Semantic consequences of syntactic subject licensing: Aspectual predicates and concealed modality[1]

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Abstract. Across a typologically diverse range of languages, aspectual verbs like *begin* and *continue* uniformly accept controlled complements (e.g., *Kim began to open the door*) but reject overt-subject complements (e.g., **Kim began for Sandy to open the door*). This paper explains this pattern by assigning more meaning to the complement clause than is typically assumed, couched in Kratzer's (2006) decompositional approach to attitude predicates and drawing on a long tradition of work on the semantics of infinitives. In particular, I propose that the licensing of overt subjects in *for-to* complements (and their cross-linguistic kin such as Greek subjunctives) involves a covert modal whose flavor renders such complements semantically incompatible with aspectual verbs.

Keywords: control, attitudes, modality, embedding, aspectual verbs

1. Introduction

By definition, complement control involves a syntactic configuration in which a single overtly expressed argument binds two distinct participant roles, one associated with the embedding predicate and one associated with the subject position of the embedded constituent. In all of the sentences in (1), for example, *Kim* names both the attitude-holder associated with the (bolded) matrix attitude predicate as well as the unexpressed subject of the (bracketed) embedded constituent.

(1) a. Kim **wanted** [to read the book].
     b. Kim **was glad** [to leave].
     c. Kim **regretted** [leaving].
     d. Kim **wondered** [how to help].
     e. Kim **claimed** [to be an expert].

Given the distinctness of the two participant roles that are tied together in a control configuration, it should come as no surprise that a great many control sentences have non-control variants in which each of the two relevant participant roles is linked to its own unique, overtly expressed argument. The sentences in (1), for example, can all be manipulated to yield the variants in (2), where, with various kinds of syntactic adjustments, it is possible to supply the embedded constituent with its own referentially independent subject, in this case *Sandy*.

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(2) a. Kim **wanted** [Sandy to read the book].

    b. Kim **was glad** [for Sandy to leave].

    c. Kim **regretted** [Sandy leaving].

    d. Kim **wondered** [how Sandy could help].

    e. Kim **claimed** [that Sandy was an expert].

The starting point for this paper is the observation that not all control predicates participate in this kind of alternation. In particular, there are at least three kinds of control predicates that resist a non-control syntax to one degree or another. First, there is a class of subject-control predicates including *try* and *decide* which have to do with naming a commitment on the part of the attitude-holder to carry out some action (what Sag and Pollard 1991 call *promise*-type verbs), as in (3). Even more marginal with overt embedded subjects are object-control predicates, such as *persuade* and *beg*, as illustrated in (4). Finally, aspectual predicates like *begin* and *continue* robustly reject overt embedded subjects, as illustrated in (5).

(3) a. Kim **tried** [(?for Sandy) to sing].

    b. Kim **decided** [(?for Sandy) to sing].

(4) a. Kim **persuaded** Sandy [(??for Bill) to sing].

    b. Kim **begged** Sandy [(??for Bill) to sing].

(5) a. Kim **began** [(*for Sandy) to sing].

    b. Kim **continued** [(*for Sandy) to sing].

The focus of this paper is specifically on the aspectual verbs: Why do aspectual verbs disallow non-controlled/overt-subject complements? In a nutshell, the answer that I will propose is that we need to pay careful attention to what it is that licenses an overt subject. In English, the complementizer *for* syntactically licenses an overt subject in an infinitive, but, I argue, this complementizer contributes a modal semantics that renders it incompatible with aspectual verbs.

The proposed analysis intersects with at least three themes that are of broader significance than the specific puzzle in (5). First, it provides support for a Kratzer-style decompositional approach to embedding (Kratzer, 2006, 2013; Moulton, 2009, 2015; Bogal-Allbritten, 2016) and synthesizes this approach with an independently long tradition of work on the semantics of infinitives (see especially Bresnan 1972; Stowell 1982; Pesetsky 1992; Portner 1997; Bhatt 1999). Second, the analysis has repercussions for the debate over whether some kinds of aspect have a modal dimension. If the analysis in this paper is on the right track, then aspectual verbs, and possibly the grammatical category of aspect more generally, are either not modal at all or at the very least involve some kind of modality importantly different from (other kinds of) root modality. Finally, a third general theme of this paper has to do with the utility of shifting some of the explanatory

burden of complementation facts off the syntax proper and onto principles of interpretive semantics. To the extent that all of the semantic pieces are independently motivated, we can simplify our theory of syntax by letting it generate certain kinds of deviant sentences, since the deviance is fully predicted by the semantic component alone.

