

# Phase Edge and Extraction: A Tagalog Case Study

Andrea Rackowski  
Norvin Richards

In this article, we examine evidence for the phase theory of movement (Chomsky 2000, 2001) in the context of Tagalog, arguing in particular that Tagalog has overt morphology that signals movement of arguments to check an EPP-feature on the head of the vP phase. We show that this morphology interacts with extraction in ways Chomsky's theory leads us to expect, and we develop a theory of the Tagalog facts that also accounts for the effects of Huang's (1982) Condition on Extraction Domain.

*Keywords:* Tagalog, *wh*-agreement, Condition on Extraction Domain, phases, successive cyclicity

## 1 Introduction

According to the phase-based theory of syntax (Chomsky 2000, 2001), in order for some element to be extracted out of a phase, it must be located at the edge of that phase, either by merging into that position or by moving there. Movement to the edge of the phase is accomplished by an EPP-feature that forces some argument within the domain of the phase head to move to check it. In this article, we examine evidence for this theory in the context of Tagalog.

In particular, we argue that Tagalog has a process of "object" shift for specific arguments. We argue that, just as in Germanic languages, specific arguments are forced to move to the edge of the vP phase in order to receive the correct semantic interpretation. In Tagalog, this movement is signaled by morphology on the verb that agrees with the shifted argument (in Case, we will claim; see Rackowski 2002 for arguments), and also by the marker *ang* (or *si* for proper names) on the shifted argument. The shifted argument is italicized in the following examples, and the agreement morphology on the verb is boldfaced (Maclachlan 1992). (Note that word order is very free in Tagalog, so shifting is not evident from order in the following examples.)<sup>1</sup>

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The abbreviations used in this article are *ACC* = accusative, *ASP* = aspect, *AUX* = auxiliary, *COND* = conditional, *CS* = case, *DAT* = dative, *DO* = direct object, *EA* = external argument, *GEN* = genitive, *NOM* = nominative, *OBL* = oblique, *POSS* = possessor, *SG* = singular, *TOP* = topic.

<sup>1</sup> We assume that the final word order is derived from  $\bar{A}$ -scrambling after the stage at which the specificity shift occurs (see Richards 1993 on the  $\bar{A}$ -properties of Tagalog scrambling).

- (1) *Agent, -um-*
- a. **B-um-ili**     *ang bata* ng tela sa palengke para sa nanay.  
 -NOM.ASP-buy ANG child CS cloth DAT market for DAT Mother  
 ‘The child bought cloth at the market for Mother.’
- Theme, -in*
- b. **B-in-ili-Ø**    ng bata *ang tela* sa palengke para sa nanay.  
 -ASP-buy-ACC CS child ANG cloth DAT market for DAT Mother  
 ‘The child bought *the cloth* at the market for Mother.’
- Locative phrase, -an*
- c. **B-in-ilh-an**    ng bata ng tela *ang palengke* para sa nanay.  
 -ASP-buy-DAT CS child CS cloth ANG market for DAT Mother  
 ‘The child bought (the) cloth *at the market* for Mother.’
- Benefactive phrase, i-*
- d. **I-b-in-ili**     ng bata ng tela sa palengke *ang nanay*.  
 OBL-ASP-buy CS child CS cloth DAT market ANG Mother  
 ‘The child bought (the) cloth at the market *for Mother*.’

As the examples show, the shifted argument can bear any of a number of different argument relations to the verb. This fact will be a focus of discussion in section 3.1, where we will show that despite this apparent diversity of options, shift is actually very local, capable of affecting only the highest internal argument; examples like (1c–d), we will argue, crucially involve the use of applicative constructions that introduce the *ang*-marked phrase as the highest internal argument. The *ang*-marked phrase has been known by a number of names in the literature on Tagalog, including “subject,” “topic,” and “pivot”—here we will refer to it as the “subject,” though this term should be regarded with caution.<sup>2</sup>

Since extraction can only occur from the edge of the phase, the morphology exemplified above correlates with the possibility of extraction; extracted DPs in Tagalog must be “subjects,” as shown in (2).

- (2) a. *Sino* [ang **b-in-igy-an** ng lalaki ng bulaklak \_\_\_\_]?  
 who ANG -ASP-give-DAT CS man CS flower  
 ‘Who did the man give the flower to?’
- b. \**Sino* [ang **i-b-in-igay** ng lalaki *ang bulaklak* \_\_\_\_]?<sup>3</sup>  
 who ANG OBL-ASP-give CS man ANG flower
- c. \**Sino* [ang **n-agbigay** *ang lalaki* ng bulaklak \_\_\_\_]?  
 who ANG NOM.ASP-give ANG man CS flower

<sup>2</sup> For some discussion of the syntactic properties associated with “subjects” in Tagalog, see Schachter 1976, 1996, Guilfoyle, Hung, and Travis 1992, Kroeger 1993, Richards 1993, 2000, Maclachlan 1996, Aldridge 2002, Rackowski 2002, and references cited there.

<sup>3</sup> Oblique rather than accusative Case appears for the direct objects of double object verbs in Tagalog. See Rackowski 2002 for discussion.

This morphology also interacts in interesting ways with long-distance extraction; embedded clauses must become the “subjects” of higher verbs in order to allow extraction out of them. We argue that this follows from a requirement that embedded clauses enter into Agree relations with higher heads in order to allow the extraction of arguments out of them. The resulting theory will capture the facts of Tagalog *wh*-extraction and will also offer a new account of the Condition on Extraction Domain and its effects in more familiar languages.

## 2 “Subjects”

Consider again the examples in (1), repeated here as (3).

(3) *Agent, -um-*

- a. B-**um**-ili      *ang bata* ng tela sa palengke para sa nanay.  
 -NOM.ASP-buy ANG child CS cloth DAT market for DAT Mother  
 ‘The child bought cloth at the market for Mother.’

*Theme, -in*

- b. B-in-ili- $\emptyset$       ng bata *ang tela* sa palengke para sa nanay.  
 -ASP-buy-ACC CS child ANG cloth DAT market for DAT Mother  
 ‘The child bought *the cloth* at the market for Mother.’

*Locative phrase, -an*

- c. B-in-ilh-**an**      ng bata ng tela *ang palengke* para sa nanay.  
 -ASP-buy-DAT CS child CS cloth ANG market for DAT Mother  
 ‘The child bought (the) cloth *at the market* for Mother.’

*Benefactive phrase, i-*

- d. I-b-in-ili      ng bata ng tela sa palengke *ang nanay*.  
 OBL-ASP-buy CS child CS cloth DAT market ANG Mother  
 ‘The child bought (the) cloth at the market *for Mother*.’

One interesting property of “subjects” that is evident from these examples is that all “subjects” are obligatorily specific in Tagalog. That is, the sentence in (3a) cannot mean ‘A (*nonspecific*) child bought cloth at the market for Mother’. In contrast, direct objects are obligatorily nonspecific in sentences where the external argument is the “subject” (3a) and are optionally specific in sentences where some other argument is the “subject” (3c–d).

The effects of “subjecthood” on specificity are particularly clear in the case of pronouns; being obligatorily specific, pronouns are ungrammatical as ordinary objects in Tagalog. If an object pronoun is present, the form of the verb that makes the pronoun a “subject” must be used, as illustrated in (4).

- (4) a. S-in-ampal- $\emptyset$  *ako* ng mandurukot.  
 -ASP-slap-ACC ANG.I CS pickpocket  
 ‘A/The pickpocket slapped *me*.’

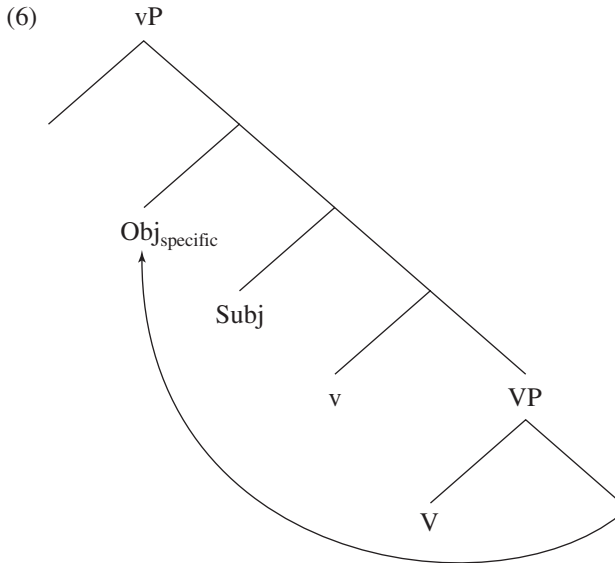
- b. \*S-**um**-ampal ko ang mandurukot.  
 -NOM.ASP-slap CS.me ANG pickpocket  
 ‘The pickpocket slapped me.’

This pattern is strikingly reminiscent of object shift in Germanic languages, where specific direct objects are disallowed in VP-internal positions. In Icelandic, for example, specific objects shift out of VP and nonspecifics do not. Pronouns obligatorily shift.<sup>4</sup> Shifted items move to a position to the left of VP-adjoined adverbs and negation.

- (5) a. Nemandinn las bókina **ekki**.  
 students.the.NOM read book.the.ACC **not**  
 ‘The students didn’t read the book.’  
 (Thráinsson 2001)
- b. Hann las **ekki** bækur.  
 he read **not** books  
 ‘He didn’t read books.’
- c. ?\*Hann las bækur **ekki**.  
 he read books **not**  
 (Diesing 1996)
- d. Nemandinn las hana **ekki**.  
 students.the.NOM read it **not**  
 ‘The students didn’t read it.’
- e. \*Nemandinn las **ekki** hana.  
 students.the.NOM read **not** it  
 ‘The students didn’t read it.’  
 (Thráinsson 2001)

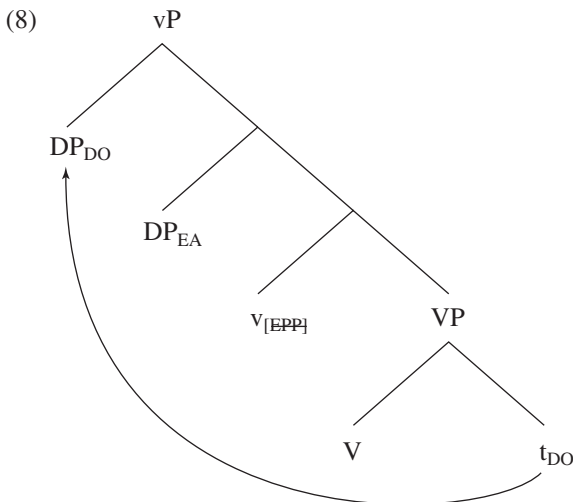
Chomsky (2001) argues that object shift occurs as the result of an EPP-feature on *v* that is present only when it has an effect on semantic outcome. There is an effect on semantic outcome because the position at the edge of the *v*P is assigned a specific interpretation, while everything internal to *v*P is assigned a nonspecific interpretation. According to this theory, any specific argument must therefore raise to the edge of *v*P in order to receive the correct interpretation. The process is diagrammed in (6). In what follows, we will crucially assume that there is no tucking-in below a thematic specifier (see McGinnis 1998, Chomsky 2001, Rackowski 2002 for discussion); as a result, object shift in a tree like (6) lands in a specifier above the thematic specifier occupied by Subj. Rackowski (2002) suggests that the relevant derivation involves Merge of the external argument, to an inner specifier, after object shift has already taken place.

