

# On the control/raising ambiguity with aspectual verbs: a structural account

Shin Fukuda

*University of California, San Diego*

## 1. Introduction\*

Since Perlmutter (1968, 1970) argued that English aspectual verbs are ambiguous between control and raising<sup>1</sup>, the phenomenon has been argued or assumed to exist in a number of other languages, such as French (Lamiroy 1987, Ruwet 1991), German (Wurmbrand 2001), Greek (Alexiadou & Anagnostopoulou 1999), Hebrew (Landau 2003), Italian (Rizzi 1982, Burzio 1986), Japanese (Shibatani 1973, 1978, Kuno 1987, Nishigauchi 1993, Kageyama 1993, 1999, Matsumoto 1996, Koizumi 1998), and Spanish (Schroten 1986, Moore 1996), suggesting that it is common cross-linguistically. This paper takes up the issue of how the control/raising ambiguity with aspectual verbs should be accounted for. Two hypotheses are considered: the *lexical ambiguity* hypothesis and the *structural ambiguity* hypothesis. The *lexical ambiguity* hypothesis derives the differences between control and raising instances of aspectual verbs from their lexical specifications, i.e. selectional restrictions. The *structural ambiguity* hypothesis, on the other hand, claims that aspectual verbs may occupy different syntactic positions in a clause. The same aspectual verb is interpreted differently in different positions, creating the control/raising ambiguity. Perlmutter's influential work exemplifies the *lexical ambiguity hypothesis*, and a brief review of some recent analyses of control and raising also reveals that they take the lexical distinction of control and raising as a starting assumption. Under such an assumption, the control/raising ambiguity can only be lexical. In this study, I present arguments for the *structural ambiguity* hypothesis.

In what follows, I first briefly review Perlmutter (1968, 1970), in which it is argued that aspectual verbs are ambiguous between control and raising. I suggest that while the argument for the raising analysis is solid, the arguments supporting the control analysis of aspectual verbs are less so. As an alternative

---

\* I would like to thank Peter Jenks and Laura Kertz for proofreading an earlier draft of this paper and providing me with valuable comments. Usual disclaimers apply. The work on this project was supported in part by NSF grants BCS-0131993 and BCS-0131946.

1 Perlmutter (1968, 1970) also discuss other ambiguous verbs, such as *threaten*, *promise*, and modals. This study focuses on aspectual verbs and extends its scope to *want*-type verbs, but it makes no claim about other verbs that also show the control/raising ambiguity. For recent analyses of modals and the control/raising ambiguity, see Wurmbrand (1999) and Bulter (2003).

hypothesis to consider, I introduce the *structural ambiguity hypothesis*. In Section 3, I review three recent analyses of control and raising. Although there are important differences among them, they all share the basic assumption that the control/raising distinction is due to differences in selectional restrictions that the lexical items impose. Under such an assumption, the *lexical ambiguity hypothesis* is the only available option. In Section 4, I present evidence for the *structural ambiguity hypothesis* from studies concerning aspectual verbs in languages from four distinct families, German (Wurmbrand 2001), Japanese (Fukuda 2006), Romance languages (Cinque 2003), and Basque (Arregi & Molina-Azaola 2004). These data strongly suggest that across languages aspectual verbs can appear in two different syntactic positions, either below or above  $vP$ , or the projection with which an external argument is introduced (Kratzer 1994, 1996, Chomsky 1995). Given these findings, I argue that it is the aspectual verbs' position with respect to  $vP$  which creates the control/raising ambiguity. When an aspectual verb appears in a position that is lower than  $vP$ , an external argument takes scope over the aspectual verb. Thus, it is interpreted as control. When an aspectual verb appears in a position that is higher than  $vP$ , on the other hand, it is the aspectual verb that takes scope over an entire  $vP$ , including the external argument. Thus, it is interpreted as raising. In section 5, I extend the scope of this study to include a discussion of *want*-type verbs in Indonesian, as analyzed in Polinsky & Potsdam (2006). Polinsky & Potsdam argue that the Indonesian *want*-type verbs must be raising in at least certain cases where they allow a rather peculiar interpretation. Although they assume that there are also control counterparts of the *want*-type verbs, I argue that applying the proposed analysis to the *want*-type verbs does away with the need for stipulating two distinct lexical entries for these verbs. Section 6 concludes the paper.

## **2. The two verbs *begin* (Perlmutter 1968, 1970)**

In this section, I first briefly review the arguments for the control/raising ambiguity presented in Perlmutter (1968, 1970). Following that, I review past literature and discuss new evidence to suggest that the arguments for the control analysis of aspectual verbs are not as solid as those for the raising analysis. Given the questionable status of the claim that aspectual verbs are lexically ambiguous between control and raising, I introduce an alternative hypothesis, the *structural ambiguity hypothesis*.

## 2.1. Arguments that aspectual verbs are lexically ambiguous

In his dissertation (Perlmutter 1968) and the influential paper, ‘The two verbs *begin*’ (Perlmutter 1970), Perlmutter argues that English aspectual verbs, such as *begin*, are ambiguous between control and raising.<sup>2</sup>

First, Perlmutter shows that *begin* can have a non-thematic subject, indicative of raising. Examples below show that *begin* allows sentential subjects and expletive subjects (1), exhibits active/passive synonymy (2), and permits idiom chunks to maintain their idiomatic meanings (3).

- (1) a. That Bill was promoted began to annoy John.  
b. It began to rain.  
c. There began to be commotion.
- (2) a. The noise began to annoy Joe.  
b. Joe began to be annoyed by the noise.
- (3) a. Heed began to be paid to urban problems.  
b. Headway began to be made toward a solution.

He then presents evidence that the same verb behaving as a control verb. First, *begin* is compatible with the agentive nominalization with *-er*, unlike typical raising verbs such as *seem* and *happen*.

- (4) a. Peter is a beginner.  
b. \*Peter is a seemer.

Also, *begin* can take an NP object, which can undergo passivization.

- (5) a. Sam began the job.  
b. The job was begun by Sam.

Moreover, *begin* can be embedded under a control verb, either subject control (6a) or object control (6b).

- (6) a. I tried to begin to work.  
b. I forced Tom to begin work.

Furthermore, he claims that *begin* is compatible with imperative formation, suggesting that it selects an animate subject (7).

- (7) Begin to work.

Another diagnostic that Perlmutter uses is *do so* anaphor. Assuming that verbs that take abstract subjects cannot be replaced with this anaphor, he shows that

---

2 In the terminology and classification that Perlmutter used, raising verbs are intransitive verbs that take a clausal complement and control verbs are transitive verbs which require an identity between the subject and the subject of the complement, triggering Equi(valent) NP deletion.

*do so* anaphor can replace *begin* when its subject is animate (8a), but cannot when *begin*'s subject is inanimate, as in cases of raising (8b).

- (8) a. Warren tried to begin to work and Jerry tried to do so too.  
 b. \*Oil began to gush from the well and water did so too.

## 2.2. Arguments against the control analysis of aspectual verbs

Although Perlmutter's arguments for analyzing *begin* as a raising verb remain virtually unchallenged<sup>3</sup>, his arguments for the control analysis of *begin* has been challenged by subsequent studies, most notably by Newmeyer (1975).

Newmeyer (1975) focuses in particular on the arguments that *begin* can be embedded under a control verb, as in (6). Despite Perlmutter's assumption that *begin* must select an animate subject in this environment in order to trigger Equi-NP deletion, Newmeyer argues that aspectual verbs are transparent in terms of selectional restrictions, even in environments like (6) (Newmeyer 1975:33-34). The example Newmeyer uses to illustrate this point involves three verbs, *remember*, *keep*, and *forget*. First, (9a-c) below shows that *remember* can embed *keep* (9a), and *keep* can embed *forget* (9b), but *remember* cannot embed *forget* (9c).

- (9) a. I remembered to keep working. (remember > keep)  
 b. I kept forgetting what my mother told me. (keep > forget)  
 c. \*I remember to forget what mother told me. (\*remember > forget)

Given the assumption that selectional restrictions are local, one would expect from (9a-c) that the combination of the three verbs, 'remember > keep > forget', would be grammatical. However, that is not the case.

- (10) \*I remembered to keep forgetting what my mother told me.

Instead, (10) shows that the selectional restriction conflict between *remember* and *forget* that we witnessed in (9c) still has its effects in (10). Based on (10), Newmeyer concludes that *keep* is transparent with respect to selectional restrictions, even though it is embedded under a control verb, *remember*.<sup>4</sup>

Newmeyer also claims that the example with *do so* anaphor in (8) does not necessarily show the control/raising contrast, as definiteness of the arguments appears to affect the grammaticality (Newmeyer 1975:31, fn. 7).

3 For instance, Newmeyer (1975) describes Perlmutter's arguments for the raising analysis of *begin* 'impeccable'. (Newmeyer 1975:27).

4 Rochette (1999) points out that the assumptions behind (6) do not carry over under the current analyses of control. Under the PRO analysis of control, for instance, (6a) can be analyzed as involving raising of PRO from the subject of the most deeply embedded complement to the subject of the complement headed by *begin*, where it is controlled by the matrix subject.

(11) **The** oil stopped gushing from the wall and **the** water did so too.

In addition to Newmeyer's arguments against the control analysis of *begin*, I argue that the value of the *-er* nominalization as a support for *begin* selecting an agentive subject (4) is also questionable. First, the most salient interpretation of the *-er* form of *begin*, *beginner*, appears to be a person who is inexperienced or novice, and not a person who begins. In fact, it appears the latter interpretation is not available to some speakers. Second, the *-er* nominalization fails to classify *continue* and *keep* as control verbs, since they do not undergo the nominalization.

However, at least two of Perlmutter's arguments for the control analysis (or non-raising analysis) of *begin* still hold. The fact that *begin* undergoes imperative formation (7) suggests that *begin* must be able to select an animate subject.<sup>5</sup> Also, the fact that aspectual verbs take an NP object (5) makes it difficult to argue that *begin* is *always* a raising verb. Cases of aspectual verbs taking a nominal object have been analyzed differently, for example the *concealed complement* analyses,<sup>6</sup> which assume that such instances involve an invisible clausal complement, and a process called *complement coercion*, a non-syntactic process that "converts the entity-donation object into an event description" and satisfies the selectional restrictions of aspectual verbs which otherwise require an event-denoting clausal complement (Pylkkänen & McElree, to appear).<sup>7</sup> As Perlmutter points out, the *concealed complement* analysis would have difficulties explaining why the NP object passivizes (5b), since an object of a clausal complement would not (12b). (Perlmutter 1970:fn. 11)

- (12) a. Sam began to make the table.  
b. \*The table was begun to make.

On the other hand, *complement coercion* is a non-syntactic process in which the hearer accommodates by thinking up a reasonable eventive interpretation from a given NP object. As such, the assumed syntax is that of the regular transitive structure, where an aspectual verb selects a subject and an object. Thus, the raising analysis appears to be inappropriate for (5).<sup>8</sup> However, (5) crucially does

---

5 Rochette (1999) argues that imperative formation does not necessarily show the control/raising contrast, suggesting that the well-formedness of imperative formation is constrained by the aspectual nature of the verb. For instance, being a stative verb prevents *seem* from undergoing imperative formation (Rochette 1999:149). However, Rochette's argument only shows that a verb may fail to undergo imperative formation even when it selects an animate subject. This does not refute Perlmutter's argument that the fact that *begin* is compatible with imperative formation suggests that it must be capable of selecting an animate subject.

6 A similar analysis has been proposed for *want* (c.f. den Dikken et al. 1996).

7 Pylkkänen & McElree (to appear) also discuss processing studies that support the coercion hypothesis.

8 However, see Rochette (1999) for an analysis of (5) as an instance of raising.

not involve a clausal complement, and one might argue that all it shows is that *begin* can be a transitive verb (it is not always a raising verb). Thus, it is not as strong an argument for the control analysis for *begin* as imperative formation is.

