The Modal Auxiliary *Biso* 'can' in Jambi Malay[1]

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1. Introduction

This paper focuses on the Malay dialect spoken in the city of Jambi (Jambi Province, Sumatra). Modal auxiliaries in Jambi Malay such as *biso* 'can', *harus* 'must', *məsti* 'should', and *bole* 'may' appear before predicates, as shown in (1) (see also Yanti, 2010).

(1) a. abaŋ   dioʔ biso bawaʔ motor
     older.brother 3   can ride   motorcycle
     'His older brother can ride a motorcycle.'

   b. edi   harus   jəmput anaʔɲo
     Edi   must   pick.up child-3
     'Edi must pick his son up.'

   c. lante-tu   məsti   disapu
     floor-DEM.DIST   should   PASS-broom
     'The floor should be swept.'

   d. dioʔ bole tiŋgal di   sano
     3   may stay   LOC there
     'He may stay there.'

If the modal auxiliary occurs to the right of the verb, the sentence is judged ungrammatical. To illustrate, in (2), the modal auxiliary intervenes between the verb and object, and in (3) it occurs in sentence-final position.

(2) *abaŋ   dioʔ bawaʔ biso motor
   older.brother   3   ride   can   motorcycle
   'His older brother can ride a motorcycle.'

(3) *abaŋ   dioʔ bawaʔ motor   biso[2]
   older.brother   3   ride   motorcycle can
   'His older brother can ride a motorcycle.'

In this paper, I shall only focus on the modal auxiliary *biso* 'can'. The modal auxiliary *biso* can not only be used to express ability (as in (1)a), but also to express permission and possibility, as shown in the following sentences.

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[2] The sentence in (3) is grammatical if there is a short pause after the subject.

(4) maria biso kərjo sampe malam
Maria can work until night
   a. 'Maria is able to work until night.'
   b. 'Maria is permitted to work until night.'
   c. 'It is possible that Maria will work until night.'

(5) oraŋ-tu biso baŋun gərejaŋo lagi
person-DEM.DIST can build church-3 again
   a. 'They are able to build their church again.'
   b. 'They are permitted to build their church again.'
   c. 'It is possible that they will build their church again.'

As shown in (4) and (5), *biso* is ambiguous in its interpretation. First, it can express ability, as in sentence (a), and permission, as in sentence (b). It can also receive an epistemic interpretation, (i.e. expressing possibility), as in sentences (c).

Given the ambiguous interpretation in (4) and (5), one might claim that the modal auxiliary *biso* is ambiguous and its interpretation is determined by some kind of pragmatic means. However, I shall argue that this ambiguity follows from the fact that Jambi Malay makes a syntactic distinction between the root (abilitative and permissive) *biso* and the epistemic *biso*. Specifically, I shall argue that the root *biso* is generated in a position lower than the epistemic *biso*. The claim that epistemic modals and root modals have two distinct syntactic positions is not novel in the study of the world's languages. Picallo (1990) claims that modal verbs in Catalan have two base positions: the higher position which corresponds to epistemic interpretations and the lower position which corresponds to root interpretations. Likewise, the syntactic hierarchy proposed by Cinque (1999:56), shown in (6), locates epistemic modals in a higher position than root modals.

(6) $\text{Mood}_{\text{speech act}} > \text{Mood}_{\text{evaluative}} > \text{Mood}_{\text{evidential}} > \text{Mod}_{\text{epistemic}} > \text{T(Past)} > \text{T(Future)} >$

$\text{Mood}_{\text{(ir)realis}} > \text{Mod}_{\text{root}} / \text{Aspect}_{\text{habitual}} / \text{T(Anterior)} > \text{Aspect}_{\text{perfect}} > \text{Aspect}_{\text{progressive}}$