<sup>4</sup> There is a rich literature on whether nonpronominal DPs in Icelandic must shift if it is semantically appropriate (and syntactically possible) for them to do so, and the facts still seem to be not entirely clear. See Diesing and Jelinek 1993, 1995, Bobaljik 1995:126–128, Thráinsson 2001:sec. 2.4.1, and references cited there for relevant discussion.



We claim that Tagalog “subjects,” like the object-shifted phrases in Icelandic, are DPs that have entered into an Agree relation with *v*, allowing them to raise into the edge of the phase and triggering Case agreement morphology on the verb.

- (7) Lu-lutu-**in** ng lalaki *ang adobo*.  
 ASP-COOK-ACC CS man ANG adobo  
 ‘The man will cook *the adobo*.’



As in Icelandic, direct objects may fail to undergo this process, in which case they receive a nonspecific interpretation, and verbal agreement registers the external argument.

- (9) **M**-aglu-luto *ang lalaki* ng adobo.  
 NOM-ASP-COOK ANG man CS adobo  
 ‘The man will cook adobo.’

### 3 Multiple Internal Arguments and “Object Shift” in Icelandic and Tagalog

#### 3.1 “Object Shift” and Locality

The mechanics of Icelandic object shift become more complicated when there is more than one internal argument. If there are two objects and only one of them shifts, it must be the higher of the two.

- (10) a. ?\*Ég lána bækurnar **ekki** Maríu.  
 I lend books.ACC **not** Maria.DAT  
 b. Ég lána Maríu **ekki** bækurnar.  
 I lend Maria.DAT **not** books.ACC  
 ‘I do not lend the books to Maria.’  
 (Collins and Thráinsson 1996)

We will show in this section that Tagalog “object shift” exhibits the same kind of locality. On the face of it, this seems counterintuitive. The data we have looked at so far suggest that almost any DP in the sentence can become the “subject.” In a sentence containing both a benefactive and a direct object, for instance, the benefactive and the direct object are both possible “subjects.”

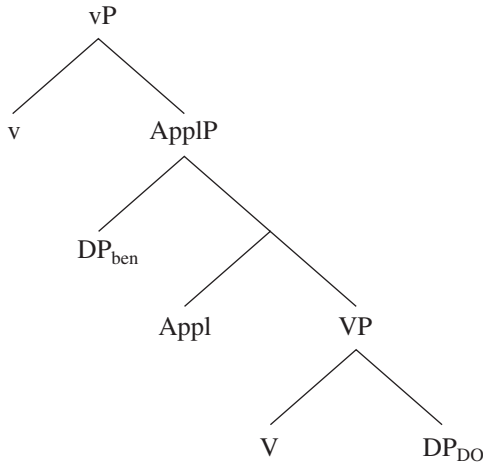
- (11) a. **I**-p-in-agluto ni Romeo ng adobo *ang babae*.  
 OBL-ASP-COOK CS Romeo CS adobo ANG woman  
 ‘Romeo cooked (the) adobo for the woman.’  
 b. Ni-luto-Ø ni Romeo *ang adobo* para sa babae.  
 ASP-COOK-ACC CS Romeo ANG adobo for DAT woman  
 ‘Romeo cooked the adobo for a woman.’

How can both of these DPs be equally accessible to Agree?

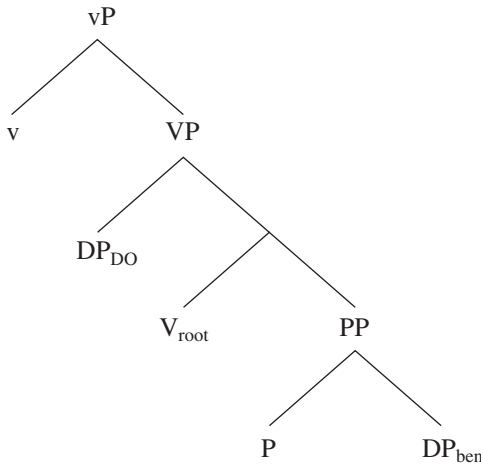
Rackowski (2002) offers arguments (reviewed in the next section) that the examples in (11) actually have different argument structures; (11a) involves an instance of Pykkänen’s (2001, 2002) high applicative construction, while the benefactive in (11b) is in a PP below the direct object.<sup>5</sup> The structures are given in (12).

<sup>5</sup> See also Nakamura 1996 for a similar claim.

(12) a. *High applicative*



b. *Prepositional benefactive*



Considerations of locality lead us to predict that in structures like these, only the highest internal argument—the benefactive in (11a) and the direct object in (11b)—will be able to become the “subject.” The arguments reviewed in the next section confirm that this is the case; sentences with a benefactive “subject” must always involve the structure in (12a), never the one in (12b). Moreover, as we expect, it is ungrammatical to move the direct object past the benefactive in a clause like (12a), as evidenced by the impossibility of a direct object–subject clause with an in-situ applicative benefactive, (13a).

- (13) a. \*Ni-luto-Ø    ni Romeo ng babae    ang adobo.  
 ASP-cook-ACC CS Romeo CS woman ANG adobo  
 ‘Romeo cooked *the adobo* for a woman.’

- b. I-p-in-agluto ni Romeo ng adobo *ang babae*.  
 OBL-ASP-cook CS Romeo CS adobo ANG woman  
 ‘Romeo cooked (the) adobo *for the woman*.’

On the proposed theory, the array of possible verb forms in Tagalog reflects a fairly small set of syntactic choices. Either Tagalog *v* bears the feature that triggers object shift, or it does not. If it does, then only the highest internal argument may shift, and the verb agrees with this argument in Case. If no argument shifts, then the external argument controls this morphology. Because Tagalog has applicative constructions, it is possible for the highest internal argument to bear any of a number of thematic roles: it may in principle be an applicative object (with one of several thematic roles introduced by the applicative constructions), or a direct object.

As in the Scandinavian languages, object shift in Tagalog affects specificity. Whatever argument occupies the highest specifier of *vP* (either a shifted object, or the external argument when no object shift takes place) is given a specific interpretation. An argument that could undergo object shift but does not is obligatorily nonspecific.

- (14) a. N-agluto        *ang lalaki* ng adobo.  
 NOM.ASP-cook ANG man CS adobo  
 ‘*The man* cooked adobo.’  
 b. Ni-luto- $\emptyset$         ng lalaki *ang adobo*.  
 ASP-cook-ACC CS man ANG adobo  
 ‘A/The man cooked *the adobo*.’

In (14a), no object shift has taken place. The external argument therefore occupies the highest specifier of *vP* and receives a specific interpretation. The internal argument could have undergone object shift but has not; it therefore receives a nonspecific interpretation. In (14b), by contrast, object shift has applied to the internal argument, placing the object in the highest specifier of *vP* and giving it a specific interpretation.<sup>6</sup>

What kind of interpretation is given to arguments that cannot undergo object shift? Here, again, we can consult the Scandinavian languages to see what we should expect for Tagalog. What we seem to find is that when movement of this kind is ruled out by the syntax, the semantic consequences that it would have had are suspended (Adger 1994, Chomsky 2001). The Danish facts in (15) are one instance of this. Object shift of pronouns is normally obligatory in Danish, as (15a–b) show; being by nature specific, they must move into the domain where they can receive a specific interpretation. However, when Holmberg’s Generalization makes object shift

<sup>6</sup> The facts in (14) are formally similar to those discussed by Rezac (2003) and Béjar and Rezac (2004), who are concerned with a type of person agreement found in many languages that agrees preferentially with an internal argument, agreeing with the external argument only if this argument bears person features that the internal argument lacks. The Tagalog parallel to the person features discussed in this line of research would be specificity; the Tagalog verb agrees with the external argument if it is the only specific argument (as in (14a)) but with the internal argument if it is specific, regardless of the specificity of the external argument (as in (14b)). Generalizing the account developed by Rezac (2003) and Béjar and Rezac (2004) to the Tagalog facts is not completely trivial and would take us fairly far afield, so we will not attempt it here; but it seems clear that a unification is desirable.



impossible, as in (15c), it simply fails to occur, with no semantic consequences for the unshifted pronoun.

- (15) a. Peter købte **den** ikke.  
Peter bought **it** not  
'Peter did not buy it.'  
b. \*Peter købte ikke **den**.  
Peter bought not **it**  
c. Peter har ikke købe **den**.  
Peter has not bought **it**  
'Peter has not bought it.'

What we expect to find in Tagalog, then, is that arguments that cannot undergo object shift (that is, most arguments: the external argument, for example, and internal arguments other than the highest one) will be ambiguous when they are not the highest specifier of vP; they may receive either a specific or a nonspecific interpretation. We have already seen one example of this in (14b), repeated here as (16).

- (16) Ni-luto- $\emptyset$  ng lalaki *ang adobo*.  
ASP-cook-ACC CS man ANG adobo  
'A/The man cooked *the adobo*.'

Here the external argument is not the highest specifier of vP, since that position is occupied by the shifted object. Since it could not itself have undergone object shift, we expect it to be free to receive either a specific or a nonspecific interpretation, and this is indeed the case.<sup>7</sup>

Internal arguments other than the highest one also behave as we expect them to. As we have shown, only the highest internal argument may undergo object shift, and we should therefore expect other, lower internal arguments to be ambiguous with respect to specificity, just as the external argument is. In fact, we have already noted an instance of this in (13b), repeated here as (17).

- (17) I-p-in-agluto ni Romeo ng adobo *ang babae*.  
OBL-ASP-cook CS Romeo CS adobo ANG woman  
'Romeo cooked (the) adobo *for the woman*.'