In sum, a closer examination of Perlmutter's arguments reveals that not all of his arguments for the control/raising ambiguity actually hold. However, at least two of the arguments, imperative formation and NP object's would be problematic under a strict raising analysis of aspectual verbs.

### 2.3. Lexical vs. structural ambiguity

Despite the controversial nature of the control analysis of aspectual verbs, the control/raising ambiguity with aspectual verbs has been documented in a number of other languages, such as French (Ruwet 1991, Lamiroy 1986), German (Wurmbrand 2003), Greek (Alexiadou & Anagnostopoulou 1999), Hebrew (Landau 2003), and Japanese (Shibatani 1973, 1978, Kuno 1987, Nishigauchi 1993, Kageyama 1993, 1999, Matsumoto 1996, Koizumi 1998). The ambiguity in these languages, however, is not always as carefully studied as it was for English aspectual verbs by Perlmutter.<sup>9</sup>

Assuming that the control/raising ambiguity with aspectual verbs exists, the question that I address in this study is what might be the best way to capture the ambiguity. In the rest of this paper, I consider two alternative hypotheses to account for the ambiguity. One is the position for which Perlmutter argued, that aspectual verbs are lexically ambiguous between control and raising. Under this hypothesis, each of the ambiguous aspectual verbs has two lexical entries, each of which imposes a different set of selectional restrictions. Let us call this hypothesis the *lexical ambiguity hypothesis*. An implicit assumption behind this hypothesis, which is important to our discussion, is that both control and raising verbs are lexical verbs, which occupy the head of VP and take a clausal complement. An alternative hypothesis suggests that the ambiguity is structural in nature. In other words, there is only one aspectual verb which means *begin*, and its interpretation changes depending on its syntactic position. Let us call this hypothesis the *structural ambiguity hypothesis*. In this study, I present arguments for the *structural ambiguity hypothesis*.

First, however, I review three recent analyses of control and raising, and show that the theories of control and raising currently available leave us with only one of the two hypotheses as an option: the *lexical ambiguity hypothesis*.

---

9 For instance, Rizzi (1982) simply assumes that Italian aspectual verbs are ambiguous between control and raising (i.e. Rizzi 1982ch 1, fn. 7).

### 3. Recent analysis of control/raising and the control/raising ambiguity

The analysis of control and raising has played an important role in the development of linguistic theories. Recently, several radically different theories of control and raising have been advanced, reviving the discussion of control and raising (Hornstein 1999, 2003, Culicover & Jackendoff 2001, Jackendoff & Culicover 2003, Boecks & Hornstein 2003, Landau 2003, Davies & Dubinsky 2003, Polinsky & Potsdam 2006). In this section, I briefly review three recent syntactic analyses of control and raising within the *Minimalist Program* (MP) framework: (i) the *case*-driven analysis, (ii) the *movement*-driven analysis, and (iii) the *Agree*-based analysis. While there are important differences between the three theories of control and raising, in all three analyses, both control and raising verbs are assumed to be verbs that take a clausal complement. The differences between control and raising verbs, therefore, boil down to differences in their lexical specifications, namely, selectional restrictions imposed on their complements and/or subjects. Thus, according to these theories of control and raising, the control/raising ambiguity with aspectual verbs would have to be lexical, as in the *lexical ambiguity hypothesis*.<sup>10</sup>

#### 3.1. The case-driven account (Martin 2001)

Given the problematic status of PRO within the Government and Binding (GB) framework and MP<sup>11</sup>, Chomsky & Lasnik (1993) propose a case-theoretical analysis of the distribution of PRO, according to which only non-finite T(ense) checks a special type of case called *null case*, which can only be found in PRO. Although this analysis accounts for the observation that the complement of a control verb is always non-finite<sup>12</sup> and the embedded subject of a control complement is always phonologically null, Martin (2001) points out that such an analysis fails to distinguish control from raising. Thus, it wrongly predicts that (13a) should be grammatical while (13b) should be ungrammatical, contrary to fact.

---

10 Although I focus on the theories of control and raising within MP in this study, the same conclusion, that the control/raising ambiguity is lexical, also applies to any semantic theories of control/raising (i.e. Jackendoff & Culicover 2003) and syntactic theories of control/raising within the lexical theories such as LFG (Bresnan 2001, Falk 2001) and HPSG (Pollard & Sag 1994, Sag & Wasow 1999).

11 See Hornstein (1999) and Martin (2001) for the theory-internal problems with PRO within GB as well as MP.

12 This appears to be the case with English, but may not be with other languages. See Landau (2004), for instance, for discussions of obligatory control with subjunctive complements.

- (13) a. \*John<sub>i</sub> seems to Bill to PRO<sub>i</sub> have solved the problem.  
 b. Naomi believes *her* to have solved the problem.

As a refinement of Chomsky and Lasnik, Martin proposes a modified version of the *null case* analysis of control, according to which the difference between control and raising is due to a difference in the specification of the head of TP in the infinitival complement which control and raising verbs select. In Martin's proposal, control verbs select infinitival complement headed by T that is [+tense, -finite], while raising verbs take infinitival complements headed by T that are [-tense, -finite]. Only the T that is [+tense, -finite] has *null case*, the only case that can license PRO (14).

- (14) John tried [PRO<sub>i</sub> [to<sub>[+tense, -finite]</sub> t<sub>i</sub> to be nice]  
 \_\_\_\_\_ null case

On the other hand, the head of TP in the infinitival complement of a raising verb, T [-tense, -finite], has no case to offer. Thus, it cannot license PRO or lexical DP as an embedded subject (14a). The only grammatical configuration with T [-tense, -finite] is one in which a lexical DP is raised to be the matrix subject and licensed by the matrix T (15b).

- (15) a. \*John seemed [PRO<sub>i</sub> [to<sub>[-tense, -finite]</sub> t<sub>i</sub> to be nice]  
 b. John<sub>i</sub> seemed [ t<sub>i</sub> [to<sub>[-tense, -finite]</sub> t<sub>i</sub> to be nice]  
 \_\_\_\_\_ NOM

Under the *null case* theory of control proposed by Martin, therefore, the differences between control and raising verbs derive from the features of T within their complement.<sup>13</sup> Therefore, when a verb is ambiguous between control and raising, as in the case of aspectual verbs, it can take either a TP that is [+tense] or [-tense]. In other words, there are two aspectual verbs with the same meaning but two different sets of selectional restrictions.<sup>14</sup> Therefore, the control/raising ambiguity is a lexical ambiguity under the *null case* theory of control (and raising).

13 Presumably, there is another important difference between control and raising verbs under the *null case* theory of control, i.e. that only control verbs have thematic subjects.

14 In fact, Martin assumes that *seem/appear* are such ambiguous verbs (fn. 42). When *seem/appear* take an agentive subject, thus they are control verbs. These verbs are eventive predicates which must (i) be in the past tense and (ii) take an eventive complement.

- (i) a. \*John seems to hit Bill (right now) (raising)  
 b. John seemed to hit Bill (right then). (control)





the *null case* theory, Landau's analysis does not rely on *case* to account for control. What creates the control relation between a matrix argument and an embedded subject in this account is *Agree* (Chomsky 2000, 2001).

According to Landau's analysis, control verbs select a CP complement with a distinct C head, which may carry both [Agr] and [T] features. The C head in turn selects an IP with distinct [T] features. The [T] feature on the head of IP can be *selected* or *free*, while *selected tense* can be further divided into *anaphoric tense*, which must be identical to the matrix tense, and *dependent tense*, which is dependent on the matrix tense but does not need to be identical to it. Moreover, CPs with both types of *selected tense* ((18b) and (18c)) are headed by C carrying the feature [-T] for *anaphoric tense* and [+T] for *dependent tense*, while a CP with *free* tense carries no [T] feature (18a).

- (18) a. [CP [C<sub>[Agr]</sub> [IP [T<sub>[free]</sub> ]]] (C embedding IP with T that is *free*)  
 b. [CP [C<sub>[Agr, -T]</sub> [IP [T<sub>[anaphoric]</sub> ]]] (C embedding IP with *anaphoric* T)  
 c. [CP [C<sub>[Agr, +T]</sub> [IP [T<sub>[dependent]</sub> ]]] (C embedding IP with *dependent* T)

Finally, the selection of the right type of tense by the matrix verb is mediated by matching of feature values through C (Landau 2004:839).

- (19) V ..... [CP C<sub>[±T]</sub> [IP I<sub>[±T]</sub> VP]]  
 └──────────┘ └──────────┘  
*selection checking* (of matching features)

Landau assumes that [Agr], which is essentially a bundle of  $\phi$ -features, is purely morphological, as opposed to [T], which is semantic. Therefore, the head I of an IP, which lacks morphological instantiations of  $\phi$ -features, has either a [-Agr] feature or lacks an [Agr] feature altogether, while indicative and subjunctive complements, with a morphological reflex of  $\phi$ -features, have a [+Agr] feature. He further assumes that [+Agr] is parasitic on [+T] (ibid: 840).

On the other hand, DPs have a [ $\pm$ R(eferential)] feature in this analysis. DPs that are capable of independent reference, such as lexical DPs and *pro*, are [+R], while DPs that are anaphoric, such as PRO, are [-R]. [+R] is assigned to I and C heads only when they are specified as [+Agr +T], and any other combination results in [-R]. When there is no [T] feature or [Agr] feature, [R] is not assigned.

Under the *Agree*-based analysis, there are two possible derivations for obligatory control. The first is *exhaustive control*, in which exhaustive referential identity is required between the matrix DP and PRO, as in (20a). The second is *partial control*, in which the controller is required to be included in, but not necessarily identical to, the referent of PRO (20b).

- (20) a. \*The chair<sub>[singular]</sub> managed to PRO<sub>[plural]</sub> meet at 6.  
 b. The chair<sub>[singular]</sub> preferred to PRO<sub>[plural]</sub> meet at 6.

While the subject of both sentences in (20) is singular, the embedded verb *meet* requires a plural subject. The control verb in (20a), *manage*, does not tolerate such a disagreement, instantiating *exhaustive control*. The control verb in (20b), *prefer*, allows it, instantiating *partial control*. Since *exhaustive control* does not allow two different time references between the matrix and the embedded event, Landau assumes that complement of *exhaustive control* verbs is untensed or [-T], as in (18b). In contrast, the complement of a *partial control* verb is tensed or [+T], as in (18c), and as such compatible with two different time references.

Since aspectual verbs such as *begin* are classified as *exhaustive control* (Landau 2004: 835), I only discuss Landau's account of *exhaustive control* here. As can be seen below, a [-T] feature on the I head guarantees that the [R] feature of I is [-R] (recall that [+R] is assigned to I and C heads only when they are specified as [+Agr +T], and any other combinations result in [-R]), making the *Agree* relation between PRO, which is [-R], and I possible (21a). C and I can also participate in an *Agree* relation, given that both are [-T] (21b). PRO, on the other hand is in an *Agree* relation with the matrix F(unctional head) which in turn is in an *Agree* relation with the matrix subject DP (21c).

