general, the ability of negative *an* to take matrix scope in a context like (13), where it is preceded by the entire complement clause except for the complement verb, strongly suggests that Korean has both a mechanism of complement raising past a negative specifier and a mechanism of verb-to-verb raising.

1.3 Negative imperatives in earlier Japanese

In Old and Early Middle Japanese, the uninflected negative imperative particle *na.*appears in two positions: the immediate preverbal position in (1b), and clause final position as in the second line of (22):

(22) Me_2gusi   mo   na mi_1 so_2/ ko_2to_2 mo to_2gam-u   na (*Man'yôshû* 1759)

worry   too   NEG see   PRT   deed   too blame-CONCLUSIVE   NEG

'Don't pity me /   Don't blame me.'

Only the latter, clause final pattern survives in modern Tokyo Japanese.[12] Clearly it is desirable to relate these two occurrences of the uninflected particle *na*, both of which have the same negative imperative function. The key to relating them has to do with the shape of the lexical verb. In the preverbal pattern of (1b), the verb appears in a compound form, either the continuative stem pattern in (1b), or for the two irregular verbs *ku* 'come' and *su* 'do' (23), the irrealis stem. The irrealis stem is normally a bound form, while the continuative is the normal stem for forming verb-verb compounds. A further characteristic of the preverbal pattern is that the lexical verb typically (although not always: see (24)) appears immediately before the etymologically obscure clause-final particle so_2 or so_2ne.
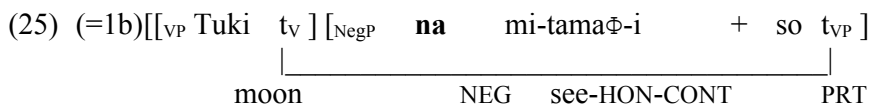
(23) Iza ko_1domo   tapa   waza   na   se so_2.(*Man'yôshû* 4487, 8th c.)

heychildren   foolish trick   NEG   do.IRREALIS   PRT

'Hey kids, don't try any foolish tricks.'

(24) Titi   papa   mo   upe   pa   na   sakari-i   (*Man'yôshû* 4487, 8th c.)

father mother too   me   TOPIC NEG   depart-CONTINUATIVE

'Father, mother, don't leave me.'

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[12] Maeda's (1977: 39-40) description of the Osaka negative imperative V-CONTINUATIVE *na* (e.g. *iki na*, 'Don't go) suggests that it is the successor to the earlier preverbal negative imperative pattern.

In contrast, in the postverbal pattern, the lexical verb always occurs in a finite (nonpast) form, either the conclusive form as in (22), or the adnominal (subordinate) form in the case of the verb 'be" and its derivatives. These two are the normal forms for clausal subordination, the conclusive for subordination under the complementizer to_2 'that' and certain modals, the adnominal for participial subordinate forms.

The appearance of compound forms in the preverbal negative imperative pattern and subordinate forms in the postverbal pattern suggests that verb raising and adjunction takes place in the former pattern and that clausal complementation without verb raising takes place in the latter. This is exactly the difference we proposed for pre- and postverbal negation in Korean in 1.1. The occurrence of the particle so_2 immediately after the verb in the preverbal pattern further support the hypothesis that uninflected *na* occupies a specifier position in this pattern. The derivation of (1b) thus proceeds as in (25), parallel to (6):

(25) (=1b)[[$_{VP}$ Tuki t_V] [$_{NegP}$ **na**   mi-tamaɸ-i   +   so t_{VP}]

             moon   NEG   see-HON-CONT   PRT

        'Please don't look at the moon!'

In the preverbal pattern, in contrast, the lexical verb remains in its expected shape inside a complement clause. It is difficult to determine in this pattern whether *na* occupies a head or specifier position, but in either case, the surface word order and the inflectional form of the verb are accounted for by raising the projection containing the verb past *na*, parallel to (7).

(26) (=22)[[$_{VP}$ ko$_2$to$_2$ mo to$_2$gam-u] [$_{NegP}$ **na** t_{VP}]

             deed   too blame   NEG
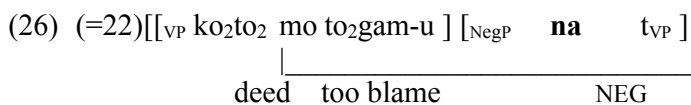
        'Don't blame me.'