The direct object *ng adobo* in (17) is incapable of undergoing object shift, since an applicative construction has created a higher internal argument (namely, the benefactive object *ang babae*

<sup>7</sup> Note that specificity of the external argument is apparently sensitive not to whether the argument could be in the position with which specificity is associated (which it could be, if the object had failed to shift), but to whether it could itself undergo an operation putting it in that position. The relevant calculations thus seem to be local, in a computationally reasonable way; the important factors have to do with possible syntactic operations affecting the DP under consideration (the external argument in this case), and not the behavior of other DPs (such as the object). We will return to this issue in section 4.4.

'the woman'). As a result, the direct object is ambiguous, receiving either a specific or a nonspecific interpretation.<sup>8</sup>

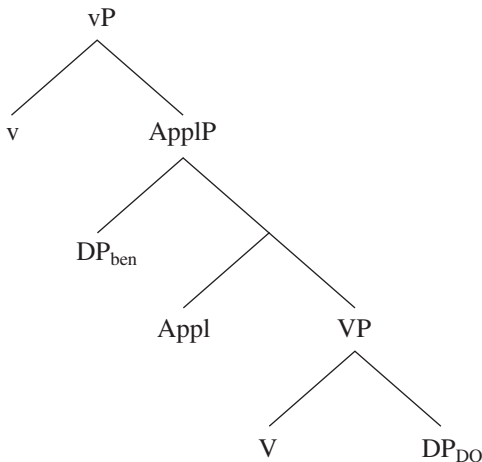
In this section, we have demonstrated that Tagalog and Scandinavian object shift share several properties. Both exhibit a strict form of locality; if only one argument shifts, it must be the highest internal argument. Moreover, they have similar semantic consequences. Object shift results in a specific interpretation of the shifted object; failure to undergo object shift when object shift could have taken place obligatorily yields a nonspecific interpretation; and arguments that are incapable of object shift (and are not in the highest specifier of vP) are ambiguous with respect to specificity. We will present another instance of this last type of case in section 4.3.

### 3.2 Variable Binding and Clause Structure

We mentioned above that Rackowski (2002) offers the structures in (19) (= (12)) for the vPs (prior to Merge of the external argument) in the examples in (18) (= (11)).

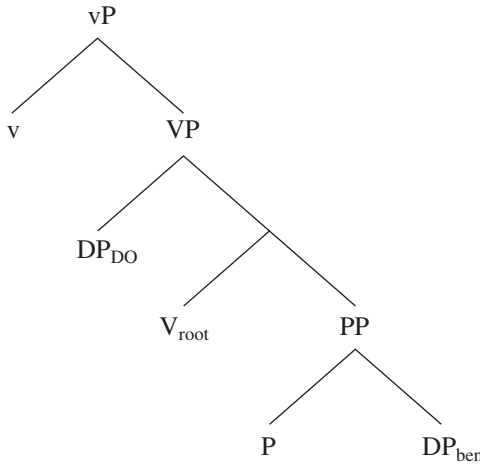
- (18) a. **I-p-in-agluto** ni Romeo ng adobo *ang babae*.  
 OBL-ASP-cook CS Romeo CS adobo ANG woman  
 'Romeo cooked adobo *for the woman*.'
- b. Ni-luto- $\emptyset$  ni Romeo *ang adobo* para sa babae.  
 ASP-cook-ACC CS Romeo ANG adobo for DAT woman  
 'Romeo cooked *the adobo* for a woman.'

- (19) a. *High applicative*



<sup>8</sup> Alternatively, it is entirely possible that the direct object does indeed undergo object shift here, but that this shift, if it occurs, has no effect on the verbal morphology. On this account, the optionality of the specific interpretation would reflect the optionality of the (morphologically invisible) shift of the direct object. This would be consistent with the parallel being drawn here with the Scandinavian languages, which do allow multiple shift of arguments but require that multiple shift exhibit "tucking in," thereby preserving the base order of the arguments.

b. *Prepositional benefactive*



These structures are crucial to our claim that promotion to “subject” status (i.e., syntactic subject) is constrained by locality in Tagalog; only the highest internal argument may undergo the Tagalog equivalent of object shift.

It is important to note here that, as shown in (20), when another argument is the “subject” (marked with *ang*), a benefactive is introduced by a preposition and the applicative construction (with the benefactive not marked by a preposition) is impossible.

- (20) a. *Ang lalaki ay t-um-awa* [para sa kanyang asawa].  
 ANG man AY -NOM.ASP-laugh for DAT POSS spouse  
 ‘The man laughed for his wife.’  
 b. \**N-agluto ng adobo ng babae si Romeo.*<sup>9</sup>  
 NOM.ASP-cook CS adobo CS woman ANG Romeo  
 ‘Romeo cooked adobo for a woman.’

- 
- (i) a. *Ég lána Maríu bækurnar ekki.*  
 I lend Maria.DAT books.ACC not  
 ‘I do not lend Maria the books.’  
 b. \**Ég lána bækurnar Maríu ekki.*  
 (Collins and Thráinsson 1996)

If Tagalog is like Scandinavian in this way as well, and if (as we have claimed) the verbal morphology in Tagalog reflects the Case of the highest specifier of vP, then we would expect shift of the lower internal argument in Tagalog to have no effect on the verbal morphology. Nothing crucial in our account will hinge on whether this is in fact the case; see Rackowski 2002 for discussion.

<sup>9</sup> This sentence is grammatical if *ng adobo ng babae* is interpreted as a possessive construction, with the meaning ‘Romeo cooked the woman’s adobo’.

Applicativized arguments, then, must apparently always undergo object shift; they cannot simply remain in their base-generated position. Positions of this kind, which can be occupied in the course of the derivation but cannot be a final landing site, are well attested in syntax, though theories vary as to why such positions exist (see Pearson 2001, Richards 2001 for some discussion). Pearson (2001) discusses a phenomenon in Malagasy that is similar to the Tagalog one, where applicativized arguments cannot stay in situ and are licensed only if they raise further in the derivation. Other phenomena of this type are found in French infinitives (Kayne 1989) and a certain subclass of English infinitives (including the ones selected by *wager*; Postal 1974, Pesetsky 1991).

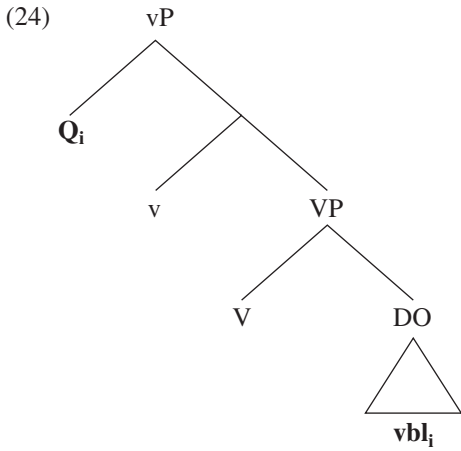
- (21) a. \*Je crois [Jean être le plus intelligent de tous].  
 I believe Jean be.INF the most intelligent of all  
 ‘I believe Jean to be the most intelligent of all.’  
 b. Quel garçon<sub>i</sub> crois-tu [t<sub>i</sub> être le plus intelligent de tous]?  
 which boy believe-you be.INF the most intelligent of all  
 ‘Which boy do you believe to be the most intelligent of all?’
- (22) a. \*John wagered Mary to have won the race.  
 b. Mary<sub>i</sub> was wagered t<sub>i</sub> to have won the race.  
 c. Mary<sub>i</sub>, who John wagered t<sub>i</sub> to have won the race . . .

It thus appears that, crosslinguistically, there are certain constructions in which it is ungrammatical *not* to move an argument and that some positions cannot be occupied by overt material at Spell-Out. Although the reasons for this restriction are unclear, its existence allows the Tagalog applicative facts to be recognized as part of this larger pattern.

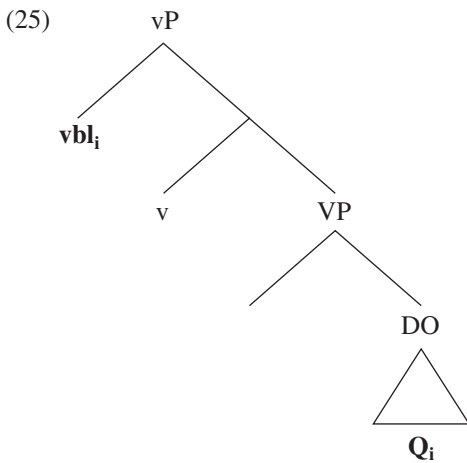
One of Rackowski’s (2002) arguments for these structures is based on the facts of pronominal-variable binding in Tagalog. Pronouns may be bound in Tagalog by quantifiers that c-command them; for instance, a quantificational external argument may bind a pronominal embedded in a nonsyntactic ‘subject’ direct object, while the reverse is not true (word order is irrelevant in all of the following examples; Tagalog scrambling does not affect quantifier-variable binding).

- (23) a. N-agma-mahal *ang bawat ama<sub>i</sub> ng kanyang<sub>i</sub> anak*.  
 NOM-ASP-love ANG every father CS POSS child  
 ‘Every *father<sub>i</sub>* loves his<sub>i</sub> child.’  
 b. \*N-agma-mahal *ang kanyang<sub>i</sub> ama ng bawat anak<sub>i</sub>*.  
 NOM-ASP-love ANG POSS father CS every child  
 ‘*Her<sub>i</sub> father* loves every child<sub>i</sub>.’  
 (Richards 1993)

In (23a), the external argument, or ‘thematic’ subject, is promoted to syntactic subject, as evidenced by the verbal agreement for nominative Case. The direct object does not shift, which means that the syntactic subject c-commands the direct object variable that it binds.



The opposite occurs in (23b), where the quantifier cannot bind the variable because it does not c-command the variable.



Crucially, these binding relations are not disrupted by promotion to syntactic subject status; (23a) is well formed, even if the direct object becomes the syntactic subject.

- (26) M-in-amahal- $\emptyset$  ng bawat ama<sub>i</sub> ang kanyang<sub>i</sub> anak.  
 -ASP-love-ACC CS every father ANG POSS child  
 ‘Every father<sub>i</sub> loves his<sub>i</sub> child.’

The contrast between (23b) and (26) is the interesting one. In both of these examples, a non-“subject” quantifier attempts to bind a pronoun embedded in the “subject,” yet binding fails in (23b) and succeeds in (26). Apparently binding relations of this kind can always succeed if the merged position of the quantifier c-commands that of the pronoun; the grammaticality difference

between (23b) and (26) therefore arises because the external argument asymmetrically c-commands the internal one.

With this in mind, we can consider pronominal-variable-binding relations between internal arguments. Rackowski (2002) discovered that the conditions on these relations reflect the structures in (19); a “subject” benefactive argument, which can only arise from the structure in (19a), may not be bound by a direct object.