- (21) a.  $[_{CP} DP \dots F \dots [_{CP} C_{[-T]} [_{IP} PRO_{[-R]i} [ I_{[-T, -Agr, -R]} [_{VP} t_i ]]]]$   
└─ Agree<sub>[-R]</sub> ─┘  
┌── Agree<sub>[-T]</sub> ─┐
- b.  $[_{CP} DP \dots F \dots [_{CP} C_{[-T]} [_{IP} PRO_{[-R]i} [ I_{[-T, -Agr, -R]} [_{VP} t_i ]]]]$   
└─ Agree<sub>[-R]</sub> ─┘  
┌── Agree<sub>[-T]</sub> ─┐
- c.  $[_{CP} DP \dots F \dots [_{CP} C_{[-T]} [_{IP} PRO_{[-R]i} [ I_{[-T, -Agr, -R]} [_{VP} t_i ]]]]$   
└─ Agree ─┘ └─ Agree<sub>[+Agr]</sub> ─┘ └─ Agree<sub>[-T]</sub> ─┘

However, if a lexical DP or *pro* appears as the embedded subject, the [+R] feature of a lexical DP/*pro* prevents an *Agree* relation to hold between I and the lexical DP/*pro*. Thus, neither a lexical DP nor *pro* can appear as an embedded subject of an *exhaustive control* verb (ibid. 847).

- (22)  $_{CP} DP \dots F \dots [_{CP} C_{[-T]} [_{IP} [ I_{[-T, -Agr, -R]} [_{VP} DP/pro_{[+R]} ]]]]$   
└─ \*Agree ─┘

Although Landau (2004) discusses raising only briefly (Landau 2004:6.3), he does propose that a raising complement has no [R] feature. Landau assumes that this 'defectiveness', often associated with raising complements, is associated with the lack of [Agr]. Since lack of either a [T] or [Agr] feature means no [R] in this analysis, neither a lexical DP nor *pro* can engage in an *Agree* relation with a functional head in the complement to check off its [+R] feature. Although

Landau does not mention specifics of the derivation of Subject Raising, I assume that a lexical DP and *pro* must both move to the matrix domain, where I has a [+R] feature which supports the *Agree* relation.<sup>15</sup> Thus, under Landau's *Agree*-based analysis, the derivation of a subject raising verb would look like (23).<sup>16</sup>

$$(23) \left[ {}_{\text{CP}} \text{DP}_{[+\text{R}]i} \dots \text{F} \dots \left[ {}_{\text{IP}} t_i \left[ \text{I}' \text{I}_{[\pm\text{T}]} \left[ {}_{\text{VP}} t_i \right] \right] \right] \right]$$

$$\quad \perp \text{Agree} \perp_{[+\text{Agr}, +\text{R}]}$$

As such, according to Landau's *Agree*-based analysis of control and raising, aspectual verbs that are ambiguous between control and raising would have two different structures, (21) and (23). However, importantly, both (exhaustive) control verbs and raising verbs are verbs that take a clausal complement, and the differences between them are due to the structure of the complement they take, as in a CP embedding an IP with [-T] for the (exhaustive) control structure (21), and IP for the raising structure (23). Thus, Landau's *Agree*-based analysis of control (and raising) shares an assumption with two other analyses of control (and raising) that have already been examined: both control and raising verbs are lexical verbs that take a clausal complement. As such, these verbs are assumed to occupy the head of VP, and the control/raising distinction is a result of the imposition of different sets of selectional restrictions.

### 3.4. Summary

I have reviewed three recent analyses of control and raising, the *case*-driven analysis, the *movement*-driven analysis, and the *Agree*-based analysis. Although the differences between these theories of control and raising are significant, they all hold the same basic assumptions about control and raising verbs: whether a given verb is control or raising, its structural position is the head of VP. The differences between them control and raising follow from different selectional restrictions. Thus, under the analyses of control/raising examined so far, the control/raising ambiguity with aspectual verbs can only have one account: lexical ambiguity.

In fact, given the identical surface word order between sentences with control and raising verbs,<sup>17</sup> this assumption seems to be the null hypothesis, unless there

---

15 Landau assumes that PRO cannot form the subject of a raising complement because such a structure would be ruled out by the  $\Theta$ -criterion (Landau 2004:fn.42).

16 Landau simply assumes that the raising complement lacks a CP projection (Landau 2004: 861).

17 This appears to be true for many languages, although there are some exceptions. For instance, in languages like Italian, Hebrew, and Indonesian, only control verbs optionally have a complement headed by a complementizer. See section 5 for the relevant data.

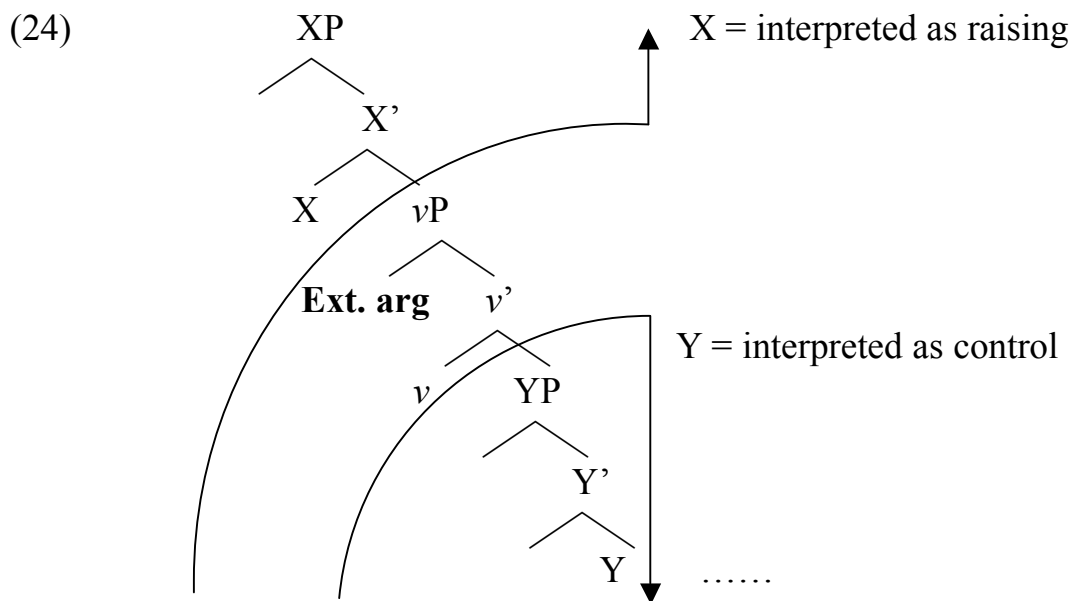
is evidence that suggests otherwise. In the subsequent section, I present such evidence.

#### 4. The control/raising ambiguity is structural

In this section, I present evidence which suggests that the control and raising instances of aspectual verbs occupy two different structural positions in a clause.

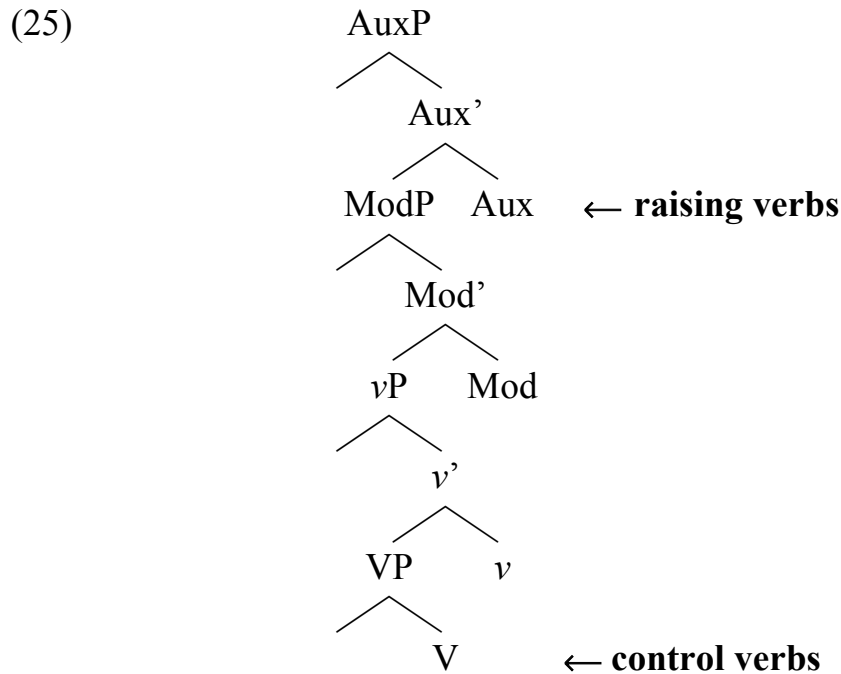
The evidence presented stems from four studies concerning aspectual verbs in languages from four distinct families, Wurmbrand (2001) for German, Fukuda (2006) for Japanese, Cinque (2003) for Romance languages, and Arregi & Molina-Azaola (2004) for Basque. Although the exact positions in which aspectual verbs occur in each of the languages may differ slightly, there is a generalization to be made from the four sets of data reviewed in this study. When an aspectual verb is interpreted as raising, it occupies a position that is structurally higher than that of *vP*, the projection where an external argument is introduced. When the same aspectual verb is interpreted as control, it occupies a position that is structurally lower than that of *vP*.

Based on this generalization, I argue that the control/raising ambiguity for aspectual verbs derives from a difference in scope relations between an aspectual verb in these two different positions and an external argument in its base-generated position ([Spec, *vP*]). When an aspectual verb occupies a position that is under the scope of an external argument, it is interpreted as a control verb. When it occupies a position that is higher than an external argument, it is interpreted as a raising verb. The analysis is illustrated as (24).



#### 4.1. German (Wurmbrand 2001)

Wurmbrand (2001) argues that control and raising verbs in German occupy different positions in a clause. According to Wurmbrand, while German raising verbs occupy the position where auxiliary verbs are found, German control verbs are found as the head of VP (Wurmbrand 2001:206).



Under this analysis, aspectual verbs that are ambiguous between control and raising may appear in either of these two positions, while *unambiguous* control and raising verbs are restricted to occur as the head of VP and the head of AuxP, respectively.

In order to show differences in the structural position of control and raising verbs, Wurmbrand contrasts the distribution of unambiguous raising verbs, such as *scheinen* ‘seem’ and *pflügen* ‘use to’, and ambiguous verbs, such as *versprechen* ‘promise’, *drohen* ‘threaten’ and the aspectual verb *beginnen* ‘begin’. First, Wurmbrand shows that the unambiguous raising verbs cannot be embedded *under* a modal, although they can embed a modal.<sup>18</sup>

- (26) a. \*Morgen **dürfte/muß** er die Stadt zu verlassen scheinen.  
 tomorrow might/must he the town to leave seem  
 ‘He will/might/must seem to be leaving the town tomorrow.’
- b. Sie schien zu Hause arbeiten zu **müssen/können**.  
 she seemed at home work to must/can  
 ‘She seemed to have to/be able to work at home.’

<sup>18</sup> According to Wurmbrand, only deontic modals can be embedded under *scheinen* ‘seem’, which, under her analysis, occupies the position where auxiliary verbs and epistemic modals occupy.

In contrast, ambiguous verbs can be embedded under a modal verb. However, when they are, they can only be interpreted as control verbs.

- (27) Er **muß** ein guter Vater zu werden versprechen/drohen.  
 He must a good father to become promise/threaten  
 ‘He must promise/threaten to become a good father.’

Second, both the unambiguous raising verbs and the ambiguous verbs allow passive in the embedded clause ((28a) and (28b)). However, once an ambiguous verb is embedded under a modal, embedded passive becomes ungrammatical (28c).

- (28) a. ?Die Stadt begann zerstört zu werden.  
 the town began destroy.PART to AUX.PASS  
 ‘The town began to get destroyed.’  
 b. Der Kaviar schien gegessen worden zu sein.  
 the caviar seemed eat.PART AUX.PASS to be  
 ‘The caviar seemed to have been eaten.’  
 c. \*Die Stadt **muss/kann** zerstört zu werden beginnen.  
 the town must/can destroy.PART to AUX.PASS begin  
 ‘The town must/can/may begin to get destroyed.’