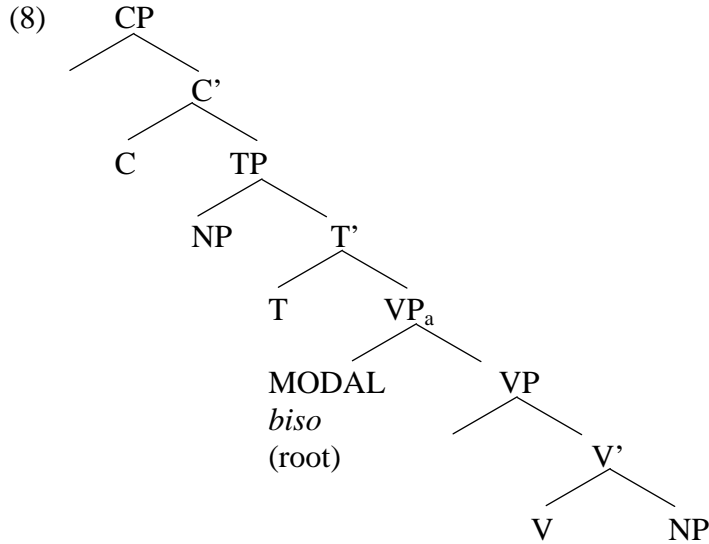$/ \text{Aspect}_{\text{completive}} / \text{Voice} > \text{V}$

This paper is organized as follows. In section 2, I propose the two syntactic positions where the modal auxiliary *biso* can be generated. In section 3 through 5, I present various types of evidence in support of the proposed structure. Specifically, I provide evidence having to do with aspectual markers, fronting, and adjacent modals. In section 6, I conclude the paper.

2. The Based-generated Structure of *Biso*

In this section, I present the structure of clauses that contain *biso*. Let us first consider a sentence that contains *biso* and is ambiguous, such as in (5) (repeated in (7) below).

(7) oraŋ-tu biso baŋun gərejaŋo lagi
person-DEM.DIST can build church-3 again
   a. 'They are able to build their church again.'
   b. 'They are permitted to build their church again.'
   c. 'It is possible that they will build their church again.'

I propose that the ambiguity of (7) follows from the fact that, in a sentence with this word order, *biso* can be generated in two different syntactic positions. The modal auxiliary *biso* that receives the root (abilitative or permissive) interpretation is base-generated as the head of an intermediate projection between TP and VP, a position which I will refer to as 'VP$_a$'. This structure is illustrated below.[3]

(8)

```
        CP
       /  \
          C'
         /  \
        C    TP
            /  \
          NP    T'
               /  \
              T    VPₐ
                  /  \
              MODAL   VP
              biso   /  \
             (root)   V'
                     /  \
                    V    NP
```

In contrast, the modal auxiliary *biso* that receives an epistemic interpretation is base-generated as the head of TP; thus, the clause structure is as follows:

(9)

```
        CP
       /  \
          C'
         /  \
        C    TP
            /  \
          NP    T'
               /  \
              T    VP
            MODAL  /  \
            biso    V'
                   /  \
                  V    NP
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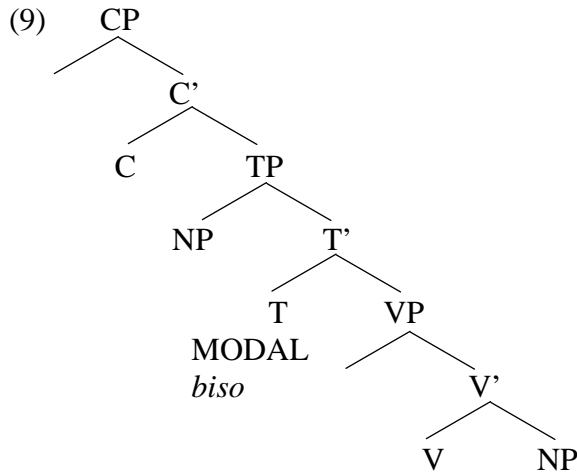
In what follows, I shall demonstrate various pieces of evidence to support the structures in (8) and (9).

3. Evidence from Aspectual Markers

The first piece of evidence I would like to present comes from the interpretation of *biso* when it appears with an aspectual marker such as *lagi* 'PROG' or *la* 'PFCT'.

When *biso* co-occurs with an aspectual marker, the aspectual marker can either precede or follow *biso*. Interestingly, however, the interpretation of *biso* depends on the position of the

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[3] Cole et al. (2008) propose similar position for Type I Auxiliary in Peranakan Javanese.
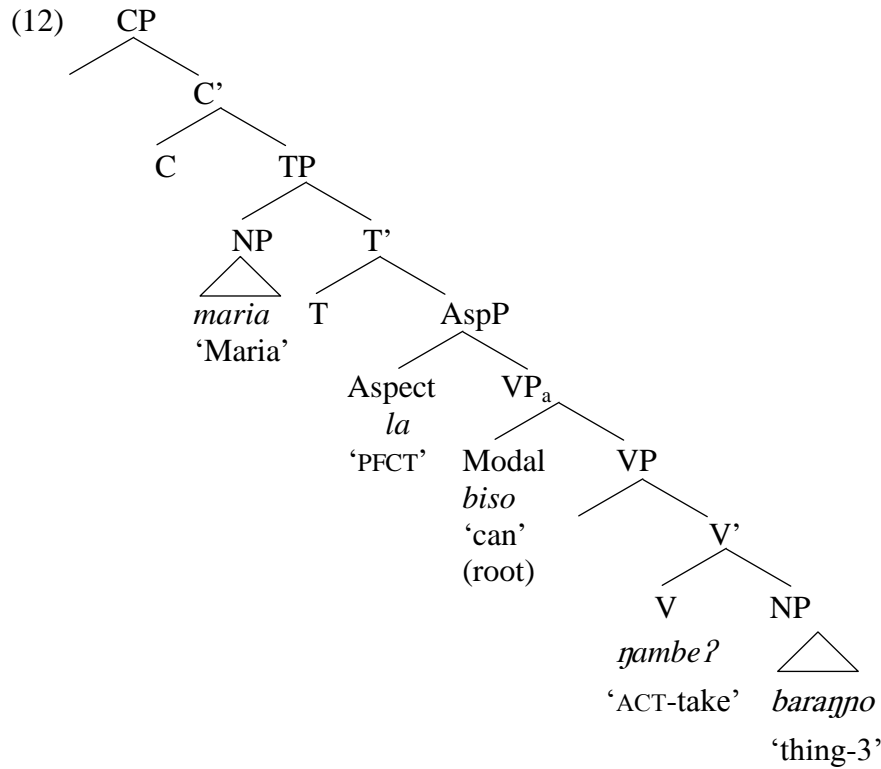
aspectual marker. If *biso* follows the aspectual marker, *biso* can only have the root (abilitative or permissive) interpretation, as shown in (10). However, if *biso* precedes the aspectual marker, the abilitative and permissive interpretations are suppressed and only the epistemic interpretation is possible, as shown in (11).

(10) a. maria   la   biso ŋambeʔ   baraŋɲo
           Maria   PFCT can ACT-take   thing-3
           'Maria has been able to take her stuff.'
           'Maria has been permitted to take her stuff.'
           *'It is possible that Maria has taken her stuff.'

     b. oraŋ-tu   lagi biso dataŋ
           person-DEM.DIST   PROG can   come
           'They currently are able to come.'
           'They are being permitted to come.'
           *'It is possible that they are coming.'

(11) a. maria   biso la   ŋambeʔ   baraŋɲo
           Maria   can   PFCT ACT-take   thing-3
           'It is possible that Maria has taken her stuff.'
           *'Maria has been able to take her stuff.'
           *'Maria has been permitted to take her stuff.'

     b. oraŋ-tu   biso lagi dataŋ
           person-DEM.DIST can   PROG come
           'It is possible that they are coming.'
           *'They currently are able to come.'
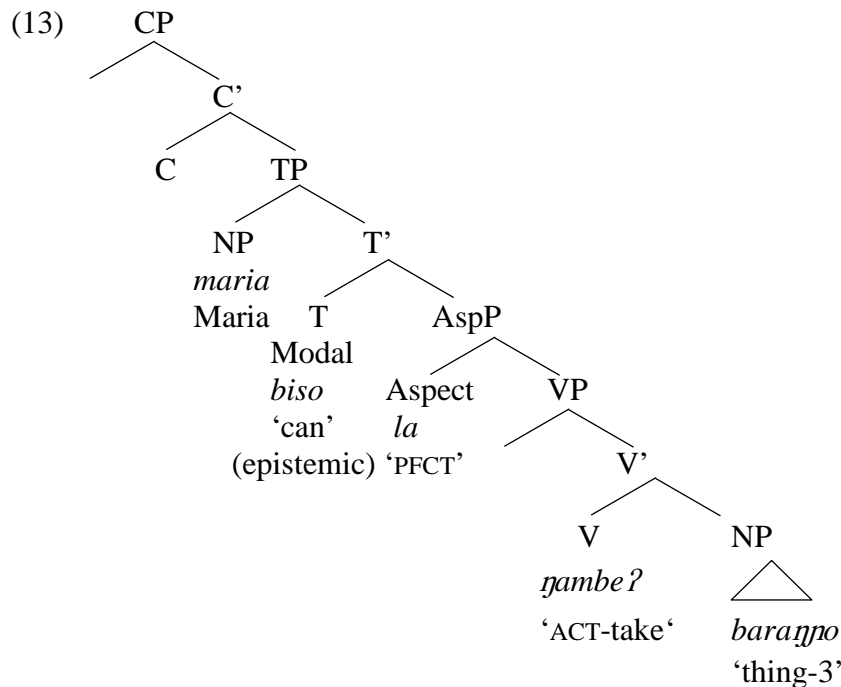   *'They are being permitted to come.'

The perfective marker *la* and the progressive marker *lagi* precede *biso* in (10)a and (10)b, respectively. Although they are grammatical, these sentences are not ambiguous in their interpretation. They can receive a root (abilitative or permissive) interpretation, but not an epistemic interpretation. In contrast, when the aspectual marker follows *biso*, as in (11), the sentences can only receive the possibility interpretation, but not the abilitative or permissive interpretation.

Now let us consider how the proposed structure would handle these facts. Assuming that the aspectual marker is generated in AspP, between TP and VP$_a$, it would follow that when *biso* appears after the aspectual marker, it only receives the root reading while when *biso* precedes the aspectual marker, it only receives the epistemic reading.

(12) roughly illustrates the structure of (10)a in which *biso* follows the aspectual marker *la* 'PFCT'.

(12)
```
              CP
              |
              C'
             /  \
            C    TP
                /  \
              NP    T'
              △    /  \
           maria  T    AspP
           'Maria'    /    \
                  Aspect   VPₐ
                    la    /   \
                  'PFCT' Modal  VP
                         biso   /  \
                         'can' V'
                        (root) /  \
                              V    NP
                           ɲambeʔ   △
                         'ACT-take' baraŋɲo
                                   'thing-3'
```

In contrast, (13) roughly illustrates the structure of (11)a in which *biso* precedes the aspectual marker *la* 'PFCT'.

(13)
```
               CP
               |
               C'
              /  \
             C    TP
                 /  \
               NP    T'
              maria  /  \
              Maria T    AspP
                   Modal  /   \
                   biso  Aspect VP
                   'can'  la   /  \
                (epistemic)'PFCT' V'
                              /  \
                             V    NP
                          ɲambeʔ   △
                        'ACT-take' baraŋɲo
                                  'thing-3'
```

As (13) shows, the epistemic *biso* is generated in T, above the aspectual marker. Therefore, the sentence can be interpreted only epistemically.

In contrast, the hypothesis that *biso* is ambiguous and that its interpretation is determined by some kind of pragmatic means cannot account for the fact that different word orders trigger different interpretations. If the ambiguity of the sentences containing *biso* occurs because *biso* is ambiguous, then the word order should play no role in the interpretation of
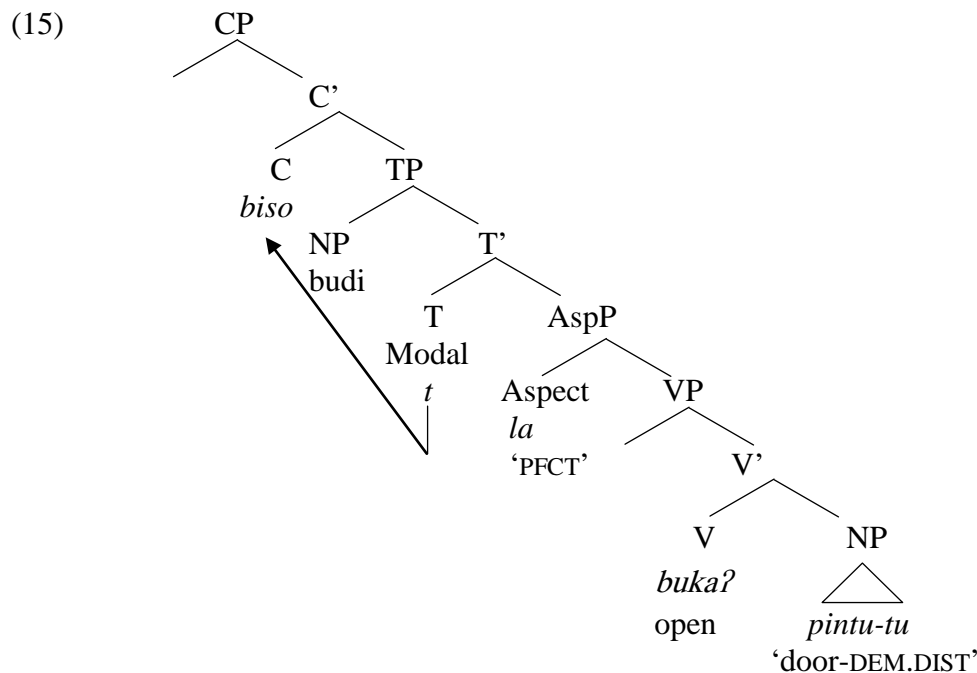
biso. However, the data in this section have shown that different word orders trigger different interpretations of *biso.*

4. Evidence from Fronting

Further evidence comes from fronting. In Jambi Malay, it is possible to front *biso* past the subject of the clause, as shown in (14) below. However, when *biso* is fronted, it loses its ambiguity. The fronted *biso* can only be interpreted epistemically.

(14) a. biso ida la ambeʔ panci-tu
      can Ida PFCT take pot-DEM.DIST
      'It is possible that Ida has taken the pot.'
      *'It is the case that Ida has been able to take the pot.'

   b. biso budi la bukaʔ pintu-tu
      can Budi PFCT open door-DEM.DIST
      'It is possible that Budi has opened that door.'
   *It is the case that Budi has been able to open that door.'

Let us now examine how the interpretation of (14) can be explained based on the proposed syntactic structure. If the fronted *biso* is base-generated in the epistemic modal, i.e. in T, as shown by the structure in (9)/(13), then *biso* undergoes head-movement to C in order to get the word order in (14). This is illustrated below (I only show the structure for (14)b).

(15)

CP
  C'
    C — *biso*
    TP
      NP — budi
      T'
        T — Modal — *t*
        AspP
          Aspect — *la* 'PFCT'
          VP
            V'
              V — *bukaʔ* open
              NP — *pintu-tu* 'door-DEM.DIST'

As (15) illustrates, the epistemic *biso* has moved from T to C.[4] This movement is possible and thus the fronted *biso* in (14) is interpreted epistemically.

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[4] Timothy McKinnon (p.c.) points out that an alternative hypothesis is that epistemics are always generated above TP, and stay in situ, while the subject optionally moves to the topic position. Whether this analysis is preferred to the proposed structure in this paper is left to future research.

Let us now examine whether or not the fact that the fronted *biso* cannot receive the root interpretation can be predicted. If the fronted *biso* is base-generated as the head of VP$_a$, as shown by the structure in (8)/(12), it needs to move cyclically, first to T and then to C, as illustrated in (16) below. However, this movement is ruled out because the movement of *biso* to T is blocked by *la* (which is generated in the head of the AspP) due to the Head Movement Constraints (Travis, 1984) which states that an X^0 category can only move to a position that governs its maximal projection.

(16)
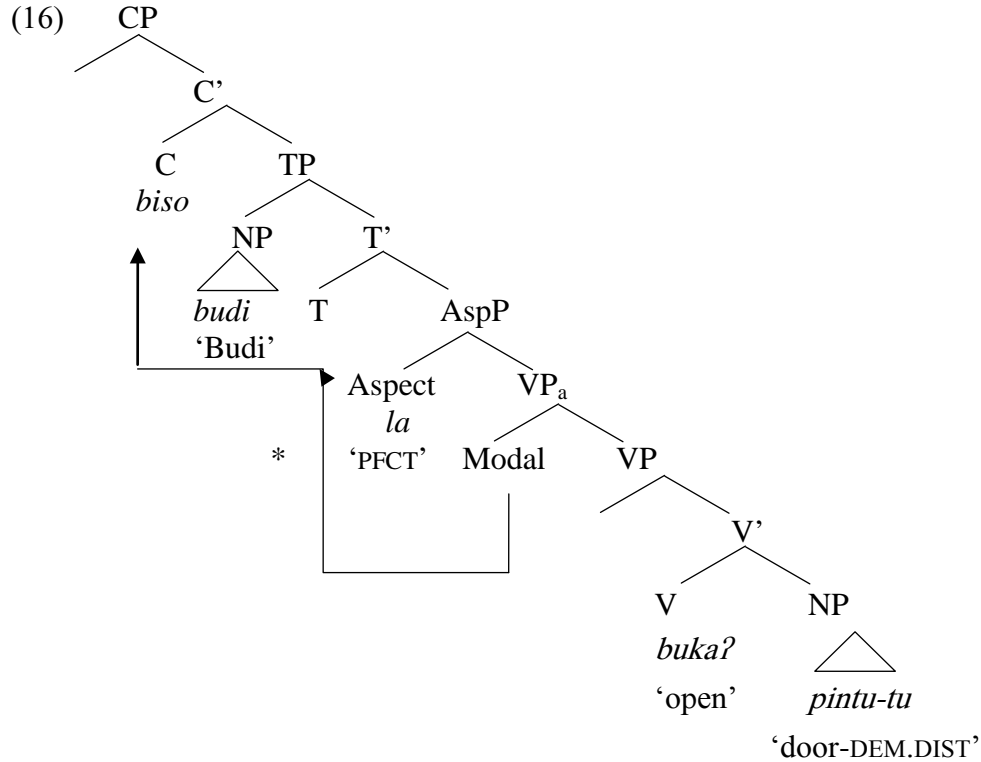
In short, the fact that *biso* in (14) only receives an epistemic interpretation indicates that the fronted *biso* is the epistemic *biso,* which is base-generated in T, and not the root *biso,* which is a head of VP$_a$.

5. Evidence from Adjacent Modals

In Jambi Malay the modal auxiliary *biso* can co-occur with another modal. As with aspectual markers, the modal that co-occurs with *biso* can either precede or follow *biso*. This is illustrated by the examples in (17) below.

(17) a. kau   harus biso   ŋaŋkat   mejaɲo
      2SG   must can   ACT-lift table-3
      'You must be able to lift the table.'
      *'It is possible that you must lift the table.'

   b. kau   biso   harus   ŋaŋkat   mejaɲo
      2SG   can   must   ACT-lift   table-3
      'It is possible that you must lift the table.'
      *'You must be able to lift the table.'

(17)a, in which *biso* follows *harus* 'must', only gets the root interpretation. In contrast, when *biso* precedes *harus,* as in (17)b, the sentence only has the epistemic interpretation. The fact that *biso* only has one interpretation in one order and another interpretation in the other order supports the claim that *biso* is projected in two different syntactic positions.

6. Conclusion

I have shown that the modal auxiliary *biso* can have either a root (abilitative or permissive) interpretation or an epistemic (possibility) interpretation. I have presented evidence that this ambiguity is due to epistemic *biso* and root *biso* being base-generated in two different syntactic positions. The claim is supported by the relationship between the word order and interpretation of sentences that contains aspectual markers and *biso,* sentences that involve fronting, and sentences in which *biso* co-occurs with another modal.

References

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