- (27) \*I-b-in-antay ko ng bawat anak<sub>i</sub> ang kanyang<sub>i</sub> magulang.  
 OBL-ASP-watch CS.I CS every child ANG POSS parent  
 ‘I watched every child<sub>i</sub> for his<sub>i</sub> parents.’

A prepositional benefactive argument, by contrast, ought to have the structure in (19b) and is thus correctly predicted to be susceptible to binding by the direct object.

- (28) B-um-antay ako ng bawat anak<sub>i</sub> [para sa kanyang<sub>i</sub> magulang].  
 -NOM.ASP-watch ANG.I CS every child for DAT POSS parent  
 ‘I watched every child<sub>i</sub> for his<sub>i</sub> parents.’

Note that the ill-formedness of (27) crucially cannot be attributed directly to the fact that the benefactive argument is a “subject”; as (26) shows, “subjects” are susceptible to binding by non-“subjects.” The structures in (19), on the other hand, offer a straightforward explanation for the asymmetry: the direct object is merged in a position c-commanding the benefactive argument in (28), but not in (27).

### 3.3 Summary

In the past sections, we have argued that promotion to “subject” in Tagalog is syntactically akin to object shift in the Germanic languages. We have shown that Tagalog “subjects” have the specific reading associated with object-shifted arguments in Germanic, and that promotion to “subject” is constrained by considerations of locality that are identical to those in Germanic. The “subject” in Tagalog triggers agreement for Case on the verb, and this morphology is sensitive to the highest specifier of vP (which may be the first one created; see the discussion following the tree in (6)).

## 4 Tagalog, English, and the Syntax of Extraction

Knowing what we now know about the syntax of Case agreement in Tagalog, we can turn to the facts of *wh*-extraction. We will show that a number of English and Tagalog conditions on  $\bar{A}$ -movement can be made to follow from fairly basic assumptions.

### 4.1 Some Assumptions

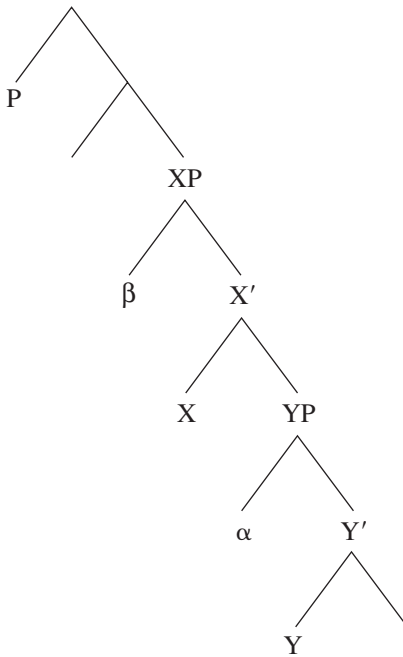
We will crucially assume, following much work on locality, that a probe must enter an Agree relation with (hereafter, Agree with) the closest available goal, where a potential “goal” is taken

to be anything that is capable of moving (following Chomsky (2000, 2001), we assume that all and only phases are in principle capable of moving) and that dominates the feature the probe is seeking. The definition of *closest* we will use is given in (29).

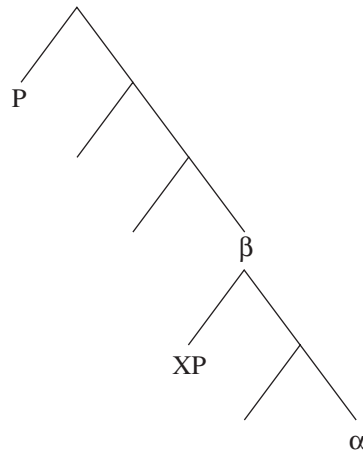
- (29) A goal  $\alpha$  is the closest one to a given probe if there is no distinct goal  $\beta$  such that for some X (X a head or maximal projection), X c-commands  $\alpha$  but does not c-command  $\beta$ .<sup>10</sup>

This definition allows us to capture the effects both of Shortest Attract and of Chomsky’s (1964) A-over-A Condition. This is demonstrated in trees (30a–b); in both,  $\beta$  is closer to the probe P than  $\alpha$  is, because there is some other element (X in (30a), and XP in (30b)) that c-commands  $\alpha$  but does not c-command  $\beta$ .

(30) a. *Shortest Attract*



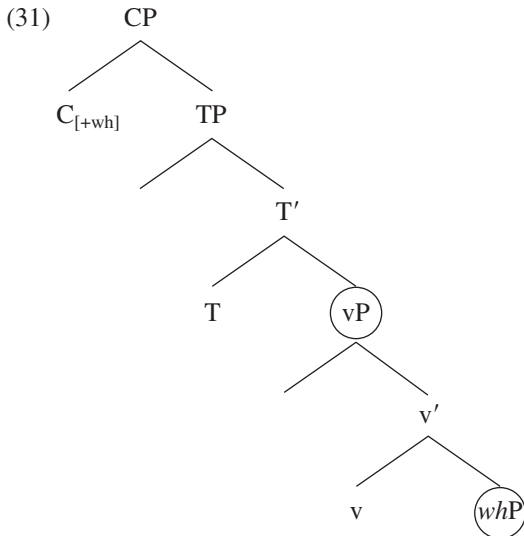
b. *A-over-A Condition*



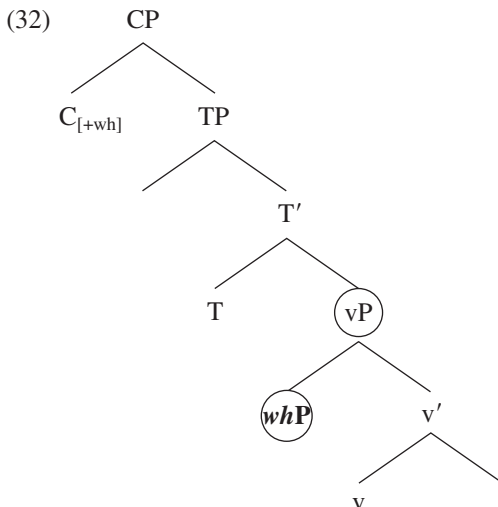
If we assume that phases are always in principle capable of moving, then we also derive the effects of the Phase Impenetrability Condition, as a special case of the A-over-A Condition. In a tree like (31), for example, the probe C cannot Agree with the *wh*P goal, because *v*P is a closer

<sup>10</sup> Equivalently, we could define the set of offending distinct goals  $\beta$  as those for which, for all X such that X c-commands  $\beta$ , X c-commands  $\alpha$ , and the reverse is not true.

potential goal that can move (since it is a phase) and dominates a *wh*-feature (namely, the *wh*-feature that is also dominated by the *wh*-phrase).

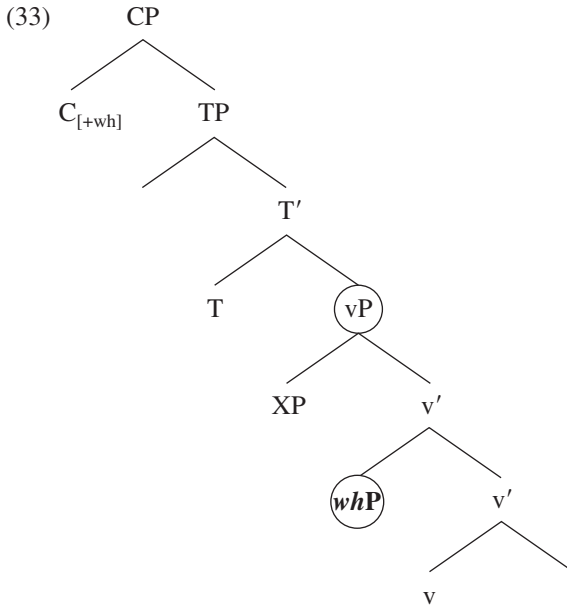


We do expect phrases in the highest specifier position of a phase to be accessible to Agree. In a tree like (32), for example, there are no nodes that c-command *whP* but not *vP* (assuming, as we did in the definition of closeness above, that nodes like *v'* are to be disregarded), and *whP* and *vP* are therefore equally close to higher probes.



This definition of locality also predicts that only the highest specifier of a phase will be able to escape the phase. We can illustrate this as in (33) by adding another specifier, *XP*, above *whP* in (32).





In (33), *whP* and *vP* are no longer equally close to higher probes, since there is now an *XP* that *c*-commands *whP* but not *vP*. We thus derive the result (which will be useful in section 4.4) that only the highest specifier of a phase can be extracted from the phase.<sup>11</sup>

We will also assume that once a probe *P* has entered an Agree relation with a goal *G*, *P* can ignore *G* for the rest of the derivation. It will be unimportant for our purposes why this is so (see Richards 1998, Hiraiwa 2001 for theories about this), but some version of this assumption seems to be needed to deal with the facts in (34), once the copy theory of movement is assumed.

- (34) a. C you gave what to whom  
 b. what C did you give what to whom

In the derivation of a multiple-*wh* question like the one in (34), the step in (34b) is somewhat problematic on standard assumptions; the copy of *what* is an *XP* bearing a *wh*-feature that is

<sup>11</sup> The effects of the definition in (29), then, can be summarized as follows. If  $\beta$  *c*-commands  $\alpha$ , then there will be some *X* (if only  $\beta$ ) that *c*-commands  $\alpha$  but not  $\beta$ , and  $\beta$  will therefore be closer to higher probes than  $\alpha$  is. If  $\beta$  dominates  $\alpha$ , then there are two cases to consider, one in which some *X* dominated by  $\beta$  *c*-commands  $\alpha$ , and one in which there is no such *X*. In the first case, *X* *c*-commands  $\alpha$  but not  $\beta$ , and  $\beta$  is therefore higher than  $\alpha$ , as desired. If there is no such *X* (that is, if  $\alpha$  is the highest specifier of  $\beta$ ), then there is no *X* *c*-commanding  $\alpha$  but not  $\beta$ , and there is also no *X* *c*-commanding  $\beta$  but not  $\alpha$ ; the two goals are therefore equally close to higher probes. There is a third potential situation in which  $\alpha$  and  $\beta$  are in neither a *c*-command nor a dominance relation; this will interact with the assumptions about Agree to be outlined in the next paragraph, so we will wait to discuss this situation in footnote 12.

closer to the probe than *whom*, yet it fails to interfere with Agree. We assume this has to do with the fact that C has already entered into an Agree relation with *what*, allowing C to ignore this chain for the rest of the derivation.<sup>12</sup>

Finally, we will make some assumptions about which heads are capable of entering into Agree relations. In particular, we will assume that *v* is responsible for checking Case on the direct object and can also have EPP-features that allow it to attract other active phrases to its edge, making them accessible for Agree by higher probes. We will make similar assumptions about interrogative C, which also has a feature that it needs to check (namely, [+wh]) and could in principle attract other goals as well, though this will play no role in the account. It will not be necessary in our account for declarative C to Agree with anything at all (in fact, it will be important that it does not).