In this section we have seen that the inflectional forms of the verbs in the two negative imperative patterns of earlier Japanese support the two derivations for pre- and postverbal negation proposed in 1.1.
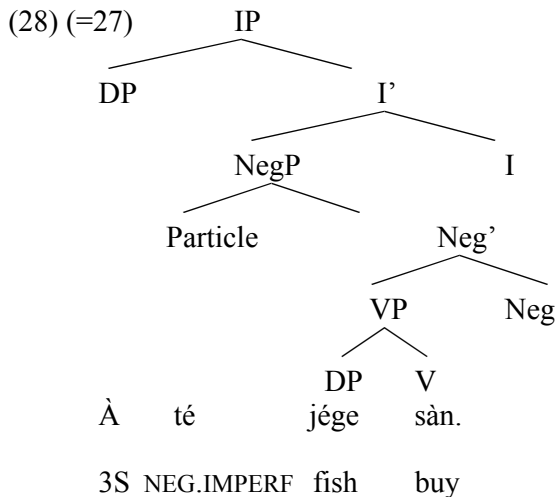
1.4 Languages with SNegOV

As noted in 1.1, Dryer (1998) lists six languages with S**Neg**OV order: Yaqui (Aztec-Tanoan), Bambara, Mandinka, and Vai (Mande, Niger-Kordofanian), and Berta and Songhai (Nilo-Saharan) (1988:123). Of

these six, the two Nilo-Saharan languages are actually SVO (Triulzi, Dafallah, and Bender 1976; Prost 1956).

However the three Mande languages listed by Dryer do indeed attest the order S**Neg**OV, as shown in the Bambara example in (27):

(27)   À té   jége   sàn.   (Bambara; Anschütz 1989: 48)

        3S NEG.IMPERF   fish   buy

        "S/he isn't buying fish.'

Thus in these languages, negation might superficially appear to occupy the predicted position for a specifier (or adjunct) negator on a symmetric left-branching picture of verb-final syntax, as in (28):

(28) (=27)

```
              IP
         ┌─────┴─────┐
        DP           I'
                ┌─────┴─────┐
              NegP           I
           ┌────┴────┐
        Particle    Neg'
                 ┌───┴───┐
                VP       Neg
              ┌─┴─┐
             DP   V
À      té      jége   sàn.
3S  NEG.IMPERF fish   buy
```

In 1.1, I argued that the SO**Neg**V pattern was the counterpart in VO languages to patterns involving a specifier or adjunct negator such as French *pas* in VO languages. But the preponderance of SO**Neg**V languages over S**Neg**OV is, after all, only statistical. If it could be shown that (28) is the correct representation for the S**Neg**OV pattern, we would be forced to recognize it as the true counterpart of *pas*-type negation in OV languages.

In fact (28) is not an adequate representation for the Mande S**Neg**OV languages listed by Dryer. As Koopman (1992) shows in her study of Bambara, the basic word order is Subject – Infl –Object – Verb – non-casemarked Complement. Koopman shows that OV (and NP-P, NP-N, NP-Infl) order in Bambara is

derived by movement of an NP complement to the left of its governing head for case purposes. Thus the

surface order in (27) is derived by movement of the subject and object NPs, as shown in (29).

(29)   [$_{IP}$ À [$_{I'}$ bé [$_{VP}$ t$_A$ jége   sàn   t$_{jege}$]]]]   (Anschütz 1989: 48; structure from

            3S   IMPERF   fish   buy   Koopman 1992: 558)

        'S/he is buying a fish."

Most crucially for our purposes, Koopman analyzes negators as Infl elements. Each of the

tense/aspect/mood indicators that appears in the position of Infl in (29) has a negative counterpart which

appears in exactly the same position (and with which it is therefore in complementary distribution). Thus

the negative counterpart of (29) is (30), with negative imperfective *té* in Infl:

(30) (=27) [$_{IP}$ À [$_{I'}$ té [$_{VP}$ t$_A$ jége   sàn   t$_{jege}$]]]]

            3S   NEG.MPERF   fish   buy

        'S/he is not buying a fish.'

