Languages in Action

Languages in Action:

Exploring Communication Strategies and Mechanisms

Edited by

Marinela Burada, Oana Tatu
and Raluca Sinu

Cambridge
Scholars
Publishing

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This book first published 2018

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

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INTRODUCTION

MARINELA BURADA

The present chapter groups together research which, while concerned with different topics and conducted from various perspectives (syntactic, morphological, lexico-semantic), highlights duality and hybridity in the structure of natural languages, with particular focus on English and Romanian. The papers included here approach aspects related to the study of aspectuality as an object of syntactic investigation as well and a point of interest in child acquisition, the syntactic behaviour of manner of speaking verbs, the nominalized adjectives, the adverbialized nominals, and the functions and distribution of bare nouns in Old Romanian.

English Aspectual Verbs: Evaluating the Functional Head Analysis (Elena Lăcătuş) is a critical discussion of Fukuda's (2008) analytical model which approaches English aspectual verbs (e.g., *begin, cease, commence, finish, resume,* etc.) as functional heads. This challenges the commonly held view that these are syntactically hybrid items, due to their ability to act as both control and raising predicates. The author of this paper starts by identifying the points on which the functional head analysis and the control/raising analysis diverge. From here, she reviews Fukuda's arguments in support of the functional head analysis, arguments relating, *inter alia*, to the type of complement (infinitive or gerundive), the quantifier scope, the long passives, and the compatibility of aspectual verbs with the imperative. Holding up to view some of the potential limitations of these data, the author calls into question the descriptive validity of the functional head analysis, using counterarguments to suggest its partial success in accounting for a number of empirical facts.

Another perspective on duality in language structure is found in the paper **The Use and Distribution of the Genitive of Deadjectival Nominals in English** (Nenad Miladinović), a corpus informed quantitative investigation of the typology, characteristic features, and distributional properties of deadjectival nominals taking synthetic or analytical genitive markers (e.g., *the weak's*, *the accused's*, *the Siamese's, of the Siamese, of the rich* etc.). The result of partial conversion to the nominal class, these lexical items have dual status: they behave like nouns, syntactically, while

also preserving their adjectival status, morphologically. The corpus under analysis consisted of over 1,000 samples of deadjectival nouns in the genitive collected from the internet. These data were measured and ranked in terms of frequency and in close correlation with their type, paradigmatic form, and semantic properties. Dispelling the traditional view that deadjectival nouns do not combine with genitive markers, this research sheds new light on an interesting aspect of language change.

Adverbialized Nominals in Superlative APs (Imola-Ágnes Farkas) tackles a rather underresearched area of Romanian language structure: adjectival phrases (APs) headed by gradable adjectives in the positive degree postmodified by bare nominals used adverbially, of the type *gol pușcă* ('stark naked') and *înghețat bocnă* 'frozen solid'. In such collocations, the adverbialized nouns act as intensifiers with superlative value and are invariably postpositive. Despite the strong semantic bond between the adjectival head and the accompanying nominal – or perhaps precisely because of it - on occasion, the adverbialized noun can displace the adjectival head altogether, whilst also retaining the superlative reading. The author sets out to conduct a fine-grained analysis of these structures by first distinguishing between phrases headed by prototypical adjectives from those headed by participial adjectives. Although superficially similar, these subtypes of AP display a number of peculiarities on which the author draws in order to account for the different interpretations and behaviour of the constituents forming their internal structure.

On the Alternation Quantified Nouns / Bare Nouns in Old Romanian (Mihaela Tănase-Dogaru and Camelia Ușurelu) explores the behaviour of bare nouns in a corpus of Old Romanian texts. This fine-grained analysis takes into account aspects relating to the distribution of singular and plural, count and mass nouns in predicative and argument position. As the authors posit, these nouns show peculiar features that set them clearly apart from the group of bare nouns in Modern Romanian. The language data extracted from texts dating the 16th and the 17th centuries indicate a higher degree of permissiveness in the use of bare nouns, which also accounts for their higher frequency in Old Romanian. This higher latitude is evidenced by their ability to figure as subjects in both pre- and post-verb position and, on the other, to their occurrence in object function in the context of a wider range of verbs than just those denoting possession and acquisition. The paper makes a case for the number-argumenthood hypothesis, by showing that, in Old Romanian, number was a strong feature allowing for the occurrence of bare nouns in positions and combinations no longer acceptable in Modern Romanian.

Within the frame of first-language acquisition, **Comprehension of Grammatical Aspect in Child Romanian** (Ioana Stoicescu) reports on the results of a study intended to gauge the level of grammatical aspect awareness with three groups of children in the 3-7 age range. The starting point of the discussion is an overview of the formal aspects of the perfective–imperfective distinction in Romanian contrasted to data from other languages, particularly English and French. This theoretical excursus is relevant, especially since previous research highlighted a direct connection between the manner of encoding aspectual distinctions in a language and the speed of acquisition by children. The work described in this paper replicates previous investigations, especially van Hout's (2008) experiment, but takes the research one step forward by amending the design of the task. The author provides a clear interpretation of the results, which she compares to findings derived from studies of child acquisition in English, Dutch, Polish, and Italian.