The organization of the rest of the paper is as follows. In section 2, I provide some justification for singling out aspectual verbs to the exclusion of other control verbs that resist overt embedded subjects. In section 3, I show that a raising-only analysis of aspectual verbs, while initially an appealing explanation for the puzzle, ultimately fails. Section 4 turns to the semantics of *for-to* infinitives and argues that they have a modal component, and in section 5, I implement the analysis in a Kratzer-style decompositional approach to embedding. Section 6 then shows how the analysis helps to make sense of the aspectual verb data, and section 7 offers some remarks on how the analysis might scale up to make sense of other complementation facts both in English and in other languages. Finally, section 8 concludes.

2. Some justification for singling out aspectual verbs

As already noted, aspectual verbs like *begin* are not the only kind of control verbs that resist overt embedded subjects; *try* is another familiar example of such a verb. But *try* differs from *begin* along at least three dimensions. The first has to do with degree of unacceptability: (6) is marginally acceptable whereas (7) is fully unacceptable.

(6) Kim **tried** (?for Sandy) to sing.

(7) Kim **began** (*for Sandy) to sing.

The second has to do with interpretability. To the extent that it is acceptable, (6) is interpretable along the lines suggested by (8), whereby the matrix subject is understood to play a causal role in effecting the outcome named by the complement. (See also Perlmutter 1968; Jackendoff and Culicover 2003; Grano 2015, 2016, who make a similar observation about *intend*.) By contrast, (7) has no coherent interpretation; as shown in (9), it cannot be interpreted using the strategy that works for *try*.

(8) Kim **tried** for Sandy to sing.
    ≈ Kim tried *to bring it about that* Sandy sing.

(9) Kim **began** for Sandy to sing.
    ≠ Kim began *to bring it about that* Sandy sing.

Finally, the third difference has to do with cross-linguistic uniformity. In some languages, such as Greek, and in some dialects of English (Henry, 1995), overt embedded subjects under *try* are

reported to be fully acceptable, whereas this is not the case for *begin*. In languages as typologically far removed from each other as Mandarin Chinese (10) and Greek (11), overt embedded subjects are ungrammatical under *begin*.

(10) Zhangsan kaishi (*Lisi) kai   men.
     Zhangsan begin Lisi   open door
     'Zhangsan began (*for Lisi) to open the door.'   MANDARIN CHINESE

(11) O Yanis arxise na   anoigi tin porta (*i Maria).
     the Yanis began SBJV opens the door the Maria
     'Yanis began (*for Maria) to open the door.'   GREEK

Table 1, taken from Grano 2015, summarizes the acceptability of overt embedded subjects for three verbs across six languages. In the case of 'want', an overt embedded subject is always acceptable, as long as the syntax of the language is respected. By contrast, 'try' exhibits variable acceptability, and 'begin' exhibits uniform unacceptability.

	English	French	Mandarin	Greek	Hebrew	Spanish
want	✓	✓	✓	✓	✓	✓
try	%	*	*	✓	✓	✓
begin	*	*	*	*	*	*

Table 1: Crosslinguistic availability of overt embedded subjects (taken from Grano 2015)

Taken together, these three considerations suggest that the deviance of overt embedded subjects under aspectual verbs has a different source from that of the (marginal) deviance of overt embedded subjects under verbs like *try*. In what follows, I focus exclusively on aspectual verbs.

3. Against a raising-only explanation for the puzzle

Data like (12) show that aspectual verbs can be used as raising predicates; i.e., there is not always a thematic dependency between the aspectual predicate and its subject. The subject can be expletive *it* (12a) or expletive *there* (12b) or an idiom chunk (12c).