   The clause structure in (29-30) provides an immediate explanation for why the surface order of negation

in Bambara is S**Neg**OV rather than SO**Neg**V. We derived SO**Neg**V order by raising the verb to the head of

the projection containing negation, and moving the remnant VP to the left past negation. But in Bambara,

neither the verb nor the verb phrase move to the left of negation. More generally, we associated SO**Neg**V

order with movement of VP to the left of Infl; clearly Bambara does not move VP to the left of Infl. This

contrast suggests the following typological generalizations:

(31)   SO**Neg**V is restricted to OV – Infl languages.

(32)   S**Neg**OV is restricted to Infl – OV languages.

Note that (32) is not predicted by the non-derived left branching structure in (28) at all. This structure

predicts that a specifier/adjunct negator should be able to appear to the left of the object in an OV language

with clause-final Infl.

Mandinka and Vai show the same complementarity between affirmative and negative tense-aspect-mood markers as Bambara. All occur before the VP, as in Bambara. The Mandinka examples below are from Wilson (2000/2001):

(33) a. Siisewo   ye   kiloo   laa.

        chicken   INFL   egg   lay

        'The chicken laid an egg.'

     b. Siisewo   man   kiloo   laa.

        chicken   INFL.NEG egg   lay

        'The chicken didn't lay an egg.'

(34) a. Asi   taa suu.

        he INFL   go home

        'He is to go home.'

     b. Akana   taa suu.

        he INFL.NEG go home

        'He isn't to go home.'

Dryer's remaining example of an SNegOV language is the Uto-Tanoan (Tara-Cáhitic) language Yaqui. Yaqui also attests surface S**Neg**OV order:

(35) 'Emé'ekáa   hunúen'án-nee.   (Dedrick and Casad 1999: 56)

     you-PL NEG   thus   do-fut

     'You must not do **that**.' (Do it rather in some other way.)

On the basis of data like (35), Lindenfeld (1973) posits a rule that inserts the negator *kaa* directly after the subject. Once again, Yaqui might appear to attest the left-branching symmetric structure in (28) that we ultimately rejected for Mande; in the Yaqui case, *kaa* would occupy the specifier of a left branching Neg P.

However Dedrick and Casad show that *káa* and its imperative counterpart *kát* do not occupy a position directly to the right of the subject. They show that Yaqui is a language with second position clitics. Clitics

include subject pronouns, emphatic and dubitative particles, and negative *kaa*. Clitics are preceded by a topicalized phrase, although as in other clitic-second languages there is some leakage to this phenomenon: in certain sentence patterns clitics may appear in initial position in others , some other item (such as certain adverbs) may precede the clitic string in addition to the topic. Thus in contrast to (35), which topicalizes 'you' and focuses 'thus', (36) focuses 'you':

(36)   Káa 'emé'e   hunúen'   án-nee.   (Dedrick and Casad 1999: 56)

       NEG you-PL   thus   do-FUT

       '**You** must not do that.' (Others may.)

(37) shows negative imperative *kát* preceded by an adjunct clause and followed by the clitic form of the second person pronoun. Note that negation precedes pronominal clitics:

(37)   Née muku-k-o   kát = e'em   hi'osia-ta née sewá-tua.   (Dedrick and Casad 1999: 59)

      I   die-PERF-when NEG=you:PL   paper-ACC me flower-cause

      'When I die, don't put paper flowers on me.'

These facts show that negation in Yaqui is not the specifier of a left branching projection between the subject and the VP, but rather a second position clitic. Its surface position appears to be the head of the projection that hosts topics.

Summarizing the results of this section, even among the small number of languages in Dryer's sample that superficially attest the order Subject – Negation – Object – Verb, none appear actually to attest a structure corresponding to (28), where the preverbal negative particle occupies the a specifier (or adjunct) position above VP. This result is totally unexpected on a conventional, left-branching picture the syntax of head-final languages. As we have seen, however, it is readily explained by an account which derives head final order by raising the verb to the left and moving the remnant VP past it.