ENGLISH ASPECTUAL VERBS: EVALUATING THE FUNCTIONAL HEAD ANALYSIS

ELENA LĂCĂTUŞ

Abstract: One of the influential approaches to the English aspectual verbs is that they are ambiguous between control and raising (Perlmutter 1968, 1970, Ross 1972). This early analysis has been, however, challenged by many studies, on both empirical and theory-internal grounds (see Kirby et al. 2010 for an overview). Fukuda's (2008) is one of these studies. He puts forth a functional head analysis which builds on the assumption that sentences with aspectual verbs are mono-clausal. According to him, the ambiguity of aspectual verbs derives from the two different syntactic structures in which they occur: above and below vP. In this paper I evaluate the main arguments in favour of this analysis. I argue that Fukuda's functional head approach is not tenable for the English aspectual verbs.

Keywords: aspectual verbs, control, raising, functional head analysis, Low-Aspect Phrase, High-Aspect Phrase

1 Introduction

One of the influential approaches to the English aspectual verbs is that they are ambiguous between control and raising (Perlmutter 1968, 1970, Ross 1972). According to this analysis, aspectual verbs like *begin, start, cease, resume, commence, repeat, finish*, etc. have hybrid behaviour. They behave like intransitives which take a clausal complement, i.e. like raising verbs (illustrated in 1), and like transitives which require identity between their own subject and the subject of the complement, i.e. like control verbs (illustrated in 2).

(1) (Raising to subject)
  a. Mary$_i$ seems t$_i$ to be nice.
  b. The noise$_i$ began t$_i$ to annoy everybody.

(2) (Subject control)
     a. Mary$_i$ promised PRO$_i$ to invite everybody.
     b. Mary$_i$ began PRO$_i$ to send letters to everybody.

One important difference between the DP in subject position in (1) and (2) is that in (1) the DP is semantically related only to the verb in the complement, whereas in (2) it is linked to both the verb in the matrix and to the one in the complement. In (1) the DP subject, which is assigned a theta-role by the verb in the complement, has moved from the embedded clause to the subject position of the matrix, leaving behind a trace. In (2), the subject DP, which receives a theta-role from the verb in the matrix, is co-indexed with a silent PRO subject in the complement, which receives a theta-role from the embedded verb.

This early analysis of aspectual verbs has been, however, challenged by many studies, on both empirical and theory-internal grounds (see Kirby et al. 2010 for an overview). Fukuda's (2008) is one of these studies. This author argues that the control/raising analysis of aspectual verbs is untenable and puts forth a functional head analysis[1] which builds on the assumption that sentences with aspectual verbs are mono-clausal. According to him, the ambiguity of aspectual verbs derives from the two different syntactic structures in which they occur: above and below vP.

In this paper I evaluate the descriptive adequacy of such an approach. In order to do that, in Section 2 I discuss Fukuda's main objections to the control/raising analysis. In Section 3 I evaluate the arguments in favour of his own analysis. The main findings are summarized in Section 4.

2 Fukuda's arguments against the control/raising analysis

2.1 On selectional restrictions

One line of reasoning in favour of the control analysis of aspectual verbs targets the restrictions which they impose on the subject DP. In some contexts, their subject DP must be thematic. This is obvious when an aspectual verb is embedded under a control verb:

(3) a. I tried to begin to work.   (subject control)
     b. I forced Tom to begin to work.   (object control)
                        (from Fukuda 2008, his examples 4a-b)

Some aspectual verbs are incompatible with "weather *it*":

(4)   *It finished being muggy. (from Ross 1972, his example 10a)

Cases of subject and object control (like the ones in 3) also show that aspectual verbs select an animate subject in order for equivalent NP deletion to take place. They can also take a 2nd person subject, as can be seen from their compatibility with the imperative (5):

(5)   Begin to study!

Fukuda (2008) challenges the evidence that aspectual verbs behave like control verbs. Following Newmeyer (1975) and Brinton (1988), he argues that aspectual verbs do not actually impose any selectional restrictions on the subject, not even when they are embedded under a control verb. The examples on which he builds this argument are given in (6):

(6)   a. John asked him to listen/ *hear.
       b. John began to listen/ to hear.
       c. John asked him to begin.
       d. John asked him to begin to listen/*hear.
           (from Fukuda 2008, his examples 9a-9d)

In (6a) *hear* cannot be embedded under *ask* but *listen* can. In (6b) *begin* can embed both *listen* and *hear*. In (6c) *begin* can be embedded under *ask*, but in (6d) *begin to hear* cannot be embedded under *ask*. There is a selectional conflict between *ask* and *hear*, present in both (6a) and (6d), i.e. in (6d) the aspectual verb *begin* is transparent with respect to selectional restrictions.