(12) a. It began to rain.
     b. There continued to be trouble.
     c. The shit started to hit the fan.

If aspectual verbs were *always* raising predicates (as argued by, e.g., Rochette 1999), then their incompatibility with overt-subject complements (i.e., the central puzzle of this paper) would be

fully expected and predicted and not actually a puzzle at all. In a sentence like (13), *Sandy* binds the participant role associated with embedded predicate *sing*, and on a raising analysis of *begin*, there would be no participant role for the matrix subject *Kim* to bind, thereby resulting in grammatical deviance.

(13)   *Kim began for Sandy to sing.

In what follows, however, I show that a raising-only analysis of aspectual verbs is untenable, following Perlmutter (1970); Landau (2013). In particular, aspectual verbs pattern like control predicates and unlike raising predicates with respect to a number of properties.

The first relevant property is complement drop. Jacobson (1992) generalized that whereas some control predicates can appear without a complement if the context supports recovery of the missing material, raising predicates can never do this. As observed by Landau (2013) (see also Perlmutter 1970 for a similar observation), aspectual verbs pattern like control verbs and unlike raising verbs in admitting complement drop. This is illustrated in (14)–(16). (14) shows that some but not all control predicates admit complement drop: *try*, *promise*, and *refuse* do whereas *want* does not. (15) shows that raising predicates do not. Crucially, (16) shows that aspectual verbs pattern like control verbs in admitting complement drop.

(14)   CONTROL
    a. Kim {tried / promised / refused} to read the book but I don't think Sandy {tried / promised / refused}.
    b. *Kim wanted read the book but I don't think Sandy wanted.

(15)   RAISING
    a. *Kim happened to read the book but I don't think Sandy happened.
    b. *Kim wound up reading the book but I don't think Sandy wound up.
    c. *Kim {seemed / appeared} to be happy but I don't think Sandy {seemed / appeared}.
    d. *Kim turned out to need surgery but I don't think Sandy turned out.
    e. *Kim grew to love Beethoven but I don't think Sandy grew.

(16)   ASPECTUAL
    a. Kim {started / began / continued} to read the book but I don't think Sandy {started / began / continued}.
    b. Kim {stopped / finished} reading the book but I don't think Sandy {stopped / finished}.

The remaining properties all relate to agent-sensitivity: there are a number of syntactic configurations that only support predicates that bear an agentive thematic relation to their subject. If a predicate is comfortable in such a configuration it means that it bears an agentive thematic relation

to its subject, so we expect (agentive) control predicates to be possible in such configurations, but not raising predicates, which by definition bear no thematic relation at all with their subject.

The first two examples of this are both due to Perlmutter (1970): control (17) but not raising predicates (18) can be used to form imperatives, and aspectual verbs pattern with control verbs here (19).

(17) CONTROL
    a. {Try / Promise} to read the book!
    b. Refuse to help them!
    c. Decide to be great!

(18) RAISING
    a. *Happen to read the book!
    b. *Wind up reading the book!
    c. ?Grow to love Beethoven!

(19) ASPECTUAL
    a. {Start / Begin / Continue} to read the book!
    b. {Stop / Finish} reading the book!

Second, as also observed by Perlmutter (1970), control (20) but not raising predicates (21) can be embedded under *persuade*, and here again aspectual verbs pattern with control verbs (22).

(20) CONTROL
    a. Kim persuaded Sandy to {try / promise / refuse / decide} to read the book.
    b. Kim persuaded Sandy to decide to be great.

(21) RAISING
    a. *Kim persuaded Sandy to happen to read the book.
    b. *Kim persuaded Sandy to wind up reading the book.
    c. ?Kim persuaded Sandy to grow to love Beethoven.
    d. *Kim persuaded Sandy to {seem / tend} to be happy.

(22) ASPECTUAL
    a. Kim persuaded Sandy to {start / begin / continue} to read the book.
    b. Kim persuaded Sandy to {stop / finish} reading the book.