2.1   **Pre-verbal auxiliaries in OV languages**

Dryer (1992) observes that tense/aspect markers display the same dual positioning as negative markers in OV languages. When the tense/aspect marker is a particle (specifically, when it lacks inflection), the marker tends to precede the verb, although some cases of SOV**Tense/Apect** also occur. Dryer shows 18 instances of SO**Tense**/**Aspect**Verb and 6 instances of SOV**Tense**/**Aspect** in his genetically and areally balanced sample (1991: 99). More importantly, the generalization is almost categorical in the case of inflected Tense/Aspect auxiliaries: these tend overwhelmingly to follow the verb in OV languages. Dryer lists 36 examples of SOV**Aux** and 3 examples of SO**Aux**V (1992: 100). Although Dryer does not specify which languages in his sample are SOAuxV, all three are in Africa. As six Mande languages (Susu, Vai, Mandinka, Gambian Mandinka, Bambara, Mende), are in Dryer's sample, it seems likely that these are the source of the SO**Aux**V pattern. Although the pattern in question in Mande languages is in fact S**Aux**OV, Dryer does not distinguish preverbal and immediate preverbal position in his discussion. Needless to say, Koopman's (1992) analysis of Bambara accounts for S**Aux**OV order in these cases.

Further research is required to fully explore the range of tense, aspect, and mood markers that occur asx preverbal particles in OV languages. In the remainder of this paper, I will explore three such particles in Japanesese and Korean.

2.2 Preverbal *e* 'can' and *ari* 'be..ing' in Earlier Japanese

Premodern Japanese had two preverbal modal/aspectual markers, *e* 'can', expressing (nondeontic, nonepistemic) possibility; i.e. ability, and *ari*, expressing ongoing action. I label the former 'potential' and the latter 'progressive' here. Both *e* and *ari* are identical to the continuative forms of the corresponding verbs, *u* 'be able to' and *ari* 'exist' respectively.

(38) Sa-wo-pune no_2 **e** yuk-$i_1$te pat-e-mu. (*Man'yôshû* 2091, 8th c.)

  PREF-small-boat GEN POT go-ing stop-IRR-CONJECTURE

  'The small boat will likely be able to go and dock.'

(39) Sima no_2 sakizaki **ari** tat-er-u panatatibana.

island GEN capes   PROG stand-IMPERF-ADNOM   flower

(*Man'yôshû* 3239, 8th c.)

'the flowers that are standing on the capes of the islands'

Already predominantly in Old Japanese, and exclusively in later stages of the language, *e* occurs in negative

potential sentences.

(40)   Sato to∏o-ki   ∏a   e   tugeyar-a-z-u.   (*Makura no sôshi*, 995)

       home far-ADNOM TOP   POT   word-send-IRR-NEG-CONCLUSIVE

       'We were unable to send word to those whose homes were far-off.'

Two properties of preverbal *e* and *ari* are relevant to our concerns. First, both of these items correspond

to "low" mood and aspect markers, Mod$_{possibility}$ and Asp$_{generic/progressive}$ in the scheme of Cinque (1999); that

is, they are positioned under Tense. Second, the interpretation of examples like (40) shows that preverbal *e*

always takes scope under negation.

Both of these properties are accounted for if assume that *e* and *ari* are specifiers.   that they are

specifiers. The verb moves to the head of the projections containing *e* and *ari*; the remnant Vp then moves to

the left of these specifiers. In a negative sentence such as (40), the verb moves past the modal projection

containing *e* to adjoin to the head of NegP, *z-*. The complement of NegP then moves past V+Neg, parallel to

(8). This is shown in (41), omitting material in the remnant VP complement of Mod:

(41) (=40)[$_{TP}$ [$_{ModP}$ [$_{VP}$ e   t$_V$ t$_{VP}$] [$_{NegP}$ tugeyar-a-z   t$_{MODP}$] -u]

                        POT   word-send-IRR-NEG   -CONCLUSIVE

The low scope of *e* is consistent with this derivation, where it originates in a projection c-commanded by

negation.