Fukuda (2008) also shows that *finish* is, actually, compatible with "weather *it*", as can be seen in the examples below:

(7)   a. After it finished raining we went down to Divi Village's new pool.
       b. The best part is that when it's finished raining, all the plants and trees have
       suddenly...
           (from Fukuda 2008,173)

Fukuda concludes that aspectual verbs do not impose any selectional restrictions, they accept non-thematic subjects and consequently they cannot be control verbs. So far, the only argument that aspectual verbs behave like control verbs which Fukuda accepts is the one that aspectual verbs can occur in imperative sentences. A raising analysis cannot explain this property.

2.2 Anaphoric Complement Deletion

According to Ross (1972), Anaphoric Complement Deletion (ACD), illustrated in (8) below, can discriminate between control and raising verbs, since only the former allows it:

(8) a. Max suggested writing to Santa Claus, and Teddy agreed/ began/ approved to write him.
     b. *It's supposed to be muggy tonight, but it hasn't begun yet to be muggy.
        (from Ross 1972, 576, his examples 8 and 9a)

In (8b) ACD is not allowed. Using ACD as a diagnostic, Ross (1972) shows that some aspectual verbs behave indeed like verbs of control (e.g. *stop*) whereas others (e.g. *cease)* behave like raising verbs:

(9) I suggested that they not shriek anymore, so they stopped/*ceased.
        (from Ross 1972, 576, his example 11a)

Fukuda (2008) challenges this argument as well. According to him, ACD cannot support the control/raising analysis because it is not a syntactic process. It does not require that the deleted element be identical with its antecedent. This can be seen in example (8a) above.

2.3 *do so* anaphora

Perlmutter (1968) takes *do so* anaphora as a possible test which distinguishes control from raising verbs. He argues that *do so* anaphora can replace an aspectual verb when it is a control verb but not when it is a raising verb. This is illustrated in the examples in (10):

(10) 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.
        (from Fukuda 2008, 173)

Following Newmeyer (1975), Fukuda (2008) rejects this argument. According to him, the sentence in (10b) is ungrammatical because of the lack of the definite article on the arguments. Definiteness appears to make the sentence grammatical.

(11) **The** oil began to gush from the well and **the** water did so too.
        (from Newmeyer 1975, 31 in Fukuda 2008)

But identifying the absence of the definite article as the source of the ungrammaticality of (10b) does not provide evidence that *begin*, at least in (10a), is not a verb of control.

2.4 NP arguments

Typical raising verbs can only select clausal arguments. Perlmutter (1970) points out that aspectual verbs may take an NP complement in addition to a clausal one, which shows that they do not behave like typical raising verbs. But Fukuda does not discuss this argument, which he rejects (in a footnote), mentioning that his investigation concerns only "cases with clausal complements" (2008, 173, footnote 5). It should be mentioned, although, that the analysis of the syntax of aspectual verbs with an NP complement can shed interesting light on the syntax of aspectual verbs in general. For example, with *start*, which denotes the beginning of an event, extraposition from subject position is allowed (12a), whereas with aspectual verbs which denote the middle and the end of an event extraposition is banned (12b and c) (Thompson 2005):

(12) a. A lecture started on anaphora.
     b. *A lecture continued on anaphora.
     c. *A lecture finished on anaphora. (examples from Thompson 2005, 3)

It is not implausible to assume that one could find differences between these subclasses when the complement is a clause. Therefore, examples like the ones in (12) seem to suggest that the English aspectual verbs might not represent a syntactically homogeneous class. Moreover, any descriptively adequate analysis of this class should include all the distributional contexts in which these verbs occur.

As one can see, Fukuda (2008) practically rejects all the arguments in favour of a control analysis of aspectual verbs with one exception: the imperative clause evidence. And he also rejects a raising analysis.

2.5 Against the biclausal analysis

A raising analysis of English aspectual verbs implies a biclausal structure, assuming that the complement of a raising verb is a Tense Phrase (TP). Fukuda (2008) argues, however, that the complements of English aspectual verbs are smaller than a TP. English infinitives have their own tense because they can select a time adverbial that is in conflict with another time adverbial modifying the matrix event. This is illustrated in the examples below:

(13)   a. Today, John hopes to win someday.
          b. Yesterday, John decided to leave tomorrow.
               (examples from Fukuda 2008, 174)

In the sentences in (13) the infinitive complement denotes a yet-to-be-realized event. The tense of such complements is interpreted as an unrealized future tense. Aspectual verbs do not allow the unrealized future interpretation.

(14) ??Yesterday, John began to leave tomorrow.

According to Fukuda (2008), the fact that the infinitive complement of an aspectual verb lacks independent tense does not necessarily prove that these complements lack tense. The tense of complements without their own tense specification is anaphoric with the tense in the matrix (Landau 2000, in Fukuda 2008). But they lack an Aspect Phrase (AspP). There is empirical data which show that the complement of an aspectual verb lacks an Aspect projection. The examples in (15) show that both the progressive and the perfective aspect are banned from the complement, i.e. the complements of aspectual verbs cannot encode grammatical aspect.