Third, as observed by Landau (2013), control (23) but not raising predicates (24) support VP pseudoclefting, and here as well, aspectual verbs pattern like control predicates (25).

(23) CONTROL

    a. What Kim did was {try / promise / refuse} to read the book.

    b. What Kim did was decide to be great.

(24) RAISING

    a. ?What Kim did was happen to read the book.

    b. ?What Kim did was wind up reading the book.

    c. ?What Kim did was grow to love Beethoven.

(25) ASPECTUAL

    a. What Kim did was {start / begin / continue} to read the book.

    b. What Kim did was {stop / finish} reading the book.

Fourth and finally, control (26) but not raising predicates (27) are compatible with agent-oriented adverbs, and as expected, aspectual verbs pattern like control predicates (28) with respect to this property as well.

(26) CONTROL

    a. Kim eagerly/reluctantly {tried / promised / refused / decided} to read the book.

    b. Kim eagerly/reluctantly claimed to be happy.

(27) RAISING

    a. *Kim eagerly/reluctantly happened to read the book.

    b. *Kim eagerly/reluctantly wound up reading the book.

    c. *Kim eagerly/reluctantly grew to love Beethoven.

    d. *Kim eagerly/reluctantly tended to always be late.

(28) ASPECTUAL

    a. Kim eagerly/reluctantly {started / began / continued} to read the book.

    b. Kim eagerly/reluctantly {stopped / finished} reading the book.

The interim conclusion here is that aspectual verbs are raising/control-ambiguous, and so we cannot explain their resistance to overt-subject complements by appealing to a raising-only analysis. The raising/control ambiguity analysis of aspectual verbs is supported also by cross-linguistic evidence: see Polinsky and Potsdam 2002 on Tsez and Davison 2008 on Hindi.

4. The meaning of *for-to* infinitives

The idea that at least certain classes of infinitives in English have a semantics that distinguish them systematically from finite clauses is not new: work in this vein includes research on complement infinitives (Kiparsky and Kiparsky, 1970; Bresnan, 1972; Carstairs, 1973; Bach, 1977; Stowell,

1982; Pesetsky, 1992; Portner, 1992, 1997; Barker, 2002) as well as relative infinitives (Kjellmer, 1975; Bhatt, 1999; Hackl and Nissenbaum, 2012) and *too/enough* infinitives (Hacquard, 2005; Nissenbaum and Schwarz, 2008; Marques, 2012).

Bresnan (1972) in particular hypothesizes that *for-to* infinitives express "subjective reason or cause" (p. 80) or "purpose, use, or goal" (p. 81). She furthermore suggests that "[t]he concepts of reason and purpose are semantically related, both implying motivation, and both implying directionality, whether from a source or toward a goal" (p. 81). The purpose- or goal-oriented sense of *for-to* infinitives is found with predicates of desire, commitment, or influence, as in (29). The reason- or cause-oriented sense, on the other hand, is found with emotive factive predicates, evaluative predicates, and predicates that have to do with deontic modality, as in (30).[2]

(29)   a. John wanted very much **for** Bill to be a doctor.

         b. John intended **for** Bill to be a doctor.

         c. John demanded **for** Bill to help out.

(30)   a. John was thrilled **for** Bill to get an A on the test.

         b. It was stupid **for** Bill to be a doctor.

         c. It was illegal **for** Bill to be a doctor.

With epistemic verbs like *claim* and *believe*, on the other hand, *for-to* infinitives are ruled out, as seen in (31).

(31)   a. *John claimed **for** Bill to be a doctor.

         b. *John believed **for** Bill to be a doctor.

The data seen so far seem to fit well with the hypothesis that *for-to* infinitives are acceptable in contexts of PRIORITY modality in the sense of Portner (2009). Portner proposes that modality comes in three main categories as illustrated in (32). Whereas epistemic modality has to do with knowledge, priority modality has to do with "reasons for preferring one situation over another" (Portner 2009:184) and subsumes the more specific subtypes deontic, bouletic, and teleological. The third category, dynamic modality, subsumes both volitional modality and quantificational modality.