The assumptions discussed above are summarized in (35).

- (35) a. A probe must Agree with the *closest* goal  $\alpha$  that *can move*.  
 b. A goal  $\alpha$  *can move* if it is a phase.  
 c. A goal  $\alpha$  is the *closest* one to a probe if there is no distinct goal  $\beta$  such that for some X (X a head or maximal projection), X c-commands  $\alpha$  but not  $\beta$ .  
 d. Once a probe P is related by Agree with a goal G, P can ignore G for the rest of the derivation (Richards 1998, Hiraiwa 2001).  
 e. *v* has a Case feature that is checked via Agree. It can also bear EPP-features that move active phrases to its edge.  
 f. [+wh] C has a [+wh] feature that is checked via Agree (and sometimes Move).

We will show in the next two sections that these assumptions, most of which are fairly widely held in some form, yield a version of Huang's (1982) Condition on Extraction Domain (CED) (see Ceplová 2001).

- (36) Only those CPs and DPs that Agree with a phase head on independent grounds (e.g., direct objects and complement clauses) are transparent for *wh*-extraction.

We will also show that the Tagalog facts follow straightforwardly, given the picture of Tagalog

<sup>12</sup> Now we can discuss the situation mentioned in footnote 11: what if neither  $\alpha$  nor  $\beta$  c-commands the other? Suppose  $\alpha$  is contained in an XP c-commanding  $\beta$  (depending on our assumptions about trees, it is conceivable that there could be trees with no such XP, but we will defer discussion of these for now). If XP is a phrase that can move, then the probe will have to Agree with XP first in order to be able to access  $\alpha$ . Then there are two cases to consider, again. If  $\alpha$  is the highest specifier of XP, then there are no nodes c-commanding  $\alpha$  but not  $\beta$ , and  $\alpha$  is highest again. If  $\alpha$  is not the highest specifier of XP, then there are phrases within XP (at least its highest specifier) that c-command  $\alpha$  but not  $\beta$ , and there are phrases (if only XP) that c-command  $\beta$  but not  $\alpha$ . Each of  $\alpha$  and  $\beta$  is therefore higher than the other, by our definition. It may be straightforward to modify our account to get the correct results for this case, depending on what they turn out to be; either probes must Agree with some appropriate goal such that no other appropriate goal is higher (by this definition,  $\alpha$  and  $\beta$  would both be inaccessible in this case, since each has another goal that is higher than itself), or they must Agree with some appropriate goal that is higher than all other appropriate goals (by this definition,  $\alpha$  and  $\beta$  would both be accessible to Agree). See Fitzpatrick 2002 for an argument that the second of these is the correct result.

syntax developed by Rackowski (2002); in fact, the Tagalog data will lend further support to our account of the English facts.

4.2 *English: Condition on Extraction Domain*


Let us first consider the formation of a well-formed long-distance *wh*-question in English.

(37)  $[_{CP}$  Who do you  $[_{vP}$  think  $[_{CP}$  that we should  $[_{vP}$  hire \_\_\_\_\_]]]?

The heads that participate in the derivation are the ones in (38); we will sketch the derivation as though movement begins once the tree has been completed, simply for ease of presentation.

(38)  $[C_{[+wh]} [v [C [v \textit{who}]]]]$

In the first relevant step in the derivation, (39), the *v* head of the embedded clause Agrees with *who*, and *who* moves to the specifier of *vP*, as is standardly assumed.

(39)  $[C_{[+wh]} [v [C [v \textit{who}]]]]$   


In the second step, (40), *v* of the matrix clause Agrees with the complement CP, just as it would with a direct object; for the time being, we will simply assume, contra much of the literature, that CPs and DPs have similar requirements with respect to Case. We will present evidence from Tagalog in the next section that this Agree relation does in fact exist; we ask readers who are skeptical about what kind of licensing relation could exist between *v* and CP to bear with us for now.<sup>13</sup>


(40)  $[C_{[+wh]} [v [C [\textit{who} \textit{v} \textit{who}]]]]$   


As pointed out in the last section, once a probe has entered an Agree relation with a particular goal, it can disregard that goal for future Agree relations. Matrix *v* can therefore now Agree with phrases dominated by CP, since it has already Agreed with CP. It could, for example, Agree with the embedded *vP*. It can also Agree with *who*, since *who* is in the specifier of the embedded *vP* and therefore, as also noted in the last section, not fully dominated by *vP*. *Who* and embedded *vP* are thus equally available to Agree with matrix *v*; *v* Agrees with *who*, which moves to Spec,*vP*.

(41)  $[C_{[+wh]} [v [C [\textit{who} \textit{v} \textit{who}]]]]$   


Finally, matrix C Agrees with *who*, causing it to move to its scope position.

<sup>13</sup> If the account developed here is on the right track, proposals like Stowell’s (1981) Case Resistance Principle and Pesetsky’s (1982) derivation of conditions on selection of CPs and DPs from Case-licensing properties will have to be rethought, since these proposals crucially depend on CPs’ lacking Case properties. For another potential approach to the Case Resistance Principle, see Richards 2003; and see Nathan 2004 for a reexamination of the selection facts.

$$(42) [C_{[+wh]} [who \ v \ [C \ [wh\theta \ v \ wh\theta]]]]$$


The long-distance *wh*-question in (37) can thus be derived successfully given our assumptions about how locality works. Note that the successive-cyclic movement path of the *wh*-phrase in our derivation is somewhat unorthodox; it stops in Spec,vP but not in Spec,CP. We return to this issue in section 4.4.1.

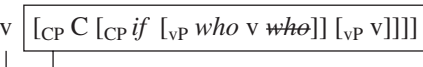
Let us now consider an ill-formed example.

$$(43) *[_{CP} \text{Who do you } [_{vP} \text{think } [_{CP} \text{that } [_{CP} \text{if we } [_{vP} \text{hire} \text{---}]], \text{we'll } [_{vP} \text{regret it}]]]]?)$$

The first two steps of this derivation are unproblematic, proceeding along lines familiar from the previous derivation. First, the *v* of the embedded adjunct clause will Agree with *who*, causing it to move to Spec,vP.

$$(44) [_{CP} \ C_{[+wh]} \ [_{vP} \ v \ [_{CP} \ C \ [_{CP} \ \text{if } [_{vP} \ v \ \text{who}]] \ [_{vP} \ v]]]]$$


The next relevant step is that matrix *v* Agrees with its complement CP, as before.

$$(45) [_{CP} \ C_{[+wh]} \ [_{vP} \ v \ [ \boxed{[_{CP} \ C \ [_{CP} \ \text{if } [_{vP} \ \text{who} \ v \ \text{wh}\theta]} \ [_{vP} \ v]]}]]]$$


Finally, the matrix *v* must attract a *wh*-phrase, in order for this *wh*-phrase to move to its edge. As before, *v* is entitled to ignore the complement CP, since it has already Agreed with it. However, even given this, the closest movable phrase that dominates a *wh*-feature is now the adjunct CP; general principles of locality therefore prevent attraction of *who*, which is dominated by this CP and therefore further away from the probe. We have no theory to offer of why English rejects phrases like *if we hire who* as possible *wh*-phrases, but whatever conditions on pied-piping rule this out will also doom the current derivation.<sup>14</sup>

The discussion thus far has concentrated on the distinction between adjuncts and internal arguments, but the theory extends fairly straightforwardly to ban extraction from subjects as well, as long as subjects, like adjuncts, never enter into an Agree relation with *v*. This is a fairly common belief about subjects, which are usually taken to begin the derivation in some vP-internal position (either the specifier of vP, or some lower position in the case of unaccusative or passive predicates), enter into an Agree relation with T, and move into the specifier of TP. Thus, *v* will

<sup>14</sup> There do in fact appear to be languages that exploit clausal pied-piping to circumvent CED violations.

(i) *Basque*  
 [Mikeli zer esan ondoren] joan zen etxetik?  
 Mikel-DAT what say after go AUX home-from  
 '[After saying what to Mikel] did he leave home?'  
 (Ortiz de Urbina 1990:198)

Thanks to Jeong-Me Yoon for pointing this out to us.

never be in an Agree relation with a subject and will therefore be unable to probe positions inside the subject; subjects will then be islands for extraction, as desired.<sup>15</sup>

The assumptions we made in the previous section, then, derive the effects of the CED. They do so on the basis of another assumption, however, which some might find questionable: that CPs and DPs behave alike with respect to attraction by *v*, in that complement CPs, but not adjunct or subject CPs, enter into checking relations with *v* to check Case or something like it. Of course, if *v* is going to Agree with any CPs at all, these are the ones we would expect it to Agree with. Still, we might prefer to find some kind of independent evidence for the Agree relations we are positing.

### 4.3 Tagalog

In previous sections, we argued that Tagalog is a language in which the Agree relations that *v* enters into have a morphological consequence. Recall from section 2 that Tagalog has verbal morphology that, we argued, signals the Case of the DP that has undergone movement to the edge of the *v*P phase. In (46), the Case agreement morphology is in boldface, and the DP this morphology agrees with is italicized.

- (46) a. **N**-agbigay *ang magsasaka* ng bulaklak sa kalabaw.  
 NOM.ASP-give ANG farmer CS flower DAT water.buffalo  
 ‘The farmer gave a flower to the water buffalo.’
- b. **I-b-in-igay** ng magsasaka *ang bulaklak* sa kalabaw.  
 OBL-ASP-give CS farmer ANG flower DAT water.buffalo  
 ‘A/The farmer gave the flower to the water buffalo.’
- c. **B-in-igy-an** ng magsasaka ng bulaklak *ang kalabaw*.  
 -ASP-give-DAT CS farmer CS flower ANG water.buffalo  
 ‘A/The farmer gave a/the flower to the water buffalo.’

The agreement morphology on the verb may agree either with a DP argument, as above, or with a CP argument. In (47), for example, the verb *sabi* ‘say’ bears either nominative morphology that agrees with its DP ‘subject’ or accusative agreement that agrees with its CP complement.

<sup>15</sup> A number of authors (see, e.g., Kitahara 1994, Takahashi 1994, Richards 2001, Stepanov 2001) have noted that while the ban on extraction from adjuncts seems to be crosslinguistically invariant, there are in fact languages that can extract out of subjects (e.g., Japanese; Takahashi 1994).