(15)   a.* He began [$_{progressive}$ being running down the road].
          b.* He began [$_{perfective}$ to have finished his homework].
               (from Akmajian et al. 1979, in Fukuda 2008,174)

This is in contrast with the infinitival complements of other verbs, as can be seen in (16):

(16) a. We'll try to make him [$_{progressive}$ be singing 'Coming through the Rye'] when…
     b. I will try [$_{perfective}$ to have finished the work] by the time...
               (from Akmajian et al. 1979, in Fukuda 2008,174)

According to Fukuda (2008), the data in (15) can be interpreted as indicating either that the complements of aspectual verbs lack an Aspect projection or that they lack both an Aspect and a Tense projection (since TP is higher than AspP, absence of a lower functional projection might trigger absence of the higher functional projections). According to him, the complement of aspectual verbs projects lower than AspP. This entails that English aspectual verbs cannot be raising verbs because sentences with raising predicates are biclausal.

2.6 Evaluating Fukuda's arguments against
a control/raising analysis

Though most of Fukuda's arguments are convincing, there are several issues which he does not directly address in his critique of the control/raising analysis of English aspectual verbs. Actually, he mentions that the arguments in favour of the raising analysis "remain virtually unchallenged" (Fukuda 2008, 173).

Here are the arguments which Fukuda (2008) does not challenge in the paper; therefore, one can assume that he considers them to be valid.

Perlmutter (1970) argues that aspectual verbs can take non-thematic subjects, such as expletive *there* and "weather *it*", on a par with raising verbs:

(17) a. There began to be commotion.
       b. It began to rain.
           (from Perlmutter 1970, in Fukuda 2008, 172)

Aspectual verbs also allow passive/active synonymy, on a par with raising predicates:

(18) a. The noise began to annoy John.
      b. John began to be annoyed by the noise.
          (from Perlmutter 1970, in Fukuda 2008, 172)

Idiom chunks may retain their meaning, as with raising verbs:

(19) a. Headway began to be made toward a solution.
      b. Heed began to be paid to urban problems.
          (from Perlmutter 1970, in Fukuda 2008, 172)
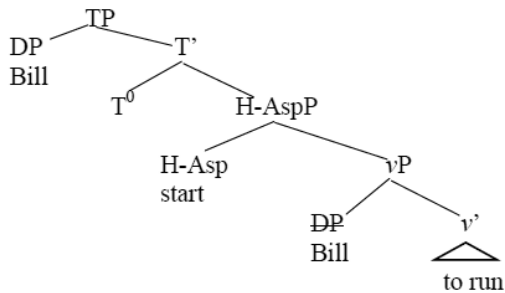
But remember that Fukuda rejects a raising analysis given the fact that he rejects the view that sentences with aspectual verbs have a biclausal structure. Therefore, according to him, an analysis of English aspectual verbs should explain why they are non-thematic without being raising verbs, and also why they are compatible with the imperative without being control verbs.

3 A functional head analysis

3.1 Main assumption

In order to better account for these properties, Fukuda (2008) proposes a functional head analysis. According to him, English aspectual verbs are functional heads, i.e. they can never assign theta-roles. They can appear in an AspP, placed above or below a projection of the Voice head or of little v. If an aspectual verb takes an infinitival complement it will appear above little v, in High-Aspect (H-AspP) (as in 20 below). If the complement is a gerund one, the aspectual verb appears in a position that is below the little v head, the Low-Aspect (L-AspP) position (as in 21):

(20)   Bill started to run. (High-Aspect)

```
            TP
        ／    ＼
      DP        T'
      Bill    ／  ＼
           T⁰      H-AspP
                ／    ＼
            H-Asp        vP
            start     ／    ＼
                    DP        v'
                    Bill      △
                           to run
```

(21) Bill started running. (Low-Aspect)

```
            TP
        ／    ＼
      DP        T'
      Bill    ／  ＼
           T⁰      vP
                ／    ＼
              DP        v'
              Bill    ／  ＼
                   v⁰      L-AspP
                        ／    ＼
                    L-Asp        VP
                    start        △
                              running
```
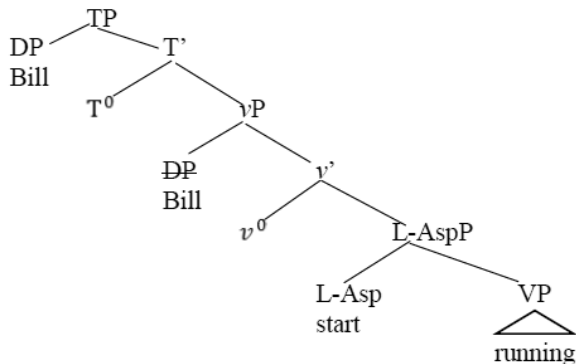
His analysis derives the syntactic position of aspectual verbs from the complexity of their complement. Within this analysis, infinitives are larger domains (vP) than gerunds (VP). Table 1 summarizes the most important differences between the standard control/raising analysis and Fukuda's (2008) proposal.