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[2]A puzzle associated with infinitival complements to emotive factives is that when the predicate is a verb rather than an adjective, the sentence sounds odd (1a) unless it is construed habitually (1b) or conditionally (1c). See Carstairs 1973; Pesetsky 1992; Portner 1997 for relevant discussion.

(1)   a. ??Yesterday John liked **for** Bill to help.

        b. John always liked **for** Bill to help.

        c. John would like **for** Bill to help.

(32) Portner's (2009) classification of modality
   a. *Epistemic*
   b. *Priority*: Deontic, Bouletic, Teleological
   c. *Dynamic*: Volitional [ability, opportunity, dispositional], Quantificational

However, the hypothesis that *for-to* infinitives are restricted to contexts of priority modality is too strong: in the data in (33), we see that *for-to* infinitives are acceptable in contexts that do not involve any kind of ranking of preferences but rather involve classic circumstantial modality or what for Portner would fall under the dynamic category of modality.

(33)   a. It was possible **for** hydrangeas to grow here.
       b. It was necessary **for** Bill to sneeze.

When we look at complementation with nouns, we see the exact same pattern: *for-to* infinitives are unacceptable as complements to nouns that have to do with epistemic modality (34) but acceptable as complements to nouns that have to do with priority modality (35) or dynamic modality (36).

(34) EPISTEMIC
   a. *the belief **for** hydrangeas to grow here
   b. *the knowledge **for** hydrangeas to grow here

(35) PRIORITY
   a. the requirement **for** John to leave
   b. the desire **for** John to leave
   c. the goal **for** John to leave

(36) DYNAMIC
   a. the ability **for** John to leave
   b. the opportunity **for** John to leave
   c. the disposition **for** John to leave
   d. the potential **for** there to be trouble
   e. the potential **for** hydrangeas to grow here

In summary, the interim conclusion of this section is that *for-to* infinitives are acceptable in contexts of priority and dynamic modality but not epistemic modality.

5. Implementation

Following Kratzer (2006), suppose attitude predicates do not introduce quantification over worlds but rather are simply predicates of eventualities, as in (37). I assume here as well that attitude predicates introduce their own external argument, though this is not crucial in what follows: it could be that the external argument is introduced by a voice head. I also assume here — inconsequentially — that beliefs and desires have experiencers (abbreviated to EXP in the formulae) whereas claims have agents (abbreviated to AG).

(37)   a. $[[believe]] = \lambda x \lambda s.belief(s) \wedge EXP(s)=x$
        b. $[[want]] = \lambda x \lambda s.want(s) \wedge EXP(s)=x$
        c. $[[claim]] = \lambda x \lambda s.claim(s) \wedge AG(s)=x$

Still following Kratzer, suppose that the modality found in attitude reports comes from functional heads in the left periphery of the embedded clause that map "entities that determine intensional content to the set of possible worlds that are compatible with that content" (Kratzer 2013:slide 51). In a sentence like (38), for example, the left periphery of the complement clause *it's raining* contains the silent modal defined in (39). This modal combines with the proposition *it's raining* to yield the set of states such that all those worlds compatible with the content of the state are worlds where it is raining. This then combines with the matrix predicate via Restrict in the sense of Chung and Ladusaw 2004. Crucially, Restrict has as a consequence that the state variable introduced by the attitude predicate and the state variable introduced by the modal are identified. This means that the state used to build the restriction of the modal is a belief state, so that what we ultimately get is the assertion that all those worlds compatible with the relevant individual's beliefs are worlds in which it is raining, just like in a standard Hintikkan approach to attitude reports.