Third, while the unambiguous raising verbs do not passivize (29a), the ambiguous aspectual verb *beginnen* ‘begin’ can passivize, which can be an *impersonal passive* (29b) or a ‘*long passive*’, promotion of an embedded object to the matrix subject with the passive morpheme attached to the matrix verb (29c).<sup>19</sup>

- (29) a. \*Der Kaviar wurde zu essen gescheint/geschienen.  
 the caviar AUX.PASS to eat seem.PART<sub>a</sub>/seem.PART<sub>b</sub>  
 ‘It seemed that somebody ate the caviar.’  
 b. Es wurde begonnen den Wagen zu reparieren.  
 it AUX.PASS begin.PART the.ACC car to repair  
 ‘They began to repair the car.’ (*impersonal passive*)  
 c. Der Wagen wurde zu reparieren begonnen.  
 the car AUX.PASS to repair begin.PART  
 ‘They began to repair the car.’ (*long passive*)

Finally, an *impersonal passive* sentence with an ambiguous verb, as in (29b), can be embedded under a modal (30). However, in this particular environment, the ambiguous verb can only be interpreted as a control verb, as was the case with the ‘disambiguated’ instances of the ambiguous verbs, seen in (27) above.

---

19 The other two ambiguous verbs, *versprechen* ‘promise’ and *drohen* ‘threaten’ only allow impersonal passive.

- (30) Es **muss** begonnen werden den Wagen zu reparieren.  
 It must begin.PART AUX.PASS the.ACC car to repair  
 ‘They must begin to repair the car.’

Wurmbrand argues that all of the above observations show that control and raising verbs occupy two different structural positions, as illustrated in (25). The *unambiguous* raising verbs can embed a modal but cannot be embedded under a modal (26) because raising verbs occupy a position as high as or higher than where modals appear. When an ambiguous verb is embedded under a modal, as in (27), therefore, it can only be in the lower position, where it is interpreted as a control verb. Moreover, both the unambiguous raising verbs and the ambiguous verbs are expected to have embedded passive complement ((28a) and (28b)), since raising verbs occupy the position higher than *vP*, where the passive morpheme is assumed to occupy.<sup>20</sup> Yet once an ambiguous verb is embedded under a modal, as in (28c), it can only be in the lower position, where it is interpreted as a control verb. When an ambiguous verb is in the lower position, there is no *vP* projection below it. Thus, it follows that (28c) cannot allow an embedded passive. Moreover, the unambiguous raising verbs are above *vP*, hence unable to passivize (29a). In contrast, the ambiguous verbs are below *vP*; thus they are expected to passivize ((29b) and (29c)). Finally, since only an ambiguous verb in the lower position is expected to passivize, the ‘passivized’ ambiguous verbs are expected to embed under a modal as well (30).

On the other hand, if we were to maintain the assumption that control and raising verbs appear in the same position, i.e. the head of VP, the above observations would be problematic. One would have to assume, for instance, that these differences derive from differences in each verb’s compatibility with modals and passives. However, such an approach would have to be quite complex, since, under such a scenario, the ambiguous verbs’ compatibility with passive would have to change, depending on the presence/absence of a modal.

#### 4.2. Japanese (Fukuda 2006)

Traditionally, Japanese aspectual verbs, such as *hajime* ‘begin’, *tsuzuke* ‘continue’, *owar* ‘finish<sub>1</sub>’ and *oe* ‘finish<sub>2</sub>’, have been analyzed as control and raising verbs. Among these four aspectual verbs, *owar* ‘finish<sub>1</sub>’ has been analyzed as an unambiguous raising verb, in contrast to *oe* ‘finish<sub>2</sub>’, which has been analyzed as an unambiguous control verb. The two other aspectual verbs,

---

20 Here I am assuming the *vP* analysis of passive (Kratzer 1994, 1996, Chomsky 1995), although Wurmbrand remains agnostic about the presence of *vP* in passive sentences (Wurmbrand 2000:fn 8).



*hajime* ‘begin’ and *tsuzuke* ‘continue’, on the other hand, are analyzed as ambiguous.<sup>21</sup>

The analysis of *oe* ‘finish<sub>2</sub>’ as a control verb has been motivated by sentences like (31) below, which suggest that only *oe* ‘finish<sub>2</sub>’ selects its subject among the four aspectual verbs (Shibatani 1973:66).

- (31) Buranko-ga yure -hajime/tsuzuke/owar/\*oe -ta  
 Swing-NOM swing -begin/continue/finish<sub>1</sub>/finish<sub>2</sub> -PERF  
 ‘The swing began/continued/finished<sub>1</sub>/\*finished<sub>2</sub> to swing/swinging.’

On the other hand, the motivation for analyzing *owar* ‘finish<sub>1</sub>’ as an unambiguous raising verb is more complicated, and it involves the aspectual verbs’ differing behavior with respect to passive. Like the German ambiguous aspectual verb *beginnen* ‘begin’, three of the Japanese aspectual verbs, *hajime* ‘begin’, *tsuzuke* ‘continue’, and *oe* ‘finish<sub>2</sub>’ allow *long passive*.

- (32) a. Sono-shoosetsu<sub>i</sub>-ga [t<sub>i</sub> kaki **oe**] -rare-ta  
 that-novel<sub>i</sub>-NOM [t<sub>i</sub> write finish<sub>2</sub>] -PASS-PERF  
 ‘That novel was finished to be written.’  
 b. Sono-shisutemu<sub>i</sub>-ga [t<sub>i</sub> tsukai **hajime**] -rare-ta  
 new-system<sub>i</sub>-NOM [t<sub>i</sub> use begin] -PASS-PERF  
 ‘The system began to be recognized.’  
 c. Onaji-kyokasho<sub>i</sub>-ga [t<sub>i</sub> tsukai **tsuzuke**] -rare-ta  
 same-textbook<sub>i</sub>-NOM [t<sub>i</sub> use continue] -PASS-PERF  
 ‘The same text book continued to be used.’

While two of the three aspectual verbs that allow *long passive*, *hajime* ‘begin’ and *tsuzuke* ‘continue’, also allow an embedded passive ((33a) and (33b)), the embedded passive is ungrammatical with *oe* ‘finish<sub>2</sub>’ (33c) (Nishigauchi 1993).

- (33) a. Sono-chiryoho<sub>i</sub>-ga [t<sub>i</sub> mitome-**rare**] **hajime**-ta  
 that-treatment<sub>i</sub>-NOM [t<sub>i</sub> recognize-PASS] begin-PERF  
 ‘That treatment began to be recognized.’  
 b. Onaji-kyokasho<sub>i</sub>-ga [t<sub>i</sub> tsukaw-**are**] **tsuzuke**-ta  
 same-textbook<sub>i</sub>-NOM [t<sub>i</sub> use-PASS] continue-PERF  
 ‘The same text book continued to be used.’

21 In this discussion of Japanese aspectual verbs, I focus on four aspectual verbs, *hajime* ‘begin’, *tsuzuke* ‘continue’, *owar* ‘finish<sub>1</sub>’, and *oe* ‘finish<sub>2</sub>’, for a couple of reasons. First, they represent three of the basic aspectual distinctions: inception, continuation, and termination. Second, they have been discussed in several studies: (Shibatani 1973, 1978, Kuno 1987, Nishigauchi 1993, Kageyama 1993, 1999, Matsumoto 1996, Koizumi 1998, among others).

- c. \* Sono-shoosetu-ga [t<sub>i</sub> kak-**are**] **oe**-ta  
 that-novel-NOM [t<sub>i</sub> write-PASS] finish<sub>2</sub>-PERF  
 ‘That novel finished being written.’

The fourth aspectual verb, *owar* ‘finish<sub>1</sub>’, on the other hand, only allows an embedded passive (Shibatani 1978).

- (34) a. Kekka<sub>i</sub>-ga [t<sub>i</sub> hyojis-**rare**] owar -ta  
 result<sub>i</sub>-NOM [t<sub>i</sub> indicate-PASS] finish<sub>1</sub> -PERF  
 ‘The results finished being posted’  
 b. \* Kekka-ga [t<sub>i</sub> hyojishi owar] **-are**-ta  
 result-NOM [t<sub>i</sub> indicate finish<sub>2</sub>] -PASS-PERF  
 ‘The results finished being posted.’

Thus, passivization patterns divide the four aspectual verbs into three groups: *hajime* ‘begin’ and *tsuzuke* ‘continue’ allow both the *long* and *embedded passives*, while *oe* ‘finish<sub>2</sub>’ and *owar* ‘finish<sub>1</sub>’ only allow the *long passive* and *embedded passive*, respectively.

Under traditional control/raising analyses of these aspectual verbs, these differences are accounted for by appealing directly to the definition of control and raising: while control verbs select their external arguments, raising verbs do not. According to the control/raising analysis of the aspectual verbs, only if a given aspectual verb is a control verb, does it then have an external argument. Assuming that passive involves suppression of an external argument (Chomsky 1981), it follows that only control aspectual verbs would passivize. Therefore, the three aspectual verbs that passivize (i.e. allow the *long passive*), *hajime* ‘begin’, *tsuzuke* ‘continue’, and *oe* ‘finish<sub>2</sub>’, are control verbs at least in these instances, while the one that never passivizes, *owar* ‘finish<sub>1</sub>’, is never a control verb and always a raising verb. Recall, however, that among the four aspectual verbs, only *oe* ‘finish<sub>2</sub>’ appears to impose selectional restrictions on its subject (30). The fact that both *hajime* ‘begin’ and *tsuzuke* ‘continue’ are compatible with an inanimate subject suggests that they can be raising verbs. Therefore, the selectional restrictions together with the passive facts led the previous studies to conclude that *oe* ‘finish<sub>2</sub>’ is the only unambiguous control verb, and *owar* ‘finish<sub>1</sub>’ is the only unambiguous raising verb, while *hajime* ‘begin’ and *tsuzuke* ‘continue’ are ambiguous.

However, the control/raising analysis outlined so far does not tell us why *long passive* is grammatical with the aspectual control verbs, since, under the PRO analysis of control, movement of an embedded object to the matrix subject position would incur a minimality violation (Rizzi 1991). In order to solve this problem, Kageyama (1993, 1999) proposes that the aspectual verbs subcategorize for either (i) a full complement with an embedded subject or (ii) a reduced complement without an embedded subject. Under this analysis, *oe* ‘finish<sub>2</sub>’ can

only take a reduced complement. The combination of being a control verb and subcategorizing for a reduced complement accounts for the observations that *oe* ‘finish<sub>2</sub>’ is compatible only with the *long passive*. If there is no embedded subject, then the *long passive* is unproblematic, while the *embedded passive* is impossible since there is no external argument for passive to suppress in the reduced complement. On the other hand, *owar* ‘finish<sub>1</sub>’ is analyzed to take only a full complement. Thus, the *embedded passive* is expected to be grammatical. However, since it is a raising verb, the matrix passive (i.e. the *long passive*) is ungrammatical. Finally, the other two aspectual verbs, *hajime* ‘begin’ and *tsuzuke* ‘continue’, can be either control or raising *and* they can take either a full or reduced complement. Thus, they allow both the *long* and *embedded passive*.

Although the control/raising analysis with the full vs. reduced complement distinction proposed by Kageyama (1993, 1999) is quite successful, accounting for an impressive range of the data, it is problematic for two reasons. First, the control/raising distinction among aspectual verbs, which is crucial for the analysis, is not adequately motivated, as the typical diagnostics for control/raising do not show the presumed control/raising distinction among Japanese aspectual verbs. Although Nishigauchi (1993) argues that differences in compatibility with idiomatic expressions motivate the control/raising distinction among the aspectual verbs, a closer examination of a wider range of data suggests that the pattern does not hold, as I have argued in Fukuda (2006). There are a handful of idiomatic expressions involving subjects, for example, that are compatible with *hajime* ‘begin’ and *tsuzuke* ‘continue’, but incompatible with *owar* ‘finish<sub>1</sub>’, a presumed unambiguous raising verb.