Table 1. Differences between Fukuda's (2008) functional head analysis and the control/ raising analysis of aspectual verbs

The control/ raising analysis	*Fukuda's (2008) Functional head analysis*
Assumes a biclausal structure	Assumes a monoclausal structure
Aspectual verbs assign a theta-role to their subjects when they are control verbs.	Aspectual verbs are functional heads. There are no theta-roles to be assigned.
The control/raising analysis does not mention anything about the selection of infinitival or gerund complements.	The difference in the complexity of the selected complements is reflected in different structural positions for aspectual verbs: when they select an infinitive they occur in High-Asp, when they select a gerund they appear in Low-Asp.

3.2 Arguments for the functional head analysis

Remember that Fukuda's argument against the raising analysis of aspectual verbs was that they do not project a biclausal structure. This is because they can select either an infinitive or a gerund as their complement and, according to his analysis, both these non-finite constructions lack Tense and Aspect projections. According to Fukuda (2008, 175), "if infinitives and gerunds under English aspectual verbs are either vPs or VPs, neither tense nor grammatical aspect can be present in these complements". On this analysis, infinitives are structurally larger than gerunds. The former are vPs, the latter VPs[2]. Let us examine Fukuda's arguments that these complements are reduced clauses which lack both a Tense Projection and an Aspect Projection.

3.3 On the functional structure of infinitives

As mentioned above, according to Fukuda (2008), aspectual verbs are functional heads, which can take a vP or a VP as a complement. It should be mentioned, however, that assuming that their complement is a VP, for example, does not necessarily require a functional head analysis for these verbs. For example, Wurmbrand (1998) adopts a lexical head analysis for aspectual verbs but she also proposes that the complement of aspectual verbs is a VP. A second issue is related to the analysis of infinitives as vP or VP, i.e. as structures which lack functional projections. Remember that a central argument in Fukuda's analysis is that infinitives project only a vP, lacking any functional projections. The argument against a Tense Phrase is mainly semantic in nature. It builds on the fact that the infinitival complement of aspectual verbs does not have a time sphere of its own. This can be seen in the oddness of (12b), repeated for convenience in (22) below:

(22) ??Yesterday, John began to leave tomorrow.   (from Fukuda 2008, 174)

According to several studies, however, in spite of the fact that infinitives do not express deictic tense, they have their own tense specification. They describe "hypothetical or unrealized" events (Bresnan 1972) and they can denote situations which are temporally located at a time different from the one of the main clause. They are future oriented:

(23) *Last week* they decided to leave the city *as soon as possible*.

It is true, however, that with aspectual verbs the infinitival complement does not enjoy this temporal independence (see 22 above) and it is not interpreted as *irrealis*. According to Stowell (1981, 1982), one should distinguish between the infinitives which occur with control verbs, which are tensed and can license PRO, and untensed infinitives, which occur with raising verbs. He argues that only control complements express *irrealis* tense, different from the tense in the matrix. This irrealis feature entails the feature [+Tense]. On this analysis, *irrealis* control infinitives are tensed complements, with an independent tense chain, i.e. they have the same structure as *that*-complement clauses. They are CPs with an uninterpretable tense feature in C^0. This can also explain why PRO is allowed. [+Tense] non-finite clauses can assign null case and therefore PRO is licensed (Chomsky and Lasnik 1993).

Raising complements, on the other hand, are untensed. In simple infinitive complements, the time sphere denoted by the infinitive must coincide with the matrix event, as shown in (24) below.

(24)   a. Everyone believed Rebecca to be the best player at Uconn.
        b. The doctor showed Bill to be sick.
                (examples from Cornilescu 2003, 238)

The lack of tense in raising structures is reflected in the incompatibility with event predicates (see 25), unless the complement denotes a habitual or generic situation (as in 26) or unless it contains progressive or perfective aspect (as in 27):

(25)   a. *Everyone believed Rebecca to win the game right then.
        b. *The doctor showed Bill to take the wrong medicine at that exact time.
        c.   Bill believes Mary to often sing the Marseillaise. (*right now)

(26)   Bill believes Mary to be tall/to know the truth.

(27)   a. Bill believes Mary to be singing the Marseillaise.
        b. Bill believes Mary to have sung the Marseillaise.
            (examples from Cornilescu 2003, 238)

Unlike *irrealis* (control) infinitives, *realis* infinitives are [-Tense]. Returning to aspectual verbs, which are [-Tense], they should be analysed as raising verbs if one adopts Stowell's (1981, 1982) analysis of infinitives.

Similarly, Landau (2000) shows that only tensed complements license adverbs of definite time which may establish Reference Time. On his analysis, not all control complements can be [+Tense], as argued by Stowell (1981). In particular, control complements of aspectual verbs such as *begin, continue, resume* are incompatible with definite time adverbials, i.e. they are [-Tense], in support of Fukuda's analysis.