(38)   John believes it's raining

(39) $[[\emptyset_{say}]] = \lambda p \lambda s.\forall w' \in f_{content}(s):p(w')$ (where s is a mental state or speech event)

(40) $\lambda x \lambda s.believe(s) \wedge EXP(s)=x \wedge \forall w' \in f_{content}(s):it's\ raining\ in\ w'$

        believe $\lambda s.\forall w' \in f_{content}(s):it's\ raining\ in\ w'$

              $\emptyset_{say}$ it's raining

A feature of this approach that will be crucial for my purposes is that the modal functional heads in the left periphery of the complement clause come in different flavors, each of which can impose

its own kind of selectional restrictions. In addition to the modal defined above in (39), Kratzer (2013) proposes that there is another one associated with the German reportative subjunctive that comes along with the presupposition that "the speaker is not committed to the truth of p", as in (41), as well as one associated with the German modal *sollen*, which "requires anchors like rumors, reports, claims; rejects mental states", as in (42).

(41) $[[\text{German reportative subjunctive}]] = \lambda p \lambda s. \forall w' \in f_{content}(s):p(w')$
where "the speaker is not committed to the truth of p" (Kratzer 2013:slide 60)

(42) $[[\text{sollen}]] = \lambda p \lambda s. \forall w' \in f_{content}(s):p(w')$
"requires anchors like rumors, reports, claims; rejects mental states" (Kratzer 2013:slide 58)

Adopting Kratzer's framework, Bogal-Allbritten (2015) proposes that the Navajo morphemes *sha'shin* and *laanaa* are overt instantiations of modals that are restricted to belief anchors and desires anchors respectively, as in (43).

(43) a. $[[\text{sha'shin}]] = \lambda p \lambda s. \forall w' \in \text{BELIEF}(s):p(w')$
      b. $[[\text{laanaa}]] = \lambda p \lambda s. \forall w' \in \text{DESIRE}(s):p(w')$ (adapted from Bogal-Allbritten 2015)

Against this backdrop, let ROOT be an accessibility function with a selectional restriction that excludes epistemic anchors but allows priority and dynamic anchors. Then I propose that the English infinitival complementizer *for* has the denotation in (44), combining with an ordinary proposition like (45) and returning the property of states in (46).

(44) $[[\text{for}]] = \lambda p \lambda s. \forall w' \in \text{ROOT}(s):p(w')$

(45) $[[\text{Bill to leave}]] = \lambda w.\text{Bill leaves in } w$

(46) $\lambda s. \forall w' \in \text{ROOT}(s):\text{Bill leaves in } w'$

The consequences of this setup for the complementation facts are as follows. Wanting states are appropriate anchors for ROOT, so a structure like (47) is interpretable: it will be true of an individual and a state just in case the state is a wanting experienced by the relevant individual, and all those worlds compatible with the content of the state are worlds where Bill leaves. (I ignore here the complication that desire reports involving *want* most likely need to be relativized both to a modal base and to an ordering source that involves ranking of preferences — see especially Heim 1992; von Fintel 1999; Giannakidou 1999; Villalta 2008; Anand and Hacquard 2013 — a complication which presumably could be dealt with via an appropriately articulated semantics for the ROOT function.)

(47) $\lambda x\lambda s.\textbf{want(s)} \wedge \text{EXP}(s)=x \wedge \forall w' \in \text{ROOT}(s):\text{Bill leaves in } w'$

$\quad$ want $\qquad \lambda s.\forall w' \in \text{ROOT}(s):\text{Bill leaves in } w'$

$\qquad\qquad$ for

$\qquad\qquad$ Bill to leave
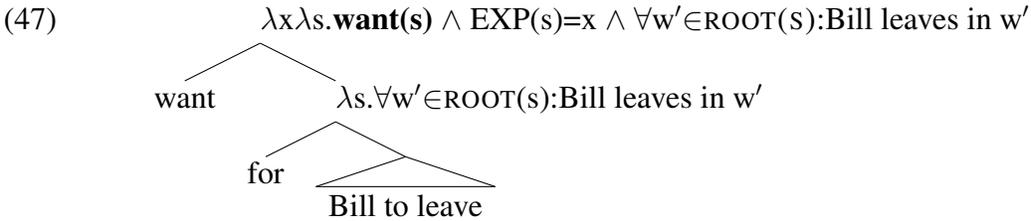
Claiming states, on the other hand, because they have to do with epistemic modality, are not appropriate anchors for ROOT, so a structure like (48) is not interpretable. (48) is freely built in the syntax, but crashes in the interpretive component of the grammar because of the selectional restriction violation induced by the identification of the state variable that ROOT applies to with the state variable that **claim** applies to.