- (35) a. Tonbi-ga taka-o um-u  
kite-NOM hawk-ACC give.birth.to-IMP  
‘A kite gives birth to a hawk.’  
(A case of an ordinary parent producing a superior child.)
- b. Tonbi-ga taka-o umi hajime/tsuzuke -ta  
kite-NOM hawk-ACC give.birth.to begin/continue -PERF  
‘A kite began/continue to give birth to hawks.’
- c. Tonbi-ga taka-o umi \*owar/\*oe -ta  
kite-NOM hawk-ACC give.birth.to \*finish<sub>1</sub>/\*finish<sub>2</sub> -PERF  
‘A kite finish<sub>1</sub>/finish<sub>2</sub> giving birth to hawks.’
- (36) a. Rui-wa tomo-o yob -u  
kind-TOP friend-ACC call -IMP  
‘A kind calls for its friends.’ (≈ Birds of a feather flock together.)
- b. Rui-ga tomo-o yobi hajime/tsuzuke -ta  
kind-NOM friend-ACC call begin/continue -PERF  
‘A kind began/continued to call for its friends.’

- c. Rui-ga tomo-o yobi \*owar/\*oe -ta  
 kind-NOM friend-ACC call \*finish<sub>1</sub>/\*finish<sub>2</sub> -PERF  
 ‘A kind finish<sub>1</sub>/finish<sub>2</sub> calling for its friends.’

What these examples suggest is that the acceptability of idiomatic expressions with aspectual verbs is determined by their compatibility with certain aspectual specifications, i.e. completive aspect.

Another common diagnostic for the control/raising distinction is imperative formation, which has also been applied to Japanese aspectual verbs to argue for the control/raising distinction (Nishigauchi 1993). However, like idiomatic expressions, imperative formation also fails to motivate the control/raising distinction among Japanese aspectual verbs. As can be seen in (37) below, a presumed raising aspectual verb *owar* ‘finish<sub>1</sub>’ is just as compatible with imperative formation as a presumed control aspectual verb *oe* ‘finish<sub>2</sub>’ is (Shibatani 1973:78).

- (37) Asu-madeni yomi owar-e!/ oe-ro!  
 tomorrow-till read finish<sub>1</sub>-IMP/ finish<sub>2</sub>-IMP  
 ‘Finish reading (the book) by tomorrow!’

As it turns out, the diagnostic that has been used to motivate the control/raising analysis, the selectional restrictions on subjects, is not as strong a piece of evidence as has been assumed. As was shown earlier, *oe* ‘finish<sub>2</sub>’ appears to be incompatible with an inanimate subject (31). However, as Nishigauchi (1993) points out, *oe* ‘finish<sub>2</sub>’ also requires a particular type of an event as its complement.

- (38) a. Kodomo-ga aruki hajime/tsuzuke/owar/\*oe -ta  
 child-NOM walk begin/continue/finish<sub>1</sub>/\***finish<sub>2</sub>** -PERF  
 ‘The child began/continued/finished<sub>1</sub>/\*finished<sub>2</sub> walking.’  
 b. Kodomo-tachi-ga **sakamichi-o** aruki oe-ta  
 child-PL-NOM **hill-ACC** walk finish<sub>2</sub>-PERF  
 ‘The children finished walking (up) a hill.’

(38) shows that, regardless of the animacy of the subject, a sentence with *oe* ‘finish<sub>2</sub>’ is ungrammatical if its complement is an atelic event. Nishigauchi concludes from the contrast in (38) that *oe* ‘finish<sub>2</sub>’ requires an accomplishment event as its complement (Nishigauchi 1993:88).<sup>22,23</sup> Nishigauchi’s observation

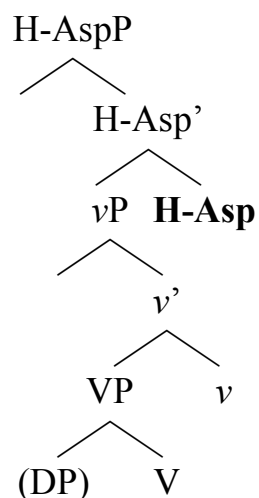
22 The same observation was made for English *finish* by Dowty (1979).

23 Strictly speaking, a complement *oe* ‘finish<sub>2</sub>’ does not have to be an accomplishment. It only needs to be compatible with being interpreted as an accomplishment. For instance, the VP in (i) by itself represents an activity, with a bare NP as its internal argument. However the VP gains an accomplishment interpretation with the presence of *oe* ‘finish<sub>2</sub>’.

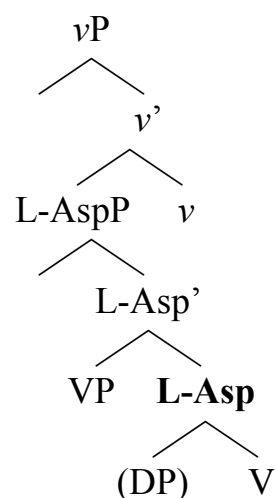
further casts doubt on the control/raising analysis of the aspectual verbs, as having an animate subject is not a sufficient condition for a sentence with *oe* ‘finish<sub>2</sub>’ to be grammatical.

Our examination of data has revealed that none of the standard diagnostics for the control/raising distinction is able to motivate a contrast among the Japanese aspectual verbs. As an alternative analysis, I have elsewhere proposed that the aspectual verbs appear in two different positions in a clause, either above *vP*, which I call *high-aspect*, or below *vP*, which I call *low-aspect* (Fukuda 2006).

(39) a. *High-aspect*



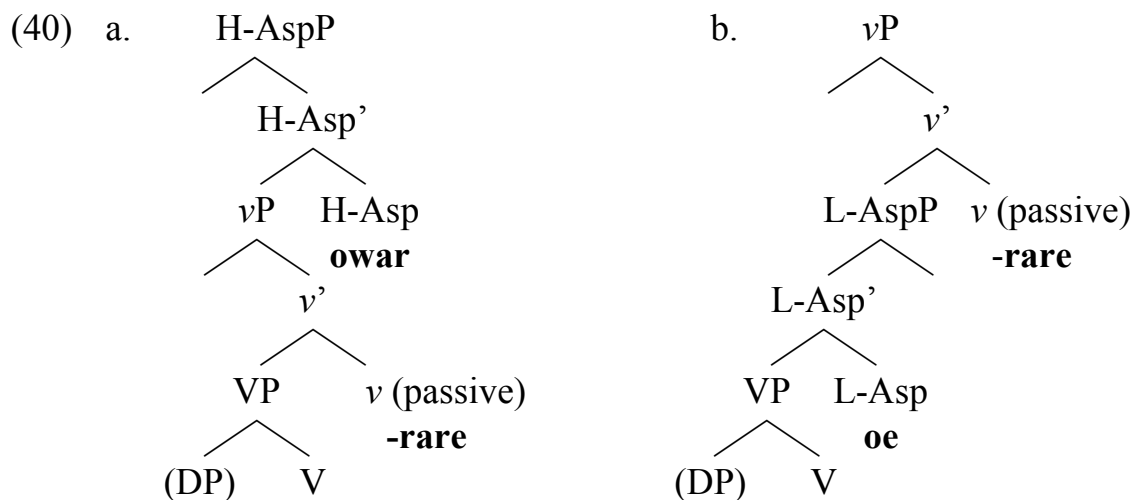
b. *Low-aspect*



I have also argued that while some aspectual verbs are restricted to occur in only one of the two positions, others can only occur in either of the two positions. Specifically, while two of the aspectual verbs, *hajime* ‘begin’ and *tsuzuk* ‘continue’, can appear as either *low-* or *high-aspect*, *oe* ‘finish<sub>2</sub>’ can only appear as *low-aspect* and *owar* ‘finish<sub>1</sub>’ can only appear as *high-aspect*.

Under this analysis, the passive facts presented earlier are consequences of the two positions for the aspectual verbs being higher and lower than *v*, where the passive morpheme is assumed to occupy. Since *owar* ‘finish<sub>1</sub>’ can only appear as *high-aspect*, which is higher than *v*, its only option is the *embedded passive* (40a). In contrast, *oe* ‘finish<sub>2</sub>’ can only appear as *low-aspect*, which is lower than *v*. Thus, the *long passive* is the only option (40b).

- 
- (i) Ken-ga hon-o yomi oe -ta  
 K-NOM book-ACC read finish<sub>2</sub> -PERF  
 ‘Ken finished reading the/a book(s).’



The two other aspectual verbs, *hajime* ‘begin’ and *tsuzuk* ‘continue’, on the other hand, can be realized as either *low-* or *high-aspect*, making them compatible with both the *long* and *embedded passive*.

Furthermore, the apparent differences among the aspectual verbs in the selectional restrictions of subjects can be analyzed as another consequence of the two structural positions for the aspectual verbs. When an aspectual verb appears as *low-aspect*, it is under the scope of an external argument. Thus, it is interpreted as control-like. In contrast, when an aspectual verb appears as *high-aspect*, it takes scope over an entire *vP*, and it is interpreted as raising-like. Under this account, *oe* ‘finish<sub>2</sub>’ always generates the control-like interpretation, since it can only appear as *low-aspect*. On the other hand, *owar* ‘finish<sub>1</sub>’ is always interpreted as a raising verb, since it can only appear as a *high-aspect* head. The other two verbs, *hajime* ‘begin’ and *tsuzuke* ‘continue’, can be interpreted as either control or raising, since they can appear in either of the two positions.

In sum, like the case of the control/raising ambiguity with German verbs, the control/raising ambiguity of Japanese aspectual verbs can also be analyzed to have a structural explanation. The control instances of the aspectual verbs occupy a position below an external argument, while the raising instances of the aspectual verbs occupy a position above an external argument.

However, there is at least one assumption in the analysis of Japanese aspectual verbs which needs to be further motivated. In the analysis that has been outlined above, it is crucial that *oe* ‘finish<sub>2</sub>’ must occur in the lower position, while *owar* ‘finish<sub>1</sub>’ must occur in the higher position, while other two aspectual verbs can occur in either of the two positions. As far as the Japanese data are concerned, it appears quite conveniently random. In the following section, I review evidence from Romance languages presented in Cinque (2003), which strongly suggests that aspectual verbs in Romance languages are also distributed between two positions, below and above *vP*. Crucially, Cinque

suggests that the distribution of Romance aspectual verbs is based on the type of an event that they are predicated of, specifically, whether it is bounded or unbounded. I suggest that a similar approach can account for the distribution of Japanese aspectual verbs.

### 4.3. Romance Languages (Cinque 2003)

The analysis of Japanese aspectual verbs introduced in the previous section crucially relies on the assumption that some aspectual verbs only appear in a position lower than *vP* or only in a position higher than *vP*, while others can appear in either of the two positions.

The data from Romance languages show that this pattern is not unique to Japanese aspectual verbs. Aissen & Perlmutter (1983) note that *long passive*, one of the diagnostics that they use to identify *clause-reduction* (restructuring) triggering verbs in Spanish, can only be natural with a certain class of aspectual verbs. In other words, not all verbs that qualify as trigger verbs by other diagnostics, such as clitic climbing, allow *long passive*. Aissen & Perlmutter characterize this class of aspectual verbs as ones that specify ‘an end point of an action’, such as *terminar* ‘finish’ and *acabar (de)* ‘finish’ (ibid: 392). The following (41) exemplifies the contrast:

- (41) a. Estas paredes están terminados de pintar.  
           these walls are finished to paint  
           ‘These walls are being finished to paint.’  
       b. \* Estas paredes fueron tratadas de pintar.  
           these walls were tried to paint  
           ‘These walls were tried to paint.’

Although Aissen & Perlmutter speculate that this may be a language-peculiar restriction unique to Spanish, Cinque (2003) shows that a similar contrast is observed with other Romance languages, such as Italian, Portuguese, and Catalan. According to Cinque, in Italian, the aspectual verbs such as *begin*, *continue*, and *finish* allow *long passive*, while other restructuring verbs such as *want*, *try* and modals do not. In Portuguese, *finish*, *begin*, and *send* allow *long passive*, but not other aspectual verbs, such as *continue*, or any other restructuring verbs. Likewise, in Catalan, *begin* and *finish* allow *long passive*, but not other aspectual verbs (Cinque 2003:50-54). Given the data from four Romance languages, Cinque claims that the fact that ‘finish’ is always in the list of aspectual verbs that allow *long passive* is consistent with his theory of functional projection (Cinque 1999) which places the *completive aspect* projects

lower than *Voice*, where passive morpheme occupies.<sup>24</sup> However, the fact that *begin*, which denotes inception, also allows *long passive* in all four Romance languages is unexpected, since the *inceptive aspect* projects higher than *Voice* in the languages that Cinque studied.

In order to account for the distribution of the Romance aspectual verbs with respect to *long passive*, Cinque suggests that aspectual verbs be distributed between two regions, below and above *Voice*, depending on whether they are predicated of an unbounded event or a bounded event.<sup>25</sup> The former group of aspectual verbs is projected above the projection of *Voice*, while the latter group of aspectual verbs is projected below *Voice*. Thus, only the aspectual verbs that belong to the latter group allow *long passive*. Cinque presents the following contrast to support his proposal (Cinque 2003:56).

- (42) a. Furono iniziate a costruire solo due case  
           were started to build only two house  
           ‘Only two houses started to be built.’  
       b. \*Furono iniziate a costruire case  
           were started to build house  
           ‘Houses started to be built.’

The aspectual verb *iniziare* ‘start’ allows *long passive* with a quantified object, which makes an event of building bounded, but not with a bare DP object, which makes an event of building unbounded.

Cinque’s distribution of Romance aspectual verbs into two positions is reminiscent of the distribution of Japanese aspectual verbs. Recall that with the Japanese aspectual verbs, the only aspectual verb that must occur in the lower position, *oe* ‘finish<sub>2</sub>’, is the one that requires an accomplishment event or a bounded event (38). On the other hand, the aspectual verb that must occur in the higher position, *owar* ‘finish<sub>1</sub>’, also denotes completion, but of an unbounded event, i.e. activity. I suggest that a classification of aspectual verbs which is similar to what Cinque suggests for Romance languages would account for the distribution of Japanese aspectual verbs between the two positions. The aspectual verbs that are predicated of an unbounded event occur in the higher position (*owar* ‘finish<sub>1</sub>’), while the aspectual verbs that are predicated of a bounded event occur in the lower position (*oe* ‘finish<sub>2</sub>’). If a single aspectual verb serves both functions, it is expected to occupy both positions (*hajime* ‘begin’ and *tsuzuke* ‘continue’).

---

24 In Cinque’s analysis, only aspectual verbs that are generated below *Voice* passivize, since they can rise to *Voice* and acquire the passive morphology. In contrast, ones that are generated above *Voice* cannot bear the passive morphology, since they cannot lower to do so (Cinque 2002:55).

25 Cinque credits the idea to Paola Binnincà (p.c.).



In sum, the evidence from Japanese and from Romance languages suggests that aspectual verbs are distributed between these two positions based on their meaning. While the aspectual verbs that denote inception/continuation/termination of an unbounded event appear in the position higher than *vP*, the aspectual verbs that denote inception/continuation/completion of a bounded event appear in the position lower than *vP*. In the following section, I examine evidence from yet another language, Basque, which provides an argument for two structural positions for aspectual verbs from a very different mechanism: agreement.

#### 4.4. Basque (Arregi & Molina-Azaola 2004)

Basque offers support for the proposed analysis of aspectual verbs, for a very different reason from the evidence presented so far. Arregi & Molina-Azaola (2004) discuss two aspectual verbs, *hasi* ‘begin’ and *amaitu* ‘finish’, which show different agreement patterns. While both aspectual verbs are analyzed as restructuring verbs, since the matrix auxiliary can agree with embedded arguments with both of these verbs<sup>26</sup>, only *amaitu* ‘finish’ allows the matrix auxiliary to agree with both the embedded dative and absolutive argument (43a). As can be seen in (43b) and (43c), *hasi* ‘begin’ allows the matrix auxiliary to agree only with the embedded dative argument.

- (43) a. Berak [zuri babak egiten] amaitu dautsuz  
 he.ERG [you.DAT beans.ABS do.NF] finished AGR<sub>A</sub>AGR<sub>D</sub>AGR<sub>E</sub>
- 

‘He finished cooking the beans for you.’

- b. Bera [zuri babak egiten] hasi jatzu  
 he.ABS [you.DAT beans.ABS do.NF] began AGR<sub>D</sub>AGR<sub>A</sub>
- 

‘He began cooking the beans for you.’

- c. \*Bera [zuri babak egiten] hasi jatzuz  
 he.ABS [you.DAT beans.ABS do.NF] began AGR<sub>A</sub>AGR<sub>D</sub>
- 

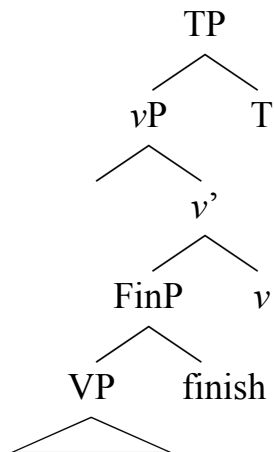
‘He began cooking the beans for you.’

26 It is not clear whether these verbs are control or raising. From what I have found in the literature, however, these aspectual verbs appear to be closer, in their structural characteristics, to the verbs that are considered as control, than to the verbs that are considered as raising, as raising verbs in Basque generally require finite complements (Hualde & de Urbina 2003:653-56).

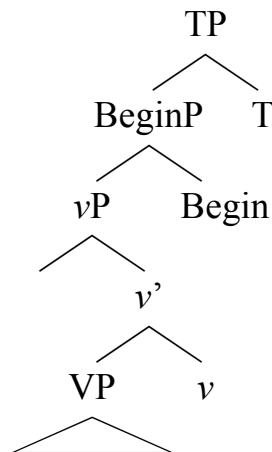
Arregi & Molina-Azaola (henceforth A&M) attempt to associate the difference in agreement patterns and the fact that these two aspectual verbs have different case on their subjects. As can be seen above, *amaitu* ‘finish’ has an ergative subject (43a), while *hasi* ‘begin’ has an absolutive subject (43b). Descriptively, therefore, it appears that the matrix auxiliary cannot agree with an embedded argument with a particular case, if it has already formed an agreement relation with a matrix argument of the same case. In (43c), the matrix auxiliary cannot form an agreement relation with the embedded absolutive argument, since it is already in an agreement relation with the matrix absolutive subject. Based on this observation, A&M hypothesize that locality in agreement is relativized to case (A&M 2004:108).

In order to account for the different agreement patterns of the two aspectual verbs, A&M propose that these two aspectual verbs are functional heads that assign absolutive case, which occupy two different positions in a clause. Specifically, A&M argue that while *amaitu* ‘finish’ occupies the position immediately below *vP*, *hasi* ‘begin’ occupies the position immediately above *vP* (A&M 2004:109).

(44) a. *amaitu* ‘finish’



b. *hasi* ‘begin’



Their analysis accounts for the two agreement patterns as follows. One of the aspectual verbs, *amaitu* ‘finish’ provides absolutive case to the embedded verb’s direct object, since it is closer to the direct object than *v*, the other functional head which potentially assigns absolutive case (45a). In contrast, with *hasi* ‘begin’, *v* is closer to the direct object. Thus, it is *v* that provides absolutive case to the direct object, and *hasi* ‘begin’ ends up providing its absolutive case to the subject.<sup>27</sup> This accounts for the observation that only with *hasi* ‘begin’, is the subject marked with absolutive (45b).

27 In both configurations, A&M assume that Applicative head is responsible for assigning dative case to the indirect object.

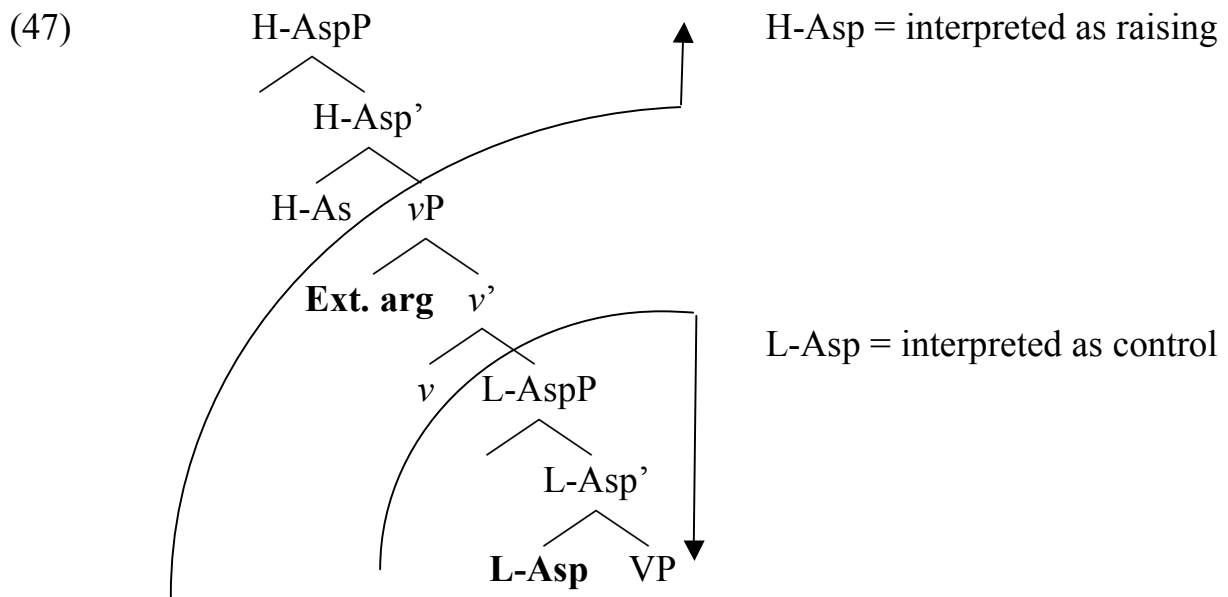


different set of data concerning a very different mechanism of grammar than what we have examined, namely, agreement.

#### 4.5. Summary

I have reviewed evidence from German, Japanese, Romance languages, and Basque, all of which suggest that aspectual verbs can occupy two different positions in a clause. This finding strongly suggests that the control/raising ambiguity observed with aspectual verbs cross-linguistically should be analyzed as a structural ambiguity.

In the spirit of the *structural ambiguity hypothesis*, I have proposed that the ambiguity derives from two positions of aspectual verbs and their structural height with respect to  $vP$ , where an external argument is introduced. The aspectual verbs that appear below  $vP$  are under the scope of an external argument. Therefore, they are interpreted to be under control of the external argument. On the other hand, aspectual verbs that occur above  $vP$  take scope over an entire  $vP$  including the external argument. Therefore, they are interpreted as raising.