(28)   *Yesterday, the student began to write the report tomorrow.
            (example from Cornilescu 2003, 239)

There seems to be a consensus with respect to the [-Tense] analysis of the infinitival complement of aspectual verbs (see also Cornilescu 2003, 240), where infinitival complements of aspectual verbs are analysed as [+Realis, - Tense].

Landau's (2000) analysis, however, reopens the issue: are aspectuals control or raising verbs? According to Stowell's (1981) analysis of infinitives, they should be analysed as raising verbs. According to

Landau's analysis (2000), which allows [-Tense] control constructions, aspectuals can be analysed as control configurations.

So far, Fukuda's analysis of the infinitival complements of aspectual verbs as untensed structures is supported by the empirical data and it is in line with previous studies. The question is whether the semantic analysis of infinitival complements of aspectuals as [-Tense] is directly reflected in the lack of a syntactic Tense Phrase. The answer to this question relies on the analysis which one assigns to the infinitival *to*. This has been standardly analysed as a T constituent (see, for example, Adger 2002, Cornilescu 2003). In what follows I will briefly list the main arguments in favour of this analysis.

There are several properties of the infinitival *to* that show that it is a head which merges with a verb phrase (a *v*P or a VP) which has certain tense features and appears in the Tense Phrase (Adger 2002). First, *to* appears in complementary distribution with modal verbs, which are inherently tensed and have been described as base-generated in Tense (see, e.g. Avram 1999, 2003/2006 and references therein):

(29)   a. *She promised to may leave.
         b. *She tried to can dance.

Second, emphatic *do*, which merges in Tense, cannot occur in infinitive clauses, as shown in the examples below:
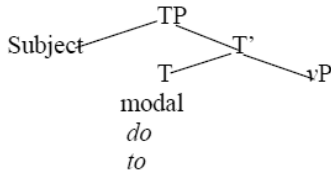
(30)   *She tried to DO leave.

Third, in VP ellipsis it is impossible to insert *do*, which carries tense features.

(31)   a. Enkidu wanted to live and Ishtar wanted to.
         b. *Enkidu wanted to live and Ishtar tried to do.
             (from Adger 2002, 163)

The empirical data above indicates that *to* has certain tense features. It is a tense carrying head, on a par with modal verbs and the auxiliary *do*, with which it is in complementary distribution. And, as known, heads project. "If each of these heads is categorised as a T head, then they can merge with *v*P, projecting T', and, once they have the subject, they project the TP" (Adger 2002, 131). The following syntactic structure emerges, where T can host a modal, the auxiliary *do* or the infinitival *to*:

(32)

```
                        TP
                       /
       Subject————————/      T'
                      /    /——————
                    T———  /        vP
                   modal
                    do
                    to
```

Similarly, Cornilescu (2003) adopts the view that infinitival *to* heads a syncretic Tense/Mood phrase. *To* is described as a tense/mood marker (2003, 215) and infinitive clauses as projecting at least a Tense Phrase (2003, 218).

While it is true that *to* signals anaphoric/deficient tense, it is also true that the infinitival complement projects a Tense projection headed by *to*. This analysis of *to* infinitives challenges Fukuda's (2008) claim that the infinitival complement of aspectual verbs lacks a Tense Phrase, projecting only as high as *v*P.

Fukuda (2008) also argues that the infinitival complement of aspectual verbs lacks an AspP. The argument against an Aspect Phrase relies on the incompatibility of the infinitival complement with the progressive or the perfective aspect (see 15 above). These complements, however, are compatible with adverbs such as *regularly, daily, frequently, (more and more) often*, etc.:

(33) They began to **regularly/daily/frequently** write to one another.

These adverbs modify only the embedded predicate, which is thus interpreted as denoting a habitual situation. Movement of the adverb in front of the aspectual verb results in a change of interpretation:

(34) They regularly began to ring several people up and ask for money.

These adverbs indicate aspectual distinctions such as habituality or frequency, belonging to the class of aspectual adverbs. According to Alexiadou (1997), they are licensed as Specifiers of the Aspect Phrase. According to her, there is a strong relationship between this kind of adverbs and Aspect Phrases. They are licensed under agreement with the head of AspP (see also Protopopescu 2014 for an overview of the analysis of aspectual adverbs along this line).

If one adopts this analysis for aspectual adverbs, their presence in the infinitival complement of aspectual verbs signals that the complement is larger than *v*P, including (at least) an AspP.