- (i) a. [[Mary ga \_\_\_\_ yonda no] ga akirakana yorimo] John wa takusan no hon o yonda.  
 Mary NOM read that NOM is.obvious than John TOP many GEN book ACC read  
 ‘John read more books than [that Mary read] was obvious.’
- b. \*[[Bill ga [Mary ga \_\_\_\_ yonda kara] odorcita yorimo] John wa takusan no hon o yonda.  
 Bill NOM Mary NOM read because was.surprised than John TOP many GEN book ACC read  
 ‘John read more books than Bill was surprised [because Mary read].’

On the account developed here, this could be handled by positing an Agree relation between *v* and the subject in such languages, after which *v* would be free to probe inside its own specifier and extract from it (see Richards 2004a for an argument that this kind of operation is available in principle).

- (47) a. **M**-agsa-sabi *ang kalabaw* na masarap ang bulaklak.  
 NOM-ASP-say ANG water.buffalo that delicious ANG flower  
 ‘The water buffalo will say that the flower is delicious.’  
 b. Sa-sabih-**in** ng kalabaw na masarap ang bulaklak.  
 ASP-say-ACC CS water.buffalo that delicious ANG flower  
 ‘A/The water buffalo will say that the flower is delicious.’

*Wh*-extraction in Tagalog imposes constraints on the kind of agreement morphology the verbs in the clause may bear, of a kind that the theory outlined in the previous section leads us to expect. Long-distance extraction in Tagalog always requires intervening verbs to Agree with the CP from which extraction takes place. This is shown for long-distance extraction of the adjunct *kailan* ‘when’ in (48)–(50).

- (48) a. Kailan [sa-sabih-**in** ng sundalo [na Ø-u-uwi ang pangulo e]]?  
 when ASP-say-ACC CS soldier that NOM-ASP-go.home ANG president  
 ‘When will the soldier say that the president will go home?’  
 b. \*Kailan [**m**-agsa-sabi *ang sundalo* [na Ø-u-uwi ang pangulo e]]?  
 when NOM-ASP-say ANG soldier that NOM-ASP-go.home ANG president  
 ‘When will the soldier say that the president would go home?’
- (49) a. Kailan [**i**-p-inangako ng sundalo [na Ø-u-uwi ang pangulo e]]?  
 when OBL-ASP-promise CS soldier that NOM-ASP-go.home ANG president  
 ‘When did the soldier promise that the president would go home?’  
 b. \*Kailan [**n**-angako *ang sundalo* [na Ø-u-uwi ang pangulo e]]?  
 when NOM.ASP-promise ANG soldier that NOM-ASP-go.home ANG president  
 ‘When did the soldier promise that the president would go home?’
- (50) a. Kailan [p-in-aniwala-**an** ng sundalo [na Ø-u-uwi ang pangulo e]]?  
 when -ASP-believe-DAT CS soldier that NOM-ASP-go.home ANG president  
 ‘When did the soldier believe that the president would go home?’  
 b. \*Kailan [**n**-aniwala *ang sundalo* [na Ø-u-uwi ang pangulo e]]?  
 when NOM.ASP-believe ANG soldier that NOM-ASP-go.home ANG president  
 ‘When did the soldier believe that the president would go home?’

The same constraint is shown to hold in cases of long-distance relativization in (51); here we have given only the well-formed examples, but choice of any other kind of agreement on the verbs would make the sentences ill formed.

- (51) a. ang kalabaw [na s-in-abi-Ø ng guro [na bi-bigy-**an** ng lalaki  
 ANG water.buffalo that -ASP-say-ACC CS teacher that ASP-give-DAT CS man  
*ng bulaklak e*]  
 CS flower  
 ‘the water buffalo that the teacher said that the man would give a flower to’

- b. ang kalabaw [na **i-p-inangako** ng guro [na **bi-bigy-an** ng lalaki  
 ANG water.buffalo that **OBL-ASP-promise** CS teacher that ASP-give-**DAT** CS man  
 ng bulaklak e]]  
 CS flower  
 ‘the water buffalo that the teacher promised *that the man would give a flower to*’
- c. ang kalabaw [na p-in-aniwala-**an** ng guro [na **bi-bigy-an** ng lalaki  
 ANG water.buffalo that -ASP-believe-**DAT** CS teacher that ASP-give-**DAT** CS man  
 ng bulaklak e]]  
 CS flower  
 ‘the water buffalo that the teacher believed *that the man would give a flower to*’

Note that the higher verb is demonstrably not agreeing with the extracted *wh*-phrase. This is perhaps clearest in (51), where the extracted operator bears dative Case but the higher verb takes whatever form is appropriate for agreement with the complement clause (accusative for *sabi* ‘say’, oblique for *pangako* ‘promise’, and dative for *paniwala* ‘believe’). This is not because the first two verbs lack a dative-agreeing form, as the following example shows:

- (52) P-in-angaku-**an** niya *ako* [na **bi-bigy-an** niya ng bulaklak ang  
 -ASP-promise-**DAT** CS.he ANG.me that ASP-give-**DAT** CS.he CS flower ANG  
 kalabaw].  
 water.buffalo  
 ‘He promised *me* that he will give a flower to the water buffalo.’

Extraction out of a complement clause therefore seems to require *v* to Agree with the complement clause. This, of course, is what the theory developed in the previous section predicted; in order for *v* to Agree with a *wh*-phrase in the complement clause, *v* must first Agree with the complement clause itself, thereby making it transparent and making the embedded *wh*-phrase accessible to Agree.

Next let us consider local extraction. Here there are two cases to look at: DP-extraction, shown in (53), and non-DP-extraction, shown in (54)–(55). There are two differences between the DP-extraction case and the non-DP-extraction case. One is that DP-extraction involves a cleft construction, while non-DP-extraction does not; we will not explore this difference here (though see Richards 2004b for some discussion). The other difference is that DP-extraction imposes restrictions on the verb of the clause; it must agree with the extracted DP, as (53) shows.

- (53) a. *Sino* [ang **b-in-igy-an** ng lalaki ng bulaklak \_\_\_\_]?  
 who ANG -ASP-give-**DAT** CS man CS flower  
 ‘Who did the man give the flower to?’
- b. \**Sino* [ang **i-b-in-igay** ng lalaki ang bulaklak \_\_\_\_]?  
 who ANG **OBL-ASP-give** CS man ANG flower  
 ‘Who did the man give *the flower* to?’

- c. \*Sino [ang **n-agbigay** *ang lalaki* ng bulaklak \_\_\_\_]?  
 who ANG NOM.ASP-give ANG man CS flower  
 ‘Who did *the man* give the flower to?’

No such restrictions are imposed by extraction of non-DPs, as (54)–(55) show; any form of the verb may be used in these cases. This is what we expect; extraction has to take place via the edge of vP, and this verbal agreement is agreement for Case, so Case-bearing extracted phrases will necessarily agree with the verb, while non-Case-bearing extracted phrases will not.

- (54) a. Kailan **b-in-igay-an** ng lalaki ng bulaklak *ang kalabaw*?  
 when -ASP-give-DAT CS man CS flower ANG water.buffalo  
 ‘When did the man give a flower *to the water buffalo*?’  
 b. Kailan **i-b-in-igay** ng lalaki *ang bulaklak* sa kalabaw?  
 when OBL-ASP-give CS man ANG flower DAT water.buffalo  
 ‘When did the man give *the flower* to the water buffalo?’  
 c. Kailan **n-agbigay** *ang lalaki* ng bulaklak sa kalabaw?  
 when NOM.ASP-give ANG man CS flower DAT water.buffalo  
 ‘When did *the man* give a flower to the water buffalo?’
- (55) a. Sa aling kalabaw **i-b-in-igay** ng lalaki *ang bulaklak*?  
 to which water.buffalo OBL-ASP-give CS man ANG flower  
 ‘To which water buffalo did the man give *the flower*?’  
 b. Sa aling kalabaw **n-agbigay** *ang lalaki* ng bulaklak?  
 to which water.buffalo NOM.ASP-give ANG man CS flower  
 ‘To which water buffalo did *the man* give the flower?’

Thus, Tagalog offers independent evidence for the theory that we offered of CED effects in English and other languages: in order for *wh*-extraction from a clause to proceed, the clause must first be a target of Agree by v. The CED distinguishes phrases that undergo this Agree relation from ones that do not, and the Tagalog facts involve a morphological reflex of this Agree relation.

#### 4.4 The Fine Structure of the vP Periphery

We have now shown evidence that Tagalog verbs agree with a class of DPs with properties that current theory associates with movement to or through the periphery of the vP. In particular, *wh*-moved DPs control agreement on the verb, and agreement on the verb is also sensitive to the specificity of the DPs in the clause in a way reminiscent of the patterns of object shift in languages like Icelandic. Since *wh*-movement and object shift are both frequently taken to involve movement to positions on the structural edge of vP, we have concluded that this Tagalog agreement diagnoses movement to these positions (or perhaps the Agree relations that drive such movement).

One issue we have not yet discussed is how these two types of movement to the edge of vP interact with each other. The facts of Icelandic indicate that object shift and *wh*-movement can proceed independently of each other. The examples in (56) show that the direct object of *skiladi*



'returned' cannot undergo object shift if the indirect object remains in situ; the direct object may shift past *ekki* 'not' if the indirect object does so as well, as in (56a), but the direct object cannot shift if the indirect object does not, as in (56b).

- (56) a. Ég skilaði bókasafninu bókinni ekki.  
 I returned library.the book.the not  
 'I didn't return the book to the library.'  
 b. \*Ég skilaði bókinni ekki bókasafninu.  
 I returned book.the not library.the

*Wh*-movement, on the other hand, is not subject to any such requirement; the direct object may be *wh*-extracted whether the indirect object undergoes object shift or not.

- (57) a. Hverju skilaðir-ðu bókasafninu ekki?  
 what returned-you library.the not  
 'What did you not return to the library?'  
 b. Hverju skilaðirðu ekki bókasafninu?

Thus, even though *wh*-movement and object shift both proceed via the edge of vP (a fact graphically represented in Tagalog's agreement morphology), they are clearly syntactically distinct; the direct object may *wh*-move, but may not undergo object shift, if the indirect object has not undergone object shift.

Let us consider what Tagalog sentences would correspond structurally with the Icelandic ones in (57). Here the interesting question is how Tagalog represents the sentence in (57a); when one argument has been object-shifted, and the other has undergone *wh*-movement, which controls agreement on the verb? In fact, agreement with an argument other than the *wh*-moved one is ruled out.