(48) $\lambda x\lambda s.\textbf{claim(s)} \wedge \text{EXP}(s)=x \wedge \forall w' \in \text{ROOT}(s):\text{Bill leaves in } w'$

$\quad$ claim $\qquad \lambda s.\forall w' \in \text{ROOT}(s):\text{Bill leaves in } w'$

$\qquad\qquad$ for

$\qquad\qquad$ Bill to leave
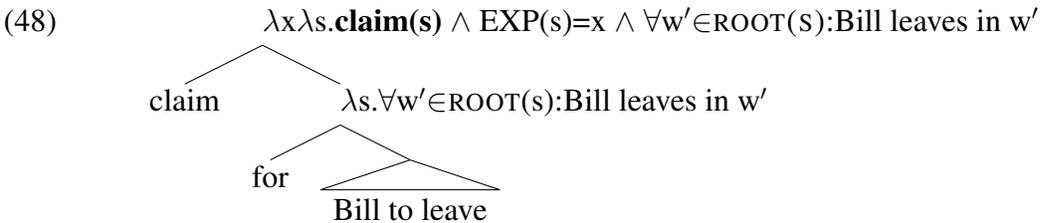
6. Back to aspectual verbs

The central proposal of this paper is that the ungrammaticality of *for-to* complements under *claim*, as in (49a), has the same source as the ungrammaticality of *for-to* complements under aspectual verbs, as in (49b); in particular, the infinitival complementizer *for* contributes a modal semantics that renders it incompatible with both kinds of predicates.

(49) a. *John claimed for Bill to open the door.
$\qquad$ b. *John started for Bill to open the door.

Why would aspectual verbs be incompatible with the modality introduced by *for*? Possibly, the state variable introduced by aspectual verbs does not determine intensional content; i.e., aspectual verbs are not modal at all. But this option stands in tension with the observation that aspectual verbs give rise to the same kind of 'imperfective paradox' behavior that motivates modal accounts of the progressive. This is illustrated in (50).

(50) a. John began/continued to cross the street but a bus hit him before he finished.
$\qquad$ b. John began/continued to draw a circle, but he stopped before there was a circle.

This leaves us with two analytical options. On the one hand, it could be that aspectual verbs describe states that determine intensional content (i.e., they are modal), but the modality differs from other kinds in a way that renders it incompatible with the ROOT accessibility function. The other option to consider is that aspectual verbs describe states that do not determine intensional content (i.e., they are not modal). These two options roughly correspond to the two families of approaches to progressive semantics, those in the modal family (Dowty, 1977, 1979; Landman, 1992; Bonomi, 1997; Portner, 1998) and those in the non-modal family (Parsons 1990; Szabó 2004, 2008; Silk 2015; cf. also Giannakidou 2013). (See also Piñango and Deo (2015) for a non-modal account of aspectual verbs.)

These two options then have repercussions for the proper analysis of the ROOT accessibility function. On the one hand, it could be that ROOT is defined negatively in being compatible with any kind of modality other than epistemic modality; such a view would entail that aspectual verbs are not modal. On the other hand, it could be that ROOT is defined positively: it is compatible with priority and dynamic modality (or whatever turns out to be the relevant category or categories); such a view would be compatible both with the position that aspectual verbs are not modal at all or with the view that aspectual verbs instantiate a kind of modality that falls outside the purview of ROOT. These two hypotheses are spelled out in (51)–(52).

(51) **Hypothesis A:** ROOT is defined negatively (any kind of modality other than epistemic); aspectual verbs are not modal.

(52) **Hypothesis B:** ROOT(s) is defined positively; aspectual verbs are either not modal or fall into some category of modal outside ROOT(s).

7. Scaling up

7.1. Other complementation options

On the analysis sketched above, the unacceptability of sentences like (53) has nothing to do with the presence of the overt embedded subject *per se*; rather, the problem has to do with the semantics of *for*.