The evidence reviewed also suggests that aspectual verbs appear to be distributed between these two positions based on their meaning. In particular, while aspectual verbs that are predicated of an unbounded event appear in the higher position, the aspectual verbs that are predicated of a bounded event appear in the lower position.

In the rest of this paper, I extend the scope of this study and examine another type of verb that also shows the control/raising ambiguity: *want*-type verbs. In particular, I examine the *want*-type verbs in Indonesian discussed in Polinsky & Potsdam (2006), which allow two distinctive interpretations under certain

conditions. It is shown that the proposed analysis is able to offer a structural account for the two interpretations, based on Polinsky & Potsdam's analysis of the semantics of these verbs, rendering unnecessary an assumption that these verbs are lexically ambiguous between control and raising.

## 5. *Want*-type verbs in Indonesian

In this final section, I examine data concerning the *want*-type verbs in Indonesian discussed by Polinsky & Potsdam (2006). Polinsky & Potsdam (henceforth P&P) show that, when *want*-type verbs in Indonesian have a passive complement, they allow an unusual reading, in which the object of *by*-phrase is interpreted as the *wanter*, in addition to the expected reading, in which the subject is interpreted as the *wanter*. P&P argue that the *want*-verbs are raising verbs which can occupy the position that is otherwise occupied by an auxiliary verb, allowing the unusual interpretation. Although they assume that the control counterparts of the same verbs are responsible for the expected interpretation, I argue that we can maintain a single lexical entry for the *want*-verbs, following P&P's analysis, and account for the expected reading, if we assume that the *want*-type verbs can appear two different positions, below or above *vP*, just as aspectual verbs do.

### 5.1. Two verbs '*want*'?

P&P show that two verbs that mean *want* in Indonesian, *mau* and *ingin*, show an interesting interpretational difference depending on whether their complement is active or passive. When the complement is active, it can only yield a control reading, in which the matrix subject *that child* is interpreted as the subject of the embedded predicate, *kiss* (48a). When the complement is passive, however, there are two interpretations available. One is the control reading just like the active case (48b-i), but the other is what P & P call 'crossed interpretation', where the matrix subject is interpreted as the theme of the embedded verb while the passive agent is interpreted as the '*wanter*' (48b-ii).

- (48) a. anak itu mau/ingin men-cium ibu  
 child that want ACT-kiss mother  
 'That child wants to kiss the mother.'
- b. anak itu mau/ingin di-cium oleh ibu  
 child that want PASS-kiss by mother  
 i) 'That child wants to be kissed by the mother.'  
 ii) 'The mother wants to kiss the child.'

Despite the puzzling reading (ii) with (48b), P&P show that the pre-verbal DP *anak itu* 'that child' in (48b) has all the right characteristics of subjects in

Indonesian, and the post-verbal ‘by-phrase’, *oleh ibu* ‘by mother’, has the characteristics consistent with a passive agent. Therefore, (48b) appears to have the syntactic structure of an ordinary embedded passive.

In order to account for the peculiar interpretation available for (48b), P & P propose an analysis in which the *want*-type verbs in Indonesian are ambiguous between control and raising. They are control verbs in (48a), but raising verbs in (48b). P&P present a number of arguments for claiming that the *want*-type verbs are different from the canonical control verbs, such as *coba* ‘try’. Issues that are immediately relevant to our discussion are (i) that the *want*-type verbs with passive complement do not co-occur with auxiliaries (49) and (ii) that the *want*-type verbs with passive complements cannot have a complementizer (50).

- (49) a. \* Mereka sempat/bias/perlu/boleh mau di-tolong  
 they have the opportunity/can/must/may want PASS-help  
 ‘Ali has a chance/can/must/may want to help them.’  
 b. Renta boleh (men)-coba masuk  
 Renta may ACT-try enter  
 ‘Renta may try to enter.’
- (50) a. Bagian kalimat ini mau (\*untuk) di-tegaskan-nya  
 section sentence this want (COMP) PASS-emphasize-3SG  
 ‘He wants to emphasize this part of the sentence.’  
 b. Rachman ingin (untuk) pergi  
 Rachman want (COMP) go  
 ‘Rachman wants to go.’ (Vamarasi 1999:151)

The implication of (49) is rather clear given the earlier discussion of the ambiguous verbs in German: Just like the case with German raising verbs, the Indonesian *want*-type verbs’ incompatibility with auxiliaries suggest that they are structurally as high as or higher than auxiliaries. In contrast, the position of the unambiguous control verb *coba* ‘try’ is lower than that of auxiliaries.

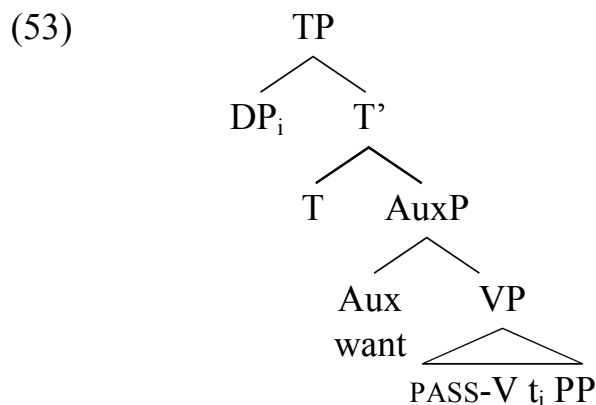
The implication of (50) has to do with a cross-linguistically attested pattern that, when a verb is ambiguous between control and raising, it is the control counterpart that is compatible with a complementizer, if a complementizer can occur at all (Kayne 1981, Landau 2003). Landau (2003) shows the following contrast from Hebrew (Landau 2003:488).

- (51) a. Rina xadla (me-) le’ acben et Gil  
 Rina stopped (COMP) to irritate ACC Gil  
 ‘Rina stopped irritating Gil.’  
 b. \* Ha-muzika ha-ro’ešet xadla (\*me-) le’ acben et Gil  
 the-music the-noisy stopped (\*COMP) to irritate ACC Gil  
 ‘The loud music stopped irritating Gil.’

Landau notes that Kayne (1981) also shows a similar contrast with Italian verbs *sembrare* ‘seem’ and *parere* ‘appear’ with raising (52a) and dative control (52b) counterparts (Kayne 1981:352).

- (52) a. Gianni sembra/pare (\*di) essere partito  
 Gianni seems/appears (COMP) be left  
 ‘Gianni appears/seems to have left.’  
 b. Mi sembra/pare di aver capito  
 me seems/appears (COMP) have understand  
 ‘It seems/appears to me that I have understood.’

Based on these observations and others that also differentiate the *want*-type verbs from the canonical control verbs,<sup>28</sup> P&P propose that, when they allow the ambiguity, the *want*-types verbs are raising verbs, which occupy the position where an auxiliary verb occurs.



As for the unusual interpretation that these verbs allow, in which the object of the *by*-phrase is interpreted as the *wanter* (48b-ii), P&P argue that it derives from the semantics of the *want*-verbs. They argue that the *want*-type verbs ascribe the *wanter* role to an agent, regardless of its syntactic position, as in the way that subject-oriented adverbs have been argued to ascribe a particular semantic property to an agent, even when an agent is not the subject, i.e. the object of a *by*-phrase, as in (54) below.<sup>29</sup>

- (54) Madonna was willingly interviewed by Barbara.  
 (i) Madonna was the willing interviewee.  
 (ii) Barbara was the willing interviewer.

On the other hand, they assume that the expected reading, in which the surface subject is interpreted as the *wanter* ((48b-i)), obtains when the control *want*

28 According to P&P, the *want*-type verbs do not (i) passivize, (ii) form an imperative, and (iii) embed under a control complement. They also do not allow (iv) independent temporal specification for their complements and (v) their complements to be fronted.

29 Cinque (2004) independently reaches a similar conclusion in his analysis of the restructuring verbs in Italian, which include the Italian counterpart of *want*.

occupies the same position. Yet the question is whether we have to assume that there are control *want*-type verbs in Indonesian, which P&P assume to exist. In what follows, I argue that we do not have to assume that there are control counterparts of the *want*-type verbs in Indonesian, if we extend the proposed analysis of aspectual verbs to the case of the *want*-type verbs in Indonesian.

## 5.2. A structural ambiguity analysis of the *want*-type verbs

Two assumptions must be made in order to account for the availability of the two interpretations with the *want*-type verbs with a single lexical entry. First, I assume that the semantics of the *want*-type verbs proposed by P&P must allow both the unusual reading and the expected reading. In fact, if the *want*-type verbs are indeed like subject-oriented adverbs in their semantics, as P&P claim, then this must be the case, since subject-oriented adverbs do allow both the structural subject and the semantic agent to be ascribed the relevant property, as seen in (51i) and (51ii) above. Thus, we need only one lexical entry of the *want*-type verbs to derive the two interpretations. Second, I assume that sentences with a *want*-type verb are always mono-clausal, and a *want*-type verb may occur either below or above *v*P, following the proposed analysis of aspectual verbs.

Now, one interesting fact about the ambiguity with the Indonesian *want*-type verbs is that a passive complement seems to make the unusual interpretation available. The same verb is unambiguously interpreted to have the expected control reading, when it does not involve a passive complement. I argue that the two assumptions outlined above can give an account for this fact. Let us first consider the cases of active sentences with a *want*-type verb, in which a *want*-type verb is below *v*P, as in (52).<sup>30</sup>

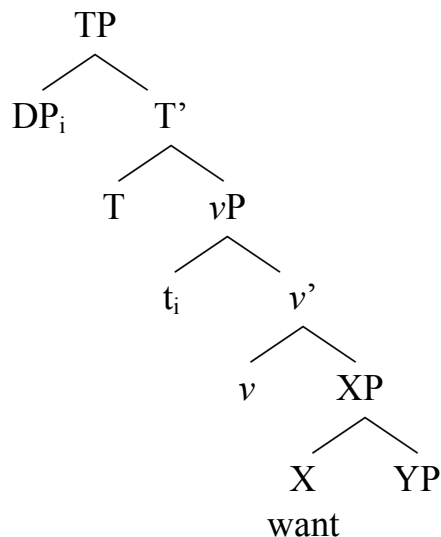
---

30 Here, I tentatively assume that the position of *want* is below *v* in (52). However, since *want* cannot be preceded by *men(g)-*, which has been analyzed to be the active voice marker, or *di*, the presumed passive marker, one may also assume that *want* may occupy the position of *v*.

- (i) \* Saya *meng-*ingin orang ini  
 I ACT-want person this  
 ‘I want this person’ (Vamarasi 1999: 147)

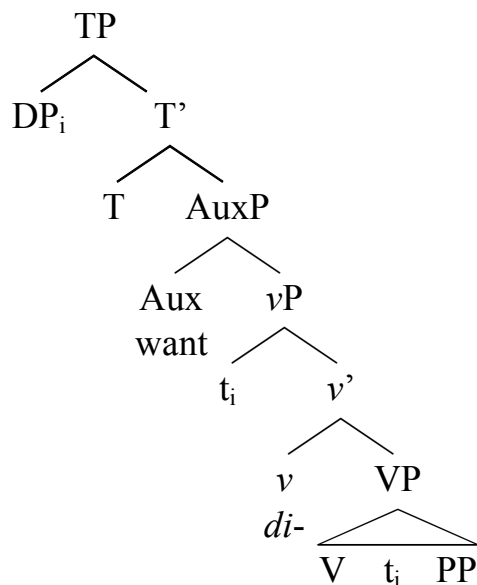


(55)



In this syntactic environment, the DP which ends up occupying [Spec, TP] is also the agent. Thus, only the subject can be ascribed the *wanter* role. However, with a passive complement, the *want*-type verb must be above *vP*, if we assume that the passive prefix *di-* in Indonesian occupies the head of *v*, as in (56).