- (58) a. *Ano ang i-s-in-auli mo sa aklatan?*  
 what ANG OBL-ASP-return CS.you DAT library  
 'What did you return to the library?'  
 b. \**Ano ang p-in-agsauli-an mo ang aklatan?*  
 what ANG -ASP-return-DAT CS.you ANG library

We might take the ill-formedness of (58b) as evidence that when *wh*-movement and object shift cooccur in Tagalog, it is the *wh*-moved phrase that controls agreement on the verb. Of course, there are a host of other imaginable explanations for the ill-formedness of (58b); it could be, for instance, that Tagalog simply differs from Icelandic in only allowing a single DP to undergo movement to the edge of vP, so that sentences with *wh*-movement obligatorily lack object shift.

There is some independent evidence from Tagalog, however, that *wh*-moved phrases can control agreement on the verb even when another DP undergoes object shift. We noted in section 3 that in simple transitive sentences, agreement is entirely determined by the specificity of the direct object; if the direct object is nonspecific, it fails to shift and the external argument controls agreement on the verb, while specific direct objects take over verbal agreement.

- (59) a. **N**-agluto      *ang lalaki* ng adobo.  
 NOM.ASP-COOK ANG man CS adobo  
 ‘The man cooked adobo.’  
 b. Ni-luto- $\emptyset$       ng lalaki *ang adobo*.  
 ASP-COOK-ACC CS man ANG adobo  
 ‘A/The man cooked *the adobo*.’

In fact, there is an exception to the generalization that nominative agreement (as in (59a)) always correlates with nonspecific direct objects; the correlation breaks down when the “subject” is *wh*-extracted (Adams and Manaster-Ramer 1988, Voskuil 1993), as in (60).

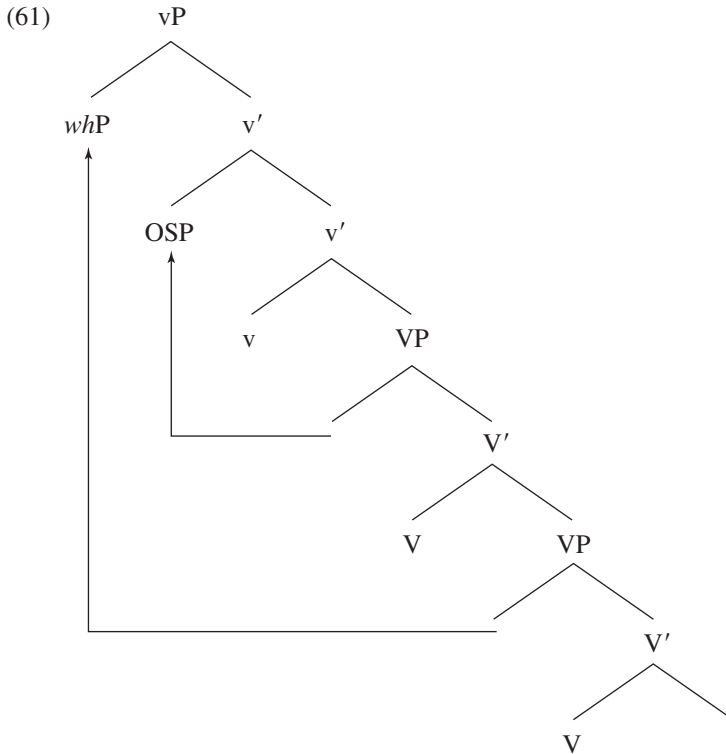
- (60) *Sino ang n*-agluto      ng adobo?  
 who ANG NOM.ASP-COOK CS adobo  
 ‘Who cooked (the) adobo?’

The direct object of (60), unlike the direct object of (59a), may be either specific or nonspecific. The difference receives a natural account if we assume that Tagalog verbs agree preferentially with *wh*-phrases; the direct object in (59a) cannot undergo object shift (since if it did, it would trigger the verb morphology in (59b)). Object shift in (60), on the other hand, has no effect on the morphology of the verb, which is obligatorily controlled by the *wh*-phrase; the ambiguity of (60), on this account, indicates that object shift of the direct object may either occur or not, with no morphological consequences.<sup>16</sup>

The Icelandic and Tagalog facts are consistent with a theory in which vP has a feature that uniquely picks out *wh*-phrases (this is why Icelandic *wh*-phrases may move past higher internal arguments that do not themselves undergo object shift). This feature moves the *wh*-phrase to a position above DPs that undergo object shift (or perhaps simply Agrees with them before agreement with the object-shifted DP takes place; either would explain why *wh*-moved DPs always trigger verbal agreement in Tagalog). This is schematically indicated in (61) (where *whP* indicates the *wh*-phrase and *OSP* the phrase undergoing object shift).<sup>17</sup>

<sup>16</sup> In section 3, we discussed another case in which DPs are ambiguous with respect to specificity; these were the DPs that cannot undergo object shift and do not control agreement on the verb. The case in (60) could be subsumed under this rubric if we could establish that the direct object was incapable of undergoing object shift; for instance, we could claim that object shift would prevent *wh*-extraction of the subject. There are at least two reasons why we reject this move, at least for now. One is that *wh*-movement in Icelandic is clearly insensitive to the presence or absence of object shift, as (57) shows, and thus far the parallel between Tagalog and Icelandic has proven reliable as far as it can be tested. The other is that the case in (60) lacks the computationally tractable properties discussed in footnote 7. To determine that the object in (60) cannot shift, on the account being rejected here, we would have to consider the effects of object shift, not just on the object itself, but on the subject *wh*-phrase. As we observed in footnote 7, the other ambiguous examples do not require this kind of computation; in those cases, we only needed to consider the structural relations between the DP in question and the v probe.

<sup>17</sup> See Cozier, to appear, for a similar tree for vP, motivated on independent grounds.



We might be able to relate the fact that the movements in (61) are triggered by distinct features to the fact that the resulting movement paths seem to be able to nest; this is the conclusion drawn by McGinnis (1998), Rackowski (2002), and Doggett (2004), among others.

The conclusions we have drawn are necessarily tentative, and more work will be needed to confirm them, but the account sketched here seems consistent with our other assumptions. It is perhaps worth emphasizing that the accounts developed in the previous two sections of the CED and the conditions on long-distance extraction in Tagalog are consistent with the approach outlined here. The accounts of long-distance *wh*-movement developed above depend on an Agree relation between the feature responsible for *wh*-movement out of a clause and the clause from which extraction takes place. The identity of this feature is irrelevant to the success of the account; whatever the feature on *v* is that drives *wh*-movement out of an embedded clause, it will be compelled to Agree first with the embedded clause (the closest movable XP dominating the *wh*-feature) and later with the *wh*-phrase itself.

#### 4.5 Successive Cyclicity and Islandhood

The account developed above of conditions on extraction contains some unfamiliar elements. In the following sections, we will try to show that the empirical coverage of existing theories of

locality has not been damaged by our proposals. In particular, we will concentrate on the nature of successive-cyclic movement and on existing accounts of islands.

*4.5.1 Successive Cyclicity* We have posited a comparatively unorthodox movement path for *wh*-phrases: they move successive-cyclically through specifiers of *vP*, rather than of *CP*. The account therefore forces us to rethink the nature of the evidence for successive-cyclic *wh*-movement. A full review of the evidence is beyond the scope of this article, but in this section we will consider a few of the relevant phenomena.

In many cases, the task is comparatively straightforward. Consider, for instance, binding facts like those in (62), which are sometimes taken to show that *wh*-movement stops in intermediate Spec,CP positions.

(62) [Which picture of himself<sub>i/j/k</sub>] does John<sub>i</sub> think [that Bill<sub>j</sub> said [that Fred<sub>k</sub> should buy]]?

What examples like (62) seem to show is that the *wh*-phrase *which picture of himself* occupies intermediate positions that are comparatively close to the subjects of the various clauses, allowing locality conditions on anaphor binding to be satisfied; such examples are silent, however, on the question of whether these positions are specifiers of *CP* or of *vP*.<sup>18</sup>

Successive-cyclic *wh*-movement is also taken to be responsible for the morphological behavior of complementizers in languages like Irish (McCloskey 1990:207).

(63) an rud [a shíl mé a dúirt tú a dhéanfá]  
 the thing C<sub>wh</sub> thought I C<sub>wh</sub> said you C<sub>wh</sub> do.COND.2SG  
 ‘the thing that I thought you said you would do’

The use of the complementizer *aL* in the embedded clauses of (63) has been argued (by McCloskey, among others) to indicate the progress of a successive-cyclically moving relative operator. In the account developed here, this morphology will have to be taken to indicate, not that the complementizers in question have hosted this operator in their specifiers, but that they have entered Agree relations with *v* heads that also Agree with a relative operator. This is essentially Chomsky’s (2001) proposal about agreement of participles with DPs for Case in languages like Icelandic; such agreement is triggered, not by the DP itself (which does not yet have a valued Case feature at the point in the derivation at which it Agrees with the participle), but by a higher head that Agrees with the DP.

Another potential challenge for our approach comes from the phenomenon of partial *wh*-movement (or “scope marking”), exemplified in (64) for certain dialects of German, in which *wh*-phrases seem to be able to stop in intermediate landing sites (which show every sign of being specifiers of *CP*).

<sup>18</sup> On this account, examples like (i) must be taken as telling us something about the internal structure of the verb phrase; there will have to be an intermediate position for the *wh*-phrase that is sufficiently local to *John* for anaphor binding to take place.

(i) [Which picture of himself<sub>i</sub>] did Mary tell John<sub>i</sub> [that she had bought]?

- (64) Was glaubst du [mit wem Maria gesprochen hat]?  
 what believe you with whom Maria spoken has  
 ‘Who do you think Maria has spoken with?’

On this theory, partial *wh*-movement would have to be analyzed in terms of the indirect dependency approach (Dayal 1994, 2000), rather than the direct dependency approach (Van Riemsdijk 1983, McDaniel 1989). On an indirect dependency approach, the *wh*-phrase *mit wem* ‘with whom’ in (64) is in its scope position, rather than occupying an intermediate landing site, and our assumptions about the nature of the intermediate landing sites for *wh*-movement can therefore be maintained.<sup>19</sup>

Du Plessis (1977) offers another classic argument for successive-cyclic *wh*-movement through Spec,CP, based on data about preposition stranding in Afrikaans.