(53) *John began for Bill to open the door.

A natural question to ask, then, is what happens when we try alternative strategies for licensing an overt embedded subject under *begin*. As seen in the data in (54)–(56), other potential strategies fail as well: *begin* rejects finite complements (55), ECM complements (55), and overt-subject gerundive complements (56).

(54) *John began that Bill opened the door.   FINITE COMPLEMENTATION

(55) *John began Bill to open the door.   ECM

(56) *John began Bill opening the door.   GERUNDIVE COMPLEMENT

I would like to suggest that the rejection of finite complements and ECM complements can both be understood along the same lines as the rejection of *for-to* complements. In particular, following Kratzer (2013) as reviewed above, the covert modal in a finite complement requires an anchor that denotes a mental state or a speech event. Regardless of what kind of state variable an aspectual verb contributes, it is uncontroversially neither a mental state nor a speech event. Consequently, sentences like (54) are uninterpretable. Similarly, Moulton (2009) has argued that ECM clauses always contribute epistemic modality. This proposal is based in part on the observation that perception verbs admit ECM complements, but do so in a way that reports a belief on the part of the perceiver (57), unlike what happens when a perception verb takes a gerundive complement (58)

(57)   Martha saw Fred to be driving too fast, #but she believed he wasn't.

(58)   Martha saw Fred driving too fast, but she believed he wasn't. (Moulton 2009:128–129)

Consequently, my suggestion is that whereas the state variable introduced by *see* can be construed in a way that builds epistemic alternatives, the state variable introduced by an aspectual verb cannot, and we thereby predict uninterpretability for sentences like (55).

Finally, the unacceptability of (56) is more puzzling: *begin* freely accepts controlled gerundive complements, as in *John began opening the door*. Why can we not understand (56) to mean that John was the agent of an event that constituted the onset of an event of Bill opening the door? Although I do not have an explanation for this, it bears noting that if we manipulate the choice of the aspectual verb and the embedded predicate, it is sometimes possible to get a grammatical result, as in (59).

(59)   a. John started Bill smoking.
       b. John kept the candle burning.

I leave the contrast between (56) and (59) as an open puzzle. But I also take the data in (59) as support for the overall proposal that there is in principle no barrier to having an overt embedded subject under an aspectual verb.

7.2. Other languages

As stated in section 2 above, aspectual verbs disallow different-subject complements not just in English but across typologically diverse languages such as Mandarin and Greek. Consequently, my suggestion is that in these languages as well, overt-subject licensing is bound up with a modality-introducing functional head, albeit not always overt. This suggestion has interesting consequences especially for languages like Greek that lack nonfinite complementation. Given the contrast between (60a) and (60b), not all Greek *na*-clauses are created equal: *na*-clauses with overt subjects have the characteristic *for-to* semantics that render them incompatible with aspectual verbs, whereas *na*-clauses with controlled subjects have a wider distribution akin to English controlled infinitives.

(60)   a. O   Yanis arxise na   anoigi tin porta.
           the Yanis began SBJV opens the door
           'Yanis began to open the door.'

       b. *O Yanis arxise na   anoigi tin porta **i   Maria**.
           the Yanis began SBJV opens the door the Maria
           '*Yanis began for Maria to open the door.'   GREEK

8. Conclusions

In this paper, I have argued that aspectual verbs are bona fide control verbs: they can occur with an external argument, and this makes their incompatibility with different-subject complements puzzling. I furthermore argued that a promising solution to their incompatibility with *for-to* complements in particular relies on a decompositional approach to embedding coupled with a restrictive modal semantics for infinitival complementizer *for*. The consequence of such an approach is that there is no problem with different-subject complements *per se*; rather, there is a syntax-semantics "conspiracy" wherein overt-subject licensing necessitates functional material whose meaning conflicts with the aspectual verbs. To the extent that all the semantic pieces are independently motivated, this has a welcome, simplifying consequence for the syntax: we can let the syntax generate sentences like *John began for Bill to open the door*; the semantic component alone accounts for its deviance.

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