2.3 Preverbal *cal* 'well' in Korean

In the §2.2 we sketched a derivation of preverbal modal/aspect markers in premodern Japanese,

accounting for their type ("low") and scope (lower than negation). Korean lacks preverbal aspect or modal

markers, but it has a preverbal adverb corresponding to another "low" functional head in Cinque's 1999 system: *cal* 'well'.[13]

As observed by many authors, *cal* is restricted to immediate preverbal position. The following examples are from J.-H. Lee (1993: 434).

(42) a. Chelswu nun sayngsenhoy lul   **cal** mek-nun-ta.

Chelswu TOP raw fish   ACC   well eat-PRES-INDIC

'Chelswu often eats raw fish.'

b. *Chelswu nun **cal**   sayngsenhoy lul   mek-nun-ta.

Chelswu TOP well   raw fish   ACC   eat-PRES-INDIC

'Chelswu often eats raw fish.'

The distribution of *cal* can be accounted for in the same fashion as the premodern Japanese mood/aspect markers discussed in the previous section. The verb moves to the head of the projection hosting *cal* in its specifier; the remnant then moves to the left of *cal*.

Korean however contains another possibility not present in modern Japanese: the preverbal negation pattern of (6). We see in (43) that *cal* must precede preverbal *an* or *mos*:

(43) a. Mica ka   hakkyo ey   **cal**   **mos/an**   ka-ss-ta.

Mica NOM   school to   well   cannot/NEG   go-PAST-INDIC

'Mica didn't/couldn't often go to school.'

---

[13] *Cal* corresponds to 'well' in with statives, accomplishment, and achievement, verbs, 'often' with activity verbs. Both correspond to relatively low functional heads in Cinque's (1999) system: Voice in the case of 'well', frequentative in the case of 'often'. As my examples in this section involve an activity interpretation, I label the projection hosting *cal* FreqP.

b. *Mica   ka   hakkyo ey   **mos/an**   **cal**   ka-ss-ta.

    Mica   NOM   school to   cannot/NEG   well   go-PAST-INDIC

The ordering in (43) is predicted by the derivation of preverbal negation in (6) and our account of potential *e* and negation in premodern Japanese sketched in the previous section. The projection containing *cal* is generated as a complement of Neg. The verb moves through the head of the projection containing *cal* to the head of NegP. The remnant VP moves to the left of *cal*; finally the larger remnant containing VP and *cal* moves to the left of negation.

While the facts concerning preverbal mood/aspect markers discussed in the previous section are mildly problematic for a base-generated left-branching representation of Japanese phrase structure (as with preverbal negation, they require generating the mood or aspect marker in the VP complement position), the relative positioning of *cal* and *mos/an* is more problematic. Consider an analysis where *cal* and *an/mos* are generated as iterated sisters of the verbal projection:

(44)   …

```
                VP
              /    \
       well/often   V'
                   /  \
                 NEG    V
```
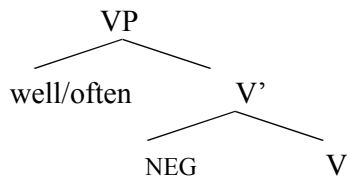
The structure in (44), if it makes any prediction about the relative scope of 'well/often' and negation, predicts that the former should take scope over the latter. As we have seen, this is exactly the wrong prediction. The appropriate descriptive generalization would appear to be (45):

(45)   Functional items immediately preceding or following the verb in Verb–Infl languages take scope

      from right (higher) to left (lower).

While a base-generated left-branching analysis of Verb-Infl languages can handle the generalization in (45) for items that follow the verb, it appears to be unable to handle the generalization for items that precede the verb.

2.5   Conclusion

One of the major accomplishments of Dryer (1992) is to show that noninflected negative and tense/aspect/modal particles are as likely – in fact more likely – to precede the verb as follow it in V-final languages. As Dryer argues, these facts militate against a uniform treament of these items as "verb-patterners", that is, as heads. The alternative is to treat such preverbal functional elements as specifiers. As we have seen, however, this move alone is insufficient: on a base-generated left-branching analysis of verb-final syntax, both their position (immediately before the verb) and their scope (always low) is unexpected. I have argued that these typological generalizations support a view where V-Infl order is derived, and that the relevant derivations involve both verb and remnant movement.

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