

# THE INTERPRETATION OF TENSE AND ASPECT IN ARGUMENT SMALL CLAUSES IN ENGLISH

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## ABSTRACT

In this paper the interrelation between tense and lexical aspect (*aktionsart*) in argument small clauses (SCs) is studied from a minimalist point of view. I will claim that Asp(ect) and T(ense) are present in the derivation of SCs. Any predicate is given a particular aspectual feature in the Lexicon, which may be [-/+ perfective], according to whether it expresses a state of affairs or a change of state respectively. Different temporal readings can be found in SCs, which depends crucially on the matrix verb's aspectual selection of the SC predicate. In minimalist terms, I will assert that T is aspectually neutral, but it may be *perfectivised* or *imperfectivised* depending on the feature sheltered under Asp. I propose that Asp moves to adjoin to T before Spell-Out, making it perfective or imperfective. In the domain of the complex category [Asp T] the SC predicate checks its aspectual feature at LF.

## 1. INTRODUCTION

Much controversy has arisen in the last two decades around the structure of argument small clauses (hereafter, SC), especially as regards how many and what sort of functional categories an SC derivation needs. Two extreme approaches can be found: Stowell's (1983) simplest structure and Starke's (1995) functionally richest representation. In order to go into this controversial issue, I assume that the beginning of an argument SC derivation is the typical Stowell structure, but, in the spirit of Cinque (1999), this develops two functional categories: Tense (T) and Aspect (Asp), necessary for the elimination of certain morphological features.

In my earlier research (Jiménez Fernández 1998) I have shown that the occurrence of an SC predicate in a context is constrained by the matrix verb's aspectual selection for the state denoted in the SC predicate, accounting for the difference between state of affairs ([- perfