

SYNTAX AND SEMANTICS OF TAGALOG MODALS *

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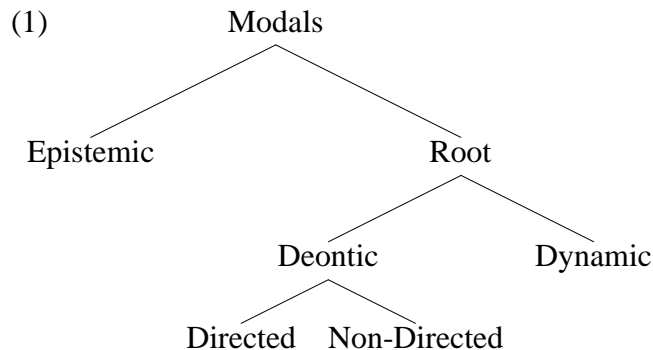
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In this paper, we analyze modal verb constructions in Tagalog, which provide support for the theory of modal proposed by Brennan (1993). There is a clear relationship between the syntax and semantics of Tagalog modal verbs. In particular, we show that Tagalog modals assign a θ -role to the subject if, and only if, they syntactically mark the subject. It follows that directed deontic modals, which assign a θ -role to the subject, are syntactically different from non-directed deontic modals, which do not. We show that dynamic modals preferentially assign a syntactic marking and a θ -role to the subject. An analysis of all Tagalog modal verbs is presented.

1. THEORIES OF MODALS

There is an open debate in the literature as to how semantic meanings of modal verbs should be classified and whether these semantic distinctions map onto underlying syntactic differences. English is a difficult language in which to further this topic, as the potential syntactic differences are not reflected in the phonology. However, overt syntactic markings in Tagalog allow us to argue for one of the three major proposals for how syntax and semantics interact in sentences with modal verbs.

Tagalog evidence indicates that the following modal classification scheme (c.f. Hall (2001)) reflects linguistically significant differences between modals:



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These categories are defined in terms of the semantics of the modals. Epistemic modality refers to speaker knowledge, e.g. “It might rain tomorrow.” Root modals refer to the state of the world. They can be further subdivided into deontic verbs, reflecting permission or obligation, and dynamic verbs, which reflect ability (e.g. “I can run a seven-minute mile.”). Furthermore, there is a key distinction between directed¹ and non-directed² deontic modals. Directed modals assign permission or obligation to the subject, as in “You must do your homework.” Non-directed deontic modals do not attribute the permission or obligation to the subject in particular, as in “The bread must be eaten.”

Traditional accounts of modality (e.g. Jackendoff (1972)) focus on the differences between root and epistemic modals. It is argued that root modals correspond to a control structure and assign a θ -role to the subject. Epistemic modals correspond to a raising structure and do not assign a θ -role to the subject. For example:

- (2) a. You_i must [PRO_i do your homework.] **(directed deontic)**
 b. It_i might [t_i rain tomorrow.] **(epistemic)**
 ⤴_____

More recently, it has been argued by Bobaljik and Wurmbrand (1999), among others, that there are no syntactic differences between root and epistemic modals. The fact that non-directed deontic modals do not assign a θ role to the subject, and therefore appear to have a raising structure, has been used to support this claim.

- (3) a. The bread_i must [t_i be eaten.] **(non-directed deontic)**
 ⤴_____
- b. It_i might [t_i rain tomorrow.] **(epistemic)**
 ⤴_____

Brennan (1993) argues for a middle ground. She proposes that non-directed deontic modals are syntactically the same as epistemic modals—they take a sentential complement, do not assign a θ -role to the subject, and result in a raising structure. Directed deontic and dynamic modals, on the other hand, take the subject and VP as arguments, assign a θ -role to the subject, and result in a control structure.

Facts from Tagalog generally support this account. Tagalog makes clear distinctions between directed and non-directed deontic modals, along the lines argued for by Brennan (1993). The modal that is preferred for the dynamic reading assigns case (and a θ -role) to the subject. (The dynamic reading is also allowed with modals that do not assign case to the subject.) Tagalog has

¹Sometimes called “ought-to-do”.

²Sometimes called “ought-to-be”.

no epistemic modal verbs, but since all accounts agree that epistemic modals take raising structures, there is no need for further evidence to distinguish between the theories.

2. ANG/NG MARKING IN TAGALOG

Verbs in Tagalog bear morphology indicating which is mirrored by morphology on the NPs in the sentence. Subject-ANG verbs (glossed as S.A. throughout the paper) cause common-noun subjects to be introduced with the morpheme *ang*, glossed throughout as ANG. Object-ANG verbs (glossed as O.A.) assign an ANG-marking to the direct object. NP's not marked with ANG are marked with SA ("dative") or NG ("unmarked"). In simple sentences containing a subject and a direct object, one of the two NP's will generally be ANG-marked and the other NG-marked. For example:

- (4) a. Bumili ang lalaki ng kotse.
S.A.-bought ANG man NG car
'The man bought a car.'
- b. Binili ng lalaki ang kotse.
O.A.-bought NG man ANG car
'The man bought the car'

Note that modal verbs are object-ANG verbs, though they lack the morphology that appears on ordinary object-ANG verbs.

- (5) a. Kailangan ng lalaki ang kotse.
need NG man ANG car
'The man needs the car.'
- b. *Kailangan ang lalaki ng kotse.
need ANG man NG car

3. KEY FACTS ABOUT TAGALOG MODAL SENTENCES

In Tagalog, the subject normally receives an ANG or NG marking from the lower verb. However, in sentences with modal verbs, the subject can sometimes be NG-marked even though the lower verb is a subject-ANG verb. Since the NG marking on the subject is not assigned by the lower verb, it appears that the marking is assigned by the modal. This is consistent with the observation that modal verbs mark their subjects with NG, as in (5).

We will now consider four possible structures for modal sentences with S.A. lower verbs. All Tagalog modal verbs allow the subject to appear before or after the lower verb. Some modals require that the subject be ANG-marked (regardless of position), some require that the subject be NG-marked (also regardless of position), and some, for instance *kailangan* ('must'), allow both possibilities.

(6) **NG-marked subject:**

- a. Kailangan ng lalaki bumili ng kotse. (**control**)
must NG man S.A.-buy NG car
'The man must buy a car.'
- b. Kailangan bumili ng lalaki ng kotse. (**transparent clause**)
must S.A.-buy NG man NG car

(7) **ANG-marked subject:**

- a. Kailangan bumili ang lalaki ng kotse. (**opaque clause**)
must S.A.-buy ANG man NG car
'The man must buy a car.'
- b. Kailangan ang lalaki bumili ng kotse. (**raising**)
must ANG man S.A.-buy NG car

There is a semantic difference between the sentences in which the subject is NG-marked by the modal and the sentences in which it is not. This difference provides further evidence that the subject is indeed being NG-marked by the modal verb. *In modal sentences with a subject-ANG lower verb, the subject receives a θ -role from the modal if, and only if, it is NG-marked (by the modal).*³ As we will see, NPs that receive a θ -role from the modal must be interpreted as bearing the obligation or ability described by the modal. A subject that pragmatically cannot receive obligation from the modal therefore cannot be NG-marked by the modal:

- (8) a. #Kailangan ng tinapay mawala. (**control**)
must NG bread disappear
#‘The bread must make itself disappear.’
- b. #Kailangan mawala ng tinapay. (**transparent clause**)
#‘The bread must make itself disappear.’

³With O.A. lower verbs in modal sentences, it is of course ambiguous whether the subject is NG-marked by the lower verb or by the modal. The subject can never be ANG-marked in these cases.

- (9) a. Kailangan mawala ang tinapay. (**opaque clause**)
 must disappear ANG bread
 ‘The bread must disappear.’
- b. Kailangan ang tinapay mawala. (**raising**)
 ‘The bread must disappear.’

We now discuss the syntax of each of the four possible constructions in greater detail.

4. SYNTACTIC STRUCTURES FOR TAGALOG MODAL VERBS

4.1. Control

The first type of sentence to consider is that in (6a), where the subject appears before the lower verb and is NG-marked despite the lower verb being S.A.:

- (10) Kailangan ng lalaki_i [_{CP} (na) bumili PRO_i ng kotse.]
 must NG man_i [_{CP} (LI) S.A.-buy PRO_i NG car]
 ‘The man must buy a car.’

(10) optionally contains *na*, which is one of the forms of the Tagalog linker (glossed as LI); the linker also appears as *-ng*. The relevant function of the linker is to indicate the left edge of a clause.⁴ The surface position of the subject in (10) is thus in the higher clause, outside of the lower CP. Since the subject is marked by *ng* and receives a θ -role from the modal, the subject is generated in the higher clause and controls a PRO in the lower clause, as shown above. *Kailangan* thus takes two arguments in the control structure: a subject NP, and a CP clause.

4.2. Transparent Clause

It is also possible for the subject in a modal sentence to appear after the S.A. lower verb, but be NG-marked, as in (6b) (repeated here).

- (11) Kailangan [_{VP} bumili ng lalaki ng kotse.]
 must [_{VP} S.A.-buy NG man NG car]
 ‘The man must buy a car.’

⁴The linker can sometimes be left out in colloquial speech, and our main informant generally allowed for the linker to be dropped.

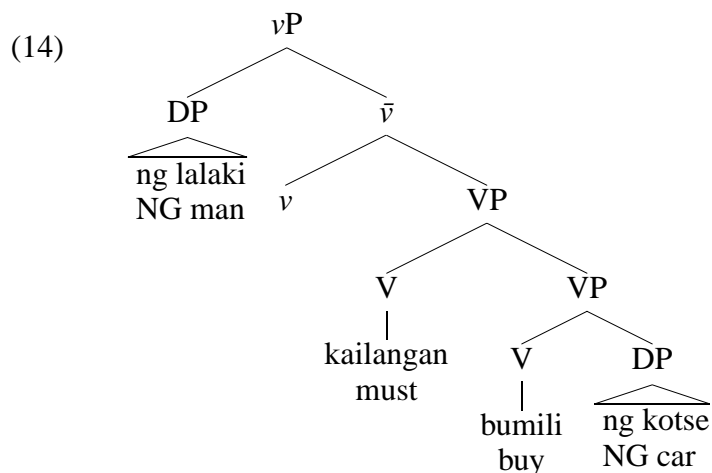
As in the control structure, the subject in the transparent clause structure receives a θ role and a NG-marking from the modal. Since the subject in (11) appears in the lower clause, we must explain why the modal is not blocked from NG-marking the subject. One possibility to consider is that the lower verb raises to the modal, as suggested in Mercado (2002) (though Mercado (2005) argues against verb raising). However, a particle can be inserted between the modal and the lower verb in (11), which shows that verb raising does not occur in (11):

- (12) Kailangan pala bumili ng lalaki ng kotse.
 must SURPRISE S.A.-buy NG man NG car
 ‘Oh, I see the man must buy a car.’

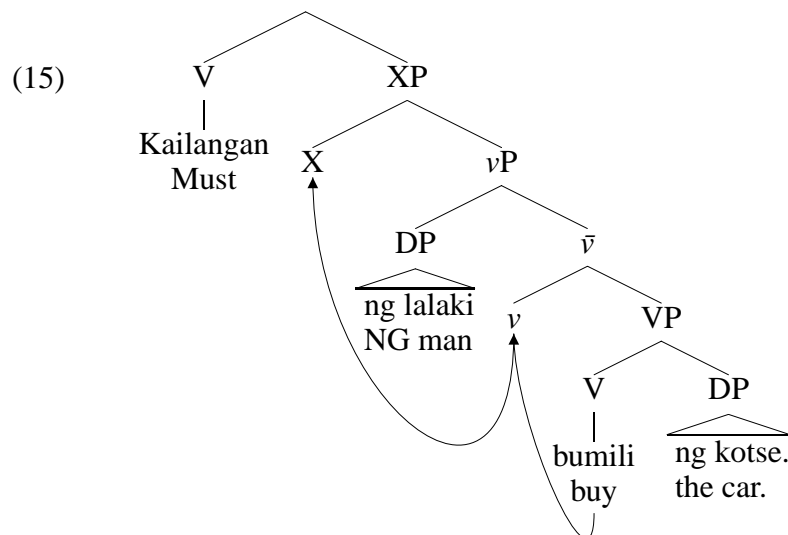
A different possibility, one that appears to be correct, is that restructuring is taking place. That is, the lower clause is not a full CP, but is reduced to a smaller clause, such as a VP. As part of her argument that restructured clauses are functionally reduced, Wurmbrand (2001) notes that such clauses cannot contain negation. And indeed, negation can be inserted between the modal and the lower verb when the subject is ANG-marked (and the lower clause is not reduced), but not when the subject is NG-marked and the lower clause is reduced:

- (13) a. *Kailangan(ng) [hindi bumili ng lalaki ng kotse.]
 must(-LI) not S.A.-buy NG man NG car
 b. Kailangan(ng) [hindi bumili ang lalaki ng kotse.]
 must(-LI) not S.A.-buy ANG man NG car
 ‘The man must not buy a car.’

Following Wurmbrand’s proposal, we expect the sentence containing the restructured clause to look like this:



As desired, there is no attachment site for negation between the modal and the lower verb. Unfortunately, this structure does not correspond to the surface Tagalog word order. We thus propose the following modified structure for the transparent clause modal sentences in Tagalog:



This structure is similar to the one corresponding to Wurmbrand's proposal. The clause that the modal takes is not a full CP, though it is slightly larger than a vP . The extra attachment site allows the lower verb to move up to precede the subject, without creating an attachment site for negation. The subject stays in situ in the specifier of vP . This proposal accounts for the Tagalog word order, the lack of attachment site for negation between the modal and the lower verb, and the fact that the lower clause is transparent, i.e. allows the modal to assign marking to the subject. However, while the proposed structure appears to be the most natural extension of restructuring to Tagalog, there may be others that also explain the data (see for instance Chung (1990)).

4.3. Agreement and Person Effects

We have shown above that a structure for modal sentences in which the subject appears below the lower verb but Agrees with the modal is possible in Tagalog. The theory developed in Richards (2005) allows us to confirm that the subject is indeed Agreeing with the modal in the transparent clause structure. Richards argues that when a Probe Agrees with more than one Goal, Goals after the first one must be in third person.

For example, Tagalog allows ANG-marked subjects to be fronted and marked with *ay* (i.e. *ay-fronted*):⁵

⁵Examples (16) and (17) are taken from Richards (2005).

- (16) a. Pilipino ako.
 Filipino ANG-I
 'I am Filipino.'
- b. Ako ay Pilipino.
 ANG-I AY Filipino
 'I am Filipino.'

However, a subject can be *ay*-fronted across a clause boundary only if it is in third person.

- (17) a. Ang guro ay sinabi ng mga pulis [na nagnakaw t_i ng kotse.]
 ANG teacher AY O.A.-said NG PL police [LI S.A.-stole t_i NG car]
 └──┘
 'The teacher, the police said t_i stole a car.'
- b. Siya ay sinabi ng mga pulis [na nagnakaw t_i ng kotse.]
 ANG-he/she AY O.A.-said NG PL police [LI S.A.-stole t_i NG car]
 └──┘
 'He/she, the police said t_i stole a car.'
- c. Ako/ka ay sinabi ng mga pulis [na nagnakaw t_i ng kotse.]
 ANG-I/ANG-you AY O.A.-said NG PL police [LI S.A.-stole t_i NG car]
 └──┘
 'I/you, the police said t_i stole a car.'

Richards (2005) shows that in the examples above the Probe ν Agrees first with the lower clause and then with the subject. The Agree relation between the Probe ν and the subject is thus not the first one that ν enters into, and so the subject is required to be in third person.

We can make a similar prediction for the transparent clause structure. If the modal is Agreeing with the subject, then it will first Agree with the lower clause, and then with the subject NP, which is inside the lower clause. The subject in the transparent clause structure will thus be required to be in third person. And indeed, while third person subjects are allowed in all four types of constructions discussed, first person and second person subjects are prohibited in transparent clause constructions.

- (18) **First/second person subject:**
- a. Kailangan ko/mo [bumili ng kotse.] (**control**)
 must NG-I/NG-you S.A.-buy NG car

‘I/you must buy a car.’

- b. *Kailangan [bumili ko/mo ng kotse.] (transparent clause)
- c. Kailangan [bumili ako/ka ng kotse.] (opaque clause)
must S.A.-buy ANG-I/ANG-you NG car
- d. Kailangan ako/ka [bumili ng kotse.] (raising)

(19) **Third person subject:**

- a. Kailangan niya [bumili ng kotse.] (control)
must NG-he/she S.A.-buy NG car
‘He/she must buy a car.’
- b. Kailangan [bumili niya ng kotse.] (transparent clause)
- c. Kailangan [bumili siya ng kotse.] (opaque clause)
must S.A.-buy ANG-he/she NG car
- d. Kailangan siya [bumili ng kotse.] (raising)

The modal thus Agrees first with the lower clause and then with the subject in the transparent clause structure. In the control structure the first Agree relation that the modal enters into is with the subject, as the is generated in the higher clause, and so first and second person subjects are permitted. The subject in opaque clause and raising structures Agrees only with the lower verb, so that again a subject in any person is allowed.

4.4. Opaque Clause

The third possibility to consider is that the subject appears after the lower verb, and is ANG-marked by the lower verb, as in (7a) (repeated below).

- (20) Kailangan [_{CP} bumili ang lalaki ng kotse.]
must [_{CP} S.A.-buy ANG man NG car]
‘The man must buy a car.’

- b. The bread must disappear.

In English, (23a) is ambiguous: it is possible that the man is obligated to disappear (directed deontic), or that another contextually salient force has to make the man disappear (non-directed deontic). In (23b), it is assumed for pragmatic reasons that the bread itself is under no obligation to do anything—some other contextually salient entity is obligated to make the bread go away. The reading for (23b) thus has to be non-directed deontic. In Tagalog, the non-directed deontic reading is available when the subject is marked by the lower verb, i.e. the structure is opaque or raising. (Note that the intransitive verb *mawala* ('disappear') below normally ANG-marks the subject.)

- (24) a. Kailangan mawala ang lalaki/tinapay. (**opaque clause**)
 must disappear ANG man/bread
 'The man/bread must disappear.'
- b. Kailangan ang lalaki/tinapay mawala. (**raising**)
 must ANG man/bread disappear
 'The man/bread must disappear.'

However, only a directed deontic reading is allowed when the subject is NG-marked by *kailangan*. This means that *lalaki* ('man') can be the subject in a control or transparent clause sentence, as a man can receive obligation. *Tinapay* ('bread'), on the other hand, cannot be the subject of a control or transparent clause sentence, as it is pragmatically unacceptable for bread to receive obligation.

- (25) a. Kailangan ng lalaki mawala. (**control**)
 must NG man disappear
 'The man must make himself disappear.'
- b. Kailangan mawala ng lalaki. (**transparent clause**)
 must disappear NG man
 'The man must make himself disappear.'
- (26) a. #Kailangan ng tinapay mawala. (**control**)
 must NG bread disappear
 #'The bread must make itself disappear.'
- b. #Kailangan mawala ng tinapay. (**transparent clause**)
 must disappear NG bread
 #'The bread must make itself disappear.'

6. SEMANTIC IMPLICATIONS OF SYNTACTIC STRUCTURES FOR OTHER TAGALOG MODALS

Kailangan lends itself equally well to structures in which the modal assigns obligation and a NG-marking to the subject and structures in which it does not. This is not the case for other Tagalog modals. However, if a modal is able to NG-mark the subject and assign the θ -role to the subject, then it allows both the control and transparent clause structures. Similarly, if the modal is able to *not* NG-mark the subject, it allows both the opaque clause and raising structures. The key distinction thus lies between modals that assign a NG marking and θ -role to the subject and those that do not.

As has been previously mentioned, a directed deontic reading is obtained when the modal NG-marks the subject, and a non-directed deontic reading is obtained when the modal does not NG-mark the subject. The dynamic reading is preferred with a modal that NG-marks the subject, but is permitted for modals that do not.

We now discuss each of the remaining Tagalog modals.

6.1. Dapat

Dapat, which like *kailangan* can be translated as ‘must’, demonstrates a clear preference for structures in which the modal does not mark the subject (opaque clause and raising). The structures in which the modal does mark the subject (control and transparent clause) are allowed for some speakers, though they are dispreferred. The semantic facts for *dapat* are consistent with those for *kailangan*: *dapat* assigns obligation to the subject if, and only if, it NG-marks the subject.⁶

6.2. Kaya

Kaya, which may be translated as ‘can’, always NG-marks the subject.

⁶There are semantic differences between *kailangan* and *dapat* even when both take a non-directed reading. For example, (ia) is good, while (ib) requires a special context.

- (i) a. *Kailangan* umulan bukas para ako gumawa ng mainit na salabat.
must rain tomorrow for ANG-I make LI hot LI ginger tea
‘It must rain tomorrow for me to make hot ginger tea.’
- b. #*Dapat* umulan bukas para ako gumawa ng mainit na salabat.
must rain tomorrow for ANG-I make LI hot LI ginger tea
‘It must rain tomorrow for me to make hot ginger tea.’

It appears that *kailangan* sentences are consistent with the rules of the universe, while *dapat* sentences are consistent with speaker authority. Hence, in (ib) it is odd to use *dapat*, as the speaker has no control of the weather. (ib) becomes good, however, in the special context in which the speaker is a wizard who can control the weather through magic.

- (27) a. Kaya ng lalaki bumili ng kotse. **(control)**
 can NG man S.A.-buy NG car
 ‘The man can buy a car.’
- b. Kaya bumili ng lalaki ng kotse. **(transparent clause)**
- (28) a. *Kaya bumili ang lalaki ng kotse. **(opaque clause)**
 can S.A.-buy ANG man NG car
- b. *Kaya ang lalaki bumili ng kotse. **(raising)**

Semantically, *kaya* always takes the dynamic reading. Since *kaya* NG-marks the subject, it always assigns ability to the subject in particular, as predicted by Brennan (1993). Subjects that pragmatically cannot have abilities, such as bread, therefore cannot be used with *kaya*.

- (29) a. Kaya ng lalaki mawala. **(control)**
 can NG man disappear
 ‘The man is able to disappear.’
- b. Kaya mawala ng lalaki. **(transparent clause)**
 can disappear NG man
 ‘The man is able to disappear.’
- (30) a. #Kaya ng tinapay mawala. **(control)**
 can NG bread disappear
 #‘The bread is able to disappear.’
- b. #Kaya mawala ng tinapay. **(transparent clause)**
 can disappear NG bread
 #‘The bread is able to disappear.’

6.3. *Puwede and Maaari*

Puwede and *maaari* may both be translated as ‘can’. There seems to be little semantic difference between the two.⁷ When the lower verb is S.A., both *puwede* and *maaari* require an ANG-marked

⁷*Puwede* is a Spanish borrowing and is more commonly used in conversation.

subject.

- (31) a. *Puwede/Maaari ng lalaki bumili ng kotse. (**control**)
 can NG man S.A.-buy NG car
- b. *Puwede/Maaari bumili ng lalaki ng kotse. (**transparent clause**)
- (32) a. Puwede/Maaari bumili ang lalaki ng kotse. (**opaque clause**)
 can S.A.-buy ANG man NG car
 ‘The man can buy a car.’
- b. Puwede/Maaari ang lalaki bumili ng kotse. (**raising**)

Correspondingly, since the subject always receives its marking from the lower verb, *puwede* and *maaari* never assign a θ -role to the subject. The two modals thus take a non-directed deontic reading, never a directed one. Consequently, subjects that pragmatically cannot receive permission are allowed in *puwede* and *maaari* sentences, both in opaque clause and raising structures.

- (33) a. Puwedeng/Maaaring mawala ang lalaki. (**opaque clause**)
 can-LI disappear ANG man
 ‘It is permissible for the man to disappear.’
- b. Puwedeng/Maaaring mawala ang tinapay. (**opaque clause**)
 can-LI disappear ANG bread
 ‘It is permissible for the bread to disappear.’
- (34) a. Maaaring/Puwedeng ang lalaki mawala. (**raising**)
 can-LI ANG man disappear
 ‘It is permissible for the man to disappear.’
- b. Puwedeng/Maaaring ang tinapay mawala. (**raising**)
 can-LI ANG bread disappear
 ‘It is permissible for the bread to disappear.’

Though *kaya* is strongly preferred in dynamic contexts, a dynamic reading is also allowed for *puwede* and *maaari*. This appears to contradict Brennan’s claim that dynamic modals always take the subject as an argument and assign a θ -role to it. Of course, Brennan was making arguments about English rather than Tagalog, but it is reasonable to suppose that there is consistency between languages, as such consistency appears to exist for deontic modality. It is possible, however, that

puwede and *maaari* do not get “real” dynamic readings. “Able to” means approximately “permitted to by certain facts”, and perhaps *puwede* and *maaari* are taking this particular permission reading when they take an “ability” reading. This is consistent with the two modals being dispreferred for situations when the dynamic reading is required.

Another possibility is that *puwede* and *maaari* take a “non-directed” dynamic reading, in which ability is not assigned to the subject in particular. However, there is a lack of separate evidence for such a division between dynamic modals, and it is unclear what it would mean for ability not to be assigned directly to the subject. This approach therefore seems less desirable than the first, and also does not explain the preference for using *kaya*, rather than *puwede* and *maaari*, in dynamic contexts.

7. SUMMARY OF FACTS

<i>Marking on Subject</i>	From Modal	From Lower Verb
<i>Structures</i>	control, transparent clause	opaque clause, raising
<i>Readings</i>	directed deontic, dynamic	non-directed deontic, dynamic (dispreferred)
<i>Modals</i>	kailangan, kaya, dapat (dispreferred)	kailangan, dapat, puwede, maaari

8. CONCLUSION

Tagalog provides clear evidence that semantic differences between modals correspond to syntactic differences. In particular, non-directed deontic modals take a CP argument and do not assign a θ -role to the subject. Directed deontic modals take the subject NP and a clause, and assign a θ -role to the subject. In Tagalog, non-directed deontic modals do not syntactically mark the subject, while directed deontic modals assign a NG-marking to the subject. The dynamic reading is preferred with a modal that assigns a NG-marking and a θ -role to the subject, though it seems to also be allowed for modals that do not. The Tagalog evidence is thus basically in line with the proposal made for English modals by Brennan (1993).

Appendix I. Pronominal Variable Binding

We can use binding theory to attempt to determine how high the subject is in raising and control constructions. Rackowski (2002) shows that an ANG-marked object can bind a pronominal variable in the subject:

- (35) Minamahal ng kanyang ama ang bawat anak.
 O.A.-love NG POSSESSIVE father ANG every child
 ‘His_i/her_i father loves every child_i.’

An ANG-marked object must then also be able to bind a variable in the subject in a raising construction, since raising should not affect binding. We know that *puwede* and *maaari* allow raising and disallow control constructions, so we can use these modals to test the prediction. And indeed, an ANG-marked object can bind a variable in the subject in raising structures with *puwede* and *maaari*.⁸

- (36) Puwede/maaari ng kanyang ama (na) mahalín ang bawat anak.
 can NG possessive father (LI) O.A.-love-INF ANG every child
 ‘His_i/her_i father can love every child_i.’

Surprisingly, however, the ANG-marked object is allowed to bind a variable in the subject in control structures as well.

- (37) Kaya ng kanyang ama (na) mahalín ang bawat anak.
 can NG possessive father (LI) O.A.-love-INF ANG every child
 ‘His_i/her_i father can love every child_i.’

Kaya allows control structures, but not raising structures, so we would expect that the subject in (37) appears too high for the object to scope over it and bind a variable. Further research is needed to determine why the object can scope over the subject in (37).

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⁸These sentences are difficult to parse, and some context is required to make them acceptable.

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