3.4 Infinitives are larger than gerunds

Fukuda (2008) also uses adverbs to prove that infinitives are larger domains than gerunds. He builds on the property of adverbs such as *stupidly* of being ambiguous between a speaker-oriented reading and a manner adverb reading. The latter is usually associated with a high syntactic position, while the former is associated with a low syntactic position. He argues that when *stupidly* occurs with an infinitive it is ambiguous between a speaker-oriented reading and a manner reading, whereas when it occurs with a gerund the only possible reading is that of a manner adverb. This is illustrated in the examples below:

(35) a. [...] everyone around me grew quiet as I began stupidly to say what I really think.
b. [...] everyone around me grew quiet as I began stupidly saying what I really think. (examples taken from Fukuda 2008, 176)

Since manner adverbs can be analysed as attached to VP, the fact that with gerunds *stupidly* can be interpreted exclusively as a manner adverb is taken to indicate that the status of the gerund is that of a VP. On the other hand, its ambiguity between a speaker-oriented reading and a manner adverb reading when it occurs with an infinitive indicates, according to Fukuda (2008), that the infinitive is a *v*P. In spite of the fact that, generally, speaker-oriented adverbs are standardly analysed as associated with the CP domain, Fukuda simply assumes that "a *v*P can host a speaker-oriented adverb" in the case of sentences with aspectual verbs (2008, 176). The manner reading of *stupidly* is to be expected because the *v*P embeds a VP. The fact that the speaker-oriented reading is also available represents, according to the author, evidence that infinitives are larger clauses than gerunds.

This argument, however, is not without problems. The claim that a speaker-oriented adverb can be hosted by a *v*P is a bit *ad-hoc*, with no independent evidence. Actually, Fukuda (2008) reaches this conclusion on the basis of the following reasoning: *stupidly* can be interpreted as a speaker-oriented adverb when the complement of the aspectual verb is an infinitive. It is true that speaker-oriented adverbs are generally associated with a CP. But, because according to his analysis infinitives under aspectual verbs lack a TP and an AspP and are analysed as *v*Ps, given the grammaticality of (35a), it follows that a *v*P phrase can host a speaker-oriented adverb. Fukuda's reasoning is, unfortunately, circular.

Another piece of evidence in favour of the claim according to which infinitives are larger than gerunds comes from differences in the selectional

restrictions imposed by aspectual verbs. The argument, however, seems to be semantic in nature and not syntactic. Fukuda (2008) claims that gerunds under aspectual verbs force a single event interpretation of the embedded verb, while infinitives under aspectual verbs do not. They allow a reading in which the event is iterative.

(36)   a. That never ceases to amaze me/ ?? amazing me.
            b. That student continued to fall asleep/ ?? falling asleep in my class.
                (examples taken from Fukuda 2008, 176)

    The contrast is claimed to be even more obvious with stative predicates. Gerunds under aspectual verbs cannot be statives, unlike infinitives. This is illustrated in the examples in (37) below:

(37)   a. The problem ceased to exist/*existing.
            b. Nora began to know/*knowing right from wrong.
                (from Fukuda 2008,176)

    However, aspectual verbs have been shown to select both infinitival and gerund complements, with little or no meaning difference (see, e.g., the overview of the literature in Cornilescu 2003). Contrary to the generalization which Fukuda mentions, gerunds can denote repeated events when used as complements of aspectual predicates (38) and infinitives can describe single occurrences (39):

(38)   a. Since then, the Bank has begun issuing quarterly reports.
            b. Bob began reading good books.
                (from Cornilescu 2003, 472)
(39)   The train started to move.
                (from Cornilescu 2003, 472)

    The eventive vs. stative difference is also weakened by examples like the one in (40), in which an aspectual takes a complement with a state predicate:

(40)   a. I will not stop loving you.
            b. The old man stopped being annoyed by noisy parties.

    It is also challenged by an important selectional property of aspectual verbs, irrespective of whether the complement is a gerund or an infinitive. As often remarked in the literature, these verbs generally take event-denoting complements (Pustejovsky 1991, 1995). Some aspectual verbs,

e.g. *finish,* impose an eventive reading on their complement (as a result of coercion) (Piñango 2015), whereas others do not, e.g. *stop*.

The data discussed above seem to cast doubt on Fukuda's (2008) arguments that infinitives under aspectual verbs are larger than gerunds in the same environment.

Just like in the case of infinitives, there are also several reasons to question the analysis of the gerund complements as devoid of any functional projection, as VPs. While it is true that gerund complements lack independent tense, one still has to find a structural position for *–ing*. Milsark (1988), for example, analyses the gerund complement of aspectuals as IP. Fukuda (2008) offers no analysis for the structural position of *–ing* in gerund complements.

3.5 Quantifier scope

One further argument in favour of the hypothesis that aspectual verbs are functional heads comes from quantifier scope. Fukuda (2008) argues that when the subject position of an aspectual verb is occupied by a quantifier the sentence is ambiguous. According to May (1985), raising predicates with a quantifier in subject position are ambiguous. In the examples below, the quantifier *someone* is ambiguous between a specific reading and an existential one.

(41) Someone from New York is likely to win the lottery.
    a. There is a person from New York who is likely to win the lottery. (specific)
    b. It is likely that a person from New York will win the lottery. (existential)
       (from Fukuda 2008, 176)

According to the raising analysis, the quantifier *someone* is analysed as base-generated in the embedded subject position from where it moves to the subject position in the matrix. Therefore, the quantifier scopes over the predicate *be likely*. The result is the specific interpretation. The quantifier *someone* can also be interpreted within the scope of *be likely*, in its base-generated position, and the result is the existential reading.