(56)



Notice that in (56), the external argument is base-generated below the *want*-type verb. In this base-generated configuration, the *wanter* role can be ascribed to the object of the *by*-phrase in the manner which P&P outline, creating the unusual interpretation. On the other hand, once the external argument moves up and occupies [Spec, TP], the subject position is filled, and the expected reading, in which the subject is the *wanter*, obtains. Thus, under the proposed structural ambiguity analysis, the two interpretations are made available via reconstruction. Importantly, under this analysis, we do not have to assume that the *want*-type verbs are also control verbs.

## 6. Conclusion

In this study, I have argued that the control/raising ambiguity with aspectual verbs should be analyzed as a *structural ambiguity*, rather than a *lexical ambiguity*. I presented evidence from studies of aspectual verbs in four languages from four distinct families, German (Wurmbrand 2001), Japanese (Fukuda 2006), Romance languages (Cinque 2003), and Basque (Arregi & Molina-Azaola 2004), all of which shows that aspectual verbs occur two different positions in a clause. Our evidence also shows that the crucial projection is  $vP$ , where an external argument is introduced in a clause. When an aspectual verb occupies a position above  $vP$ , it takes scope over an external argument and thus is interpreted as raising-like. When the same aspectual verb appears in a position below  $vP$ , it is under the scope of an external argument and thus is interpreted as control-like. I have also extended the proposed analysis to the case of *want*-type verbs in Indonesian. I have argued that the proposed analysis accounts for the two interpretations available with the *want*-type verbs, without assuming that these verbs are lexically ambiguous between control and raising.

Our findings strongly suggest that the control/raising analysis may not be the best analysis for aspectual verbs. Rather, they should be analyzed to have their own places in the phrase structure, just like tense is assumed to have. As such, the proposed analysis shares its insight with studies that argue syntactic projections of aspect, such as Travis (1991), Borer (1994), Ramchand (1997), as well as Cinque (1999, 2003, 2004). Moreover, the extension of the proposed analysis to account for the case of *want*-type verbs in Indonesian suggests that a structural account, such as one outlined in this study, may be suitable to other classes of verbs which have also been analyzed to be ambiguous between control and raising.<sup>31</sup> In fact, one may wonder, given the findings presented in this study, if there is a true instance of lexical ambiguity between control and raising.

---

31 Once again, I leave the question of exactly where *want*-type verbs can occupy for future research. Relevant discussions can be found in the recent literature on restructuring verbs, as there have been debates over whether restructuring verbs are always functional (Cinque 2004) or can also be lexical (Wurmbrand 2004).

## Abbreviations

ABS	absolutive	ERG	ergative
ACC	accusative	IMP	imperative
ACT	active	NF	nonfinite
AGR <sub>A</sub>	absolutive agreement	NOM	nominative
AGR <sub>D</sub>	dative agreement	PART	participle
AGR <sub>E</sub>	ergative agreement	PASS	passive
APPL	applicative	PERF	perfective
AUX	auxiliary	PL	plural
COMP	complementizer	SG	singular
DAT	dative		

## References

- Aissen, J. & D. Perlmutter. (1983). Clause reduction in Spanish. In: D. Perlmutter (ed.), *Studies in Relational Grammar 1*. Chicago: The University of Chicago Press, 360-403.
- Alexiadou, A. & E. Anagnostopoulou. (1999). Raising without infinitive and the nature of agreement. *WCCFL 18*, 14-26.
- Arregi, K. & G. Molina-Azaola. (2004). Restructuring in Basque and the theory of agreement. *WCCFL 23*, 101-114.
- Borer, H. (1994). The projection of arguments. In: E. Benedicto & J. Runner (eds.), *Functional projections: university of Massachusetts occasional papers 17*, 19-48.
- Boecks, C. & N. Hornstein. (2003). Reply to "Control Is Not Movement". *Linguistic Inquiry 34*, 269-280.
- Bresnan, J. (2001). *Lexical-Functional Syntax*. Oxford: Blackwell.
- Burzio, L. (1986). *Italian Syntax*. Dordrecht: Reidel.
- Butler, J. (2003). A minimalist treatment of modality. *Lingua 113*, 967-96.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, Mass: MIT Press.
- Chomsky, N. (2000). Minimalist inquiries: the framework. In: R. Martin, D. Michaels, J. Uriagereka (eds.), *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, Mass: MIT Press, 89-155..
- Chomsky N. (2001). Derivation by phrase. In: M. Kenstowicz (ed.), *Ken Hale: Life in Language*. Cambridge, Mass: MIT Press, 1-52..
- Chomsky, N. & H. Lasnik. (1993). The Theory of Principle and Parameters. In: J. Jacobs, A. von Stechow, & W. Sternfeld (eds.), *Syntax: an international handbook of contemporary research*. Berlin: Walter de Gruyter, 506-69.
- Cinque, G. (1999). *Adverbs and Functional Heads: a cross-linguistic perspective*. Oxford: Oxford University Press.
- Cinque, G. (2003). The interaction of passive, causative, and "restructuring" in Romance. In: C. Tortora (ed.), *The Syntax of Italian Dialects*. Oxford: Oxford University Press.
- Cinque, G. (2004). "Restructuring" and functional structure. In: A. Belletti (ed.), *Structures and Beyond. The Cartography of Syntactic Structures, vol. 3*. Oxford: Oxford University Press, 132-191.

- Culicover, P. & R. Jackendoff. (2001). Control is not movement. *Linguistic Inquiry* 32, 493-512.
- Davies, W. D. & S. Dubinsky. (2003). Raising (and Control). state-of-article. *Glow International* 7.
- Den Dikken, M., R. Larson & P. Ludlow. (1996). Internal 'transitive' verbs and concealed complement clauses. *Rivista di Linguistica* 8.2., 331-348.
- Dowty, D. (1979). *Word Meaning and Montague Grammar*. London: Reidel
- Falk, Y. N. (2001). *Lexical-Functional Grammar: an Introduction to Parallel Constraint-Based Syntax*. Stanford: CSLI.
- Fukuda, S. (2006). The syntax of Japanese aspectual verbs. A paper presented at 3<sup>rd</sup> Workshop on Altaic in Formal Linguistics.
- Hornstein, N. (1999). Movement and control. *Linguistic Inquiry* 30, 69-96.
- Hornstein, N. (2003). On control. In R. Hendrick (ed.), *Minimalism Syntax*. Oxford: Blackwell, 6-81.
- Hualde, J. I. & J. O. de Urbina. (2003). *A Grammar of Basque*. Berlin: Mouton de Gruyter.
- Jackendoff, R. & P. Culicover. (2003). The semantic basis of control in English. *Language* 79, 517-556.
- Kageyama, T. (1993). *Bumpo to gokeisei* [Grammar and word formation], Tokyo: Hitsuji shoboo.
- Kageyama, T. (1999). Word formation. In N. Tsujimura (ed.), *The Handbook of Japanese Linguistics*. Oxford: Blackwell, 297-325.
- Kayne, R. S. (1980). On certain differences between French and English. *Linguistic Inquiry* 12, 349-72.
- Koizumi, M. (1998). Invisible agree in Japanese. *The Linguistic Review* 15, 1-39.
- Kratzer, A. (1994). On external arguments. In E. Benedicto & J. Runner (eds.), *Functional Projections: University of Massachusetts Occasional Papers 17*, 103-130.
- Kratzer, A. (1996). Severing the external argument from the verb. In J. Rooryck and L. Zaring (eds.), *Phrase Structure and the Lexicon*, Dordrecht: Kluwer.
- Kuno, S. (1987). Honorific marking in Japanese and the word formation hypothesis of causatives and passives. *Studies in Language* 11.1, 99-128.
- Lamiroy, B. (1987). The complementation of aspectual verbs in French. *Language* 63, 278-98.
- Landau, I. (2000). *Elements of Control: Structure and Meaning in Infinitival Constructions*. Dordrecht: Kluwer.
- Landau, I. (2003). Movement out of control. *Linguistic Inquiry* 34, 471-498.
- Landau, I. (2004). The scale of finiteness and the calculus of control. *Natural Language and Linguistic Theory* 22, 811-77.
- Martin, R. (2001). Null case and the distribution of PRO. *Linguistic Inquiry* 32, 141-166.
- Matsumoto, Y. (1996). *Complex predicates in Japanese: a syntactic and semantic study of the notion 'word'*, Tokyo and Stanford: Kuroshio and CSLI
- Moore, J. (1996). *Reduced Constructions in Spanish*. New York: Garland.
- Newmeyer, F. J. (1975). *English Aspectual Verbs*. Paris: Mouton.
- Nishigauchi, T. (1993). Long distance passive. In N. Hasegawa (ed.), *Japanese Syntax in Comparative Grammar*. Tokyo: Kuroshio, 79-114.
- O'Neil, J. (1995). Out of control. *NELS* 25, 361-71.

- Perlmutter, D. (1968). *Deep and Surface Structure Constraints in Syntax*. PhD. Dissertation. MIT.
- Perlmutter, D. (1970). The two verbs *begin*. In Jacobs & P. Rosenbaum (eds.), *Readings in English Transformational Grammar*. Waltham, Mass: Blaisdell Publishing Company, 107-19.
- Polinsky, M. & E. Potsdam. (2006). The syntax and semantics of wanting in Indonesian. A paper presented at 10<sup>th</sup> International Symposia on Malay/Indonesian Linguistics.
- Polinsky, M. & E. Potsdam. (2006). Expanding the scope of control and raising. *Syntax* 9.2, 171-192.
- Pollard, C. & I. A. Sag (1994). *Head-driven Phrase Structure Grammar*. Chicago: The University of Chicago Press.
- Pylkäänen, L. & B. McElree. (to appear). The syntax-semantics interface: On-line composition of sentence meaning. In: M. Traxler & M.A. Gensbacher (eds.), *Handbook of Psycholinguistics*. New York: Elsevier.
- Ramchand, G. C. (1997). *Aspect and predication: the semantics of argument Structure*. Oxford: Clarendon Press.
- Rizzi, L. (1982). A Restructuring Rule. *Issues in Italian Syntax*. Dordrecht: Foris.
- Rizzi, L. (1991). *Relativized Minimality*. Cambridge, Mass.: MIT Press.
- Rochette, A. (1999). The selection properties of aspectual verbs. In Johnson, K. & I. Roberts (eds.), *Beyond Principles and Parameters: essays in memory of Osvaldo Jaeggli*. Dordrecht: Kluwer.
- Ruwet, N. (1991). *Syntax and Human Experience*. Chicago: The University of Chicago Press.
- Sag, I. A. & T. Wasow. (1999). *Syntactic Theory: a Formal Introduction*. Stanford: CSLI.
- Schroten, J. (1986). Ergativity, raising, and restructuring in the syntax of Spanish aspectual verbs. *Linguisticae Investigationes* 2, 439-465.
- Shibatani, M. (1973). Where morphology and syntax clash: a case in Japanese aspectual verbs. *Gengo Kenkyu* 64, 65-96.
- Shibatani, M. (1978). *Nihongo No Gunseki*, Tokyo:Taishukan.
- Travis, L. (1991). Derived objects, inner aspect, and the structure of VP. A paper presented at NELS 21.
- Vamarasi, M. K. (1999). *Grammatical Relations in Bahama Indonesia*. Canberra: Pacific Linguistics.
- Wurmbrand, S. (1999). Modal verbs must be raising verbs. *WCCFL* 18, 599-612.
- Wurmbrand, S. (2001). *Infinitives: Restructuring and Clause Structure*. Berlin: Mouton de Gruyter.
- Wurmbrand, S. (2004). Two types of restructuring – Lexical vs. functional. *Lingua* 114, 991-1014.