- (65) a. *Wat* dink julle [dink die bure [stry ons *oor*]]?  
 what think you think the neighbors argue we *about*  
 ‘What do you think the neighbors think we argue about?’  
 b. *Wat* dink julle [dink die bure [*oor* stry ons]]?  
 what think you think the neighbors *about* argue we

In (65b), on Du Plessis’s account, the preposition *oor* ‘about’ has been stranded in an intermediate landing site for successive-cyclic *wh*-movement; he proposes that this position is an initial position in S, or, in more recent terminology, Spec,CP.

Afrikaans speakers we have talked with agree that (66) is worse than (65b).

- (66) \**Wat* dink julle [*oor* dink die bure [stry ons]]?  
 what think you *about* think the neighbors argue we

Opinions vary on how bad (66) is; no one seems to find it very good, and some find it completely uninterpretable. On Du Plessis’s account of (65b), we ought to expect prepositions to be able to occur in any of the intermediate landing sites for *wh*-movement. If we take (66) to be ill formed, then this appears not to be the case; stranded prepositions may not be separated from their starting points by clause boundaries. Developing a complete account of the Afrikaans facts is beyond the scope of this article, but the contrast between (65b) and (66) is consistent with a theory in which the preposition is participating (either independently or pied-piped as part of the *wh*-phrase) in some type of clause-bound movement, perhaps driven by the forces that yield embedded verb-second in Afrikaans. We might conclude, then, that the behavior of these Afrikaans prepositions has to do with the nature of embedded verb-second in Afrikaans, rather than with successive-cyclic *wh*-movement per se. On this account, again, we avoid having to posit Spec,CP as an intermediate landing site for *wh*-movement. Whether such alternative accounts can be constructed for all of the relevant cases remains to be seen.

<sup>19</sup> Thanks to Robert Frank for raising this problem, and to Benjamin Bruening for solving it.


4.5.2 *Other Islands* The approach developed above yields a version of the CED that follows from general conditions on locality. These conditions have been used in previous work primarily to account for phenomena involving a potential goal that is c-commanded by another potential goal (namely, *wh*-island effects and Superiority effects, the classic cases for Rizzi's (1990) Relativized Minimality). We have tried to provide a natural extension for these conditions to structures in which a potential goal is dominated by another potential goal, and we have developed an account both of CED effects and of the conditions on Tagalog extraction. It is worth verifying, however, that the proposals we have made here do not harm the previously existing accounts of locality effects.

Consider the derivation of a *wh*-island violation like the one in (67).

(67) \*What are you wondering [why John bought \_\_\_\_\_]?

The derivation begins with movement of *what* into the specifier of the embedded vP.

(68) [C [v [why C [what v ~~what~~]]]]



Once the v of the matrix clause has been introduced, it Agrees with its complement clause; as we have seen, this Agree relation renders v capable of ignoring its complement clause for purposes of locality.

(69) [C [v [why C [what v ~~what~~]]]]



v may now Agree with the closest potential goal dominating a *wh*-feature. In fact, there are two potential goals—namely, *why* and *what*—and *why* is closer to v than *what* is (in terms of the definition of locality given in (29), there are heads and phrases c-commanding *what* but not *why*). v is not already in an Agree relation with *why*, and it is therefore unable to disregard the presence of *why* for purposes of locality. *Wh*-movement of *what* past *why* is therefore blocked, as desired. The reasoning of previous approaches to this problem is unchanged in the theory developed here; Agree between v and its complement CP renders it possible in principle for v to Agree with a *wh*-phrase inside CP, but this must still be the highest available *wh*-phrase.

The difference between CED effects and *wh*-island effects, on this account, is simply a difference between domination and c-command. On the present account, CED effects follow from the fact that a CP dominating a *wh*-phrase must also dominate the *wh*-feature in the *wh*-phrase itself, and the dominating CP is therefore always a potentially closer goal than the *wh*-phrase; as a result, extraction is only possible when the potentially offending CP enters an Agree relation with the probe for *wh*-movement. *Wh*-islands, by contrast, involve a goal that is separated from its probe by a c-commanding (hence, closer) goal, and since the probe is not in an Agree relation with this c-commanding goal, a locality violation is incurred. *Wh*-movement past c-commanding non-*wh*-phrases, of course, is unaffected by our account, since the non-*wh*-phrases do not dominate *wh*-features and therefore cannot interfere.

4.5.3 *Bridge Verbs* Since the approach we have developed to extraction out of clauses makes crucial use of the relation between the embedded CP and functional material immediately surrounding the verb, we would seem to be in a good position to deal with the contrast between bridge verbs and nonbridge verbs.<sup>20</sup> For example, the theory developed here might lead us to hope that Tagalog nonbridge verbs would show signs of being unable to Agree with their clausal complements.

This appears not to be true, however. The bridge/nonbridge contrast is exemplified for Tagalog in (70).

- (70) a. *Bakit s-in-abi-Ø ng pangulo [na in-atake-Ø niya ang bansang iyon]?*  
 why -ASP-say-ACC CS president that ASP-attack-ACC CS.he ANG country that  
 ‘Why did the president say that he attacked that country?’  
 (*matrix or embedded reading*)
- b. *Bakit k-in-aila-Ø ng pangulo [na in-atake-Ø niya ang bansang iyon]?*  
 why -ASP-deny-ACC CS president that ASP-attack-ACC CS.he ANG country that  
 ‘Why did the president deny that he attacked that country?’  
 (*only matrix reading*)

In Tagalog, as in English, adverbial *wh*-phrases like *bakit* ‘why’ may be extracted from the complement clause only if the main verb is a bridge verb like *sabi* ‘say’, and not if the main verb is a nonbridge verb like *kaila* ‘deny’. (70b), then, only has a reading in which the president has denied that he attacked that country at all, and we want to know the reason for his denial. Both of the matrix verbs in (70), however, agree with their complement clause; in fact, they happen to both use the same morphology to agree with it. An account in which nonbridge verbs simply fail to agree with their complements, in other words, would appear to be untenable.

In fact, this is probably desirable. In the approach developed here, to say that the complement clause of a nonbridge verb does not Agree with the matrix *v* would be to assimilate such clauses to adjuncts and subjects, which also fail to Agree with any higher phase heads. But it seems clear that the behavior of these two types of islands is not the same; adjunct clauses are strong islands, ruling out any kind of *wh*-extraction out of them, while complements of nonbridge verbs are weak islands, permitting at least some types of *wh*-extraction.

- (71) a. \*What was she angry [after he bought \_\_\_\_]?  
 b. What did he deny [that he had bought \_\_\_\_]?

A more fruitful approach to the problem of bridge verbs might start from an observation made by Hegarty (1990), who notes that nonbridge verbs seem to differ from bridge verbs in being able to take DP complements denoting propositions (examples adapted from Hegarty 1990:105–106).<sup>21</sup>

<sup>20</sup> Thanks to an anonymous reviewer for encouraging us to investigate this.

<sup>21</sup> Hegarty argues, following Cattell (1978), that it is nonbridge verbs and not factive verbs that crucially have this property, since it is found in nonbridge, nonfactive verbs like *accept* and *emphasize*. Manner-of-speaking verbs (e.g.,

- (72) a. \*They believe/say [his departing].  
 b. They admit/deny/announced [his departing].

We might take this as evidence that what distinguishes nonbridge verbs is not the absence of any Agree relation between the associated *v* and the complement of the verb, but a particular type of Agree relation that is responsible for the capacity to license DP complements. We might imagine, for example, that the *v* associated with a nonbridge verb can Agree for a  $\phi$ -feature that is associated with DPs (and possibly also with CPs).

On the approach developed here, features on *v* that participate in one Agree relation are allowed to ignore the goal with which they Agree when they are acting as probes for other goals; this is the observation encoded in Richards's (1998) Principle of Minimal Compliance and Hiraiwa's (2001) Multiple Agree. If the features on the *v* associated with a nonbridge verb have some kind of privileged association with DP, then we might expect, on our theory, that these features will be able to go on to attract DP *wh*-phrases out of the complement clause, but not non-DP *wh*-phrases. This covers the relevant data moderately well.

- (73) a. What did they deny [that they bought \_\_\_\_]?  
 b. \*When did they deny [that they left \_\_\_\_]?  
 c. \*Why did they deny [that they left \_\_\_\_]?  
 d. \*Where did they deny [that they went \_\_\_\_]?  
 e. ?On which table did they deny [that they put the book \_\_\_\_]?

The remaining potentially problematic cases are those like (73e), where argumental non-DPs are extracted. Such examples are predicted by our theory to be ill formed (and, in fact, to us they do not sound as good as cases of DP-extraction), though classic Government-Binding approaches to island phenomena would claim that they pattern with other arguments.

Many questions remain; the status of the different types of Agree involved with bridge and nonbridge verbs is still quite murky, and if examples like (73e) are to be regarded as well formed, more work needs to be done to understand why. We will have to leave these questions for future work, noting only that the account developed here offers the hope of a logical connection between the data in (72) and those in (73).

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*whisper*, *shout*) sit somewhat uneasily in this typology, since they seem to be nonbridge verbs but do not always allow DP objects representing propositions.

- (i) \*Why did they shout [that he had left \_\_\_\_]?  
 (ii) They shouted their defiance/\*Bill's departure.

One possibility (suggested by Pesetsky (1995) in a different context) is that manner-of-speaking verbs involve verbalization of a nominal base (as Pesetsky points out, many of these verbs, like *whisper* and *shout*, have homophonous nouns in English). We will be suggesting shortly that nonbridge verbs have the properties they do because of some kind of particularly nominal features associated with them. Pesetsky's observation certainly makes it reasonable to hope that manner-of-speaking verbs can be grouped under this heading, but making these ideas precise will require much more work than we can do here.



## 5 Conclusion

In this article, we have shown that Tagalog provides unique evidence for the phase-based theory of movement. The theory presented here accounts for the Tagalog morphological and specificity requirements on extraction, and also offers a new way of deriving Huang's (1982) CED. Using general principles of locality, along with previously established generalizations about the nature of syntactic relations between a single probe and multiple goals, we are led to a new expectation about the nature of successive-cyclic *wh*-movement: probes along the path of movement ought to Agree, not just with the moving *wh*-phrase, but with the clauses out of which extraction takes place. We have shown two types of evidence for this conclusion. First, only those clauses with which *v* might be expected to be able to Agree are transparent for extraction; this is the CED. Second, in languages like Tagalog, we have argued that entering into an Agree relation with *v* has overt morphological consequences, and we have shown that in cases of long-distance *wh*-extraction, the morphology signaling this Agree relation must be controlled by the clause from which *wh*-extraction takes place.

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*Department of Linguistics and Philosophy*

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MIT

Cambridge, Massachusetts 02139

asrackow@mit.edu

norvin@mit.edu