Fukuda predicts that a similar ambiguity should obtain with an aspectual verb in High-Aspect, since in this case the subject can be interpreted both within the scope of this position, in its base-generated position (Spec of vP), but it can also take scope over High-Asp once it moves to Spec TP (Fukuda (2008, 176). On the other hand, such ambiguity does not hold with Low-Asp, because this projection is lower than the small vP phrase. He claims that the quantifier *someone* is ambiguous between the existential and the specific reading with an

infinitive complement under an aspectual verb in High-Asp, whereas no ambiguity is found with a gerundive complement under an aspectual verb in Low-Asp (Fukuda 2008, 177):

(42) a. Someone from New York started to win the lottery. (infinitive = High-Asp)
    someone > start (specific)
    start > someone (existential)
    b. Someone from New York started winning the lottery. (gerund = Low-Asp)
    someone > start (specific)
    ??*start > someone* (existential)
       (from Fukuda 2008, 177)

There is one empirical problem with this argument. The existential reading of *someone* in the gerund is only semantically odd, it is not fully excluded, as Fukuda himself mentions. The second one is theory-internal. Wurmbrand (1998) argues that in the case of *begin* plus an infinitive complement, the subject is not ambiguous. Therefore, the subject can never take scope under the aspectual verb.

## 3.6 Crosslinguistic evidence: the long passive

One more argument in favour of a functional head analysis of English aspectual verbs comes from the examination of the availability of long passives across languages. This time, Fukuda's (2008) starting point is the behaviour of the Japanese equivalent of *finish* with the long passive. The long passive is defined as passivization of the embedded object with the passive morpheme appearing only on the matrix predicate. The aspectual verb *owar* ($finish_1$) allows only an embedded passive, while *oe* ($finish_2$) allows only the long passive (43). Other aspectual verbs, *hajime* ('begin') and *tzuzuke* ('continue'), allow both the long passive and the embedded one (44).

(43) a. Rombun-ga   [t_i kak **-are**] **-owar** (*-are)   -ta
    paper   NOM [t_i write-PASS] -$finish_1$ (*-PASS) -PERF
    'That paper finished being written.'   (embedded passive only)
    b. $Rombun_i$ -ga   [t_i kaki (*- are) **oe**]   **-rare** -ta
    $paper_i$ -NOM [t_i write (*-PASS) $finish_2$] -PASS -PERF
    'That paper finished being written.'   (long passive only)

(44) a. Rombun-ga   [t_i kak **-are**] **-hajime/tsuzuke** -ta
    paper   -NOM [t_i write -PASS] -begin/ continue   -PERF
   'That paper began/continued to be written.' (embedded passive only)

b. Rombun$_i$ -ga   [t$_i$ kaki   **hajime/tsuzuke**] -**rare**   -ta
 paper$_i$ -NOM [t$_i$ write begin/   continue] -PASS -PERF
‘That paper began/continued to be written.’ (long passive only)
    (examples taken from Fukuda 2008, 177)

Fukuda (2006) analyses Japanese aspectual verbs as functional heads which can appear in two syntactic positions: either in Low-Asp (below the *v*P) or in High-Asp (above the *v*P). According to Fukuda, the passive morpheme appears in the *v* position. When the aspectual verb is in High-Asp, only the embedded passive is allowed (in this case, the passive morpheme precedes the aspectual verb). When the aspectual verb is in Low-Asp, only the long passive is allowed; the passive morpheme is above the position of the aspectual verb and it must follow it (Fukuda 2008, 177).

(45)
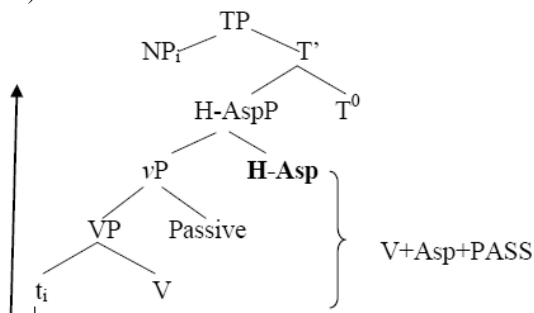
(46)
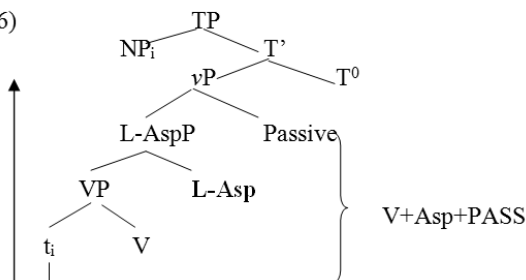
(from Fukuda 2008, 178)

By analogy, the long passive should be grammatical with English aspectual verbs in Low-Asp, i.e. which take a gerund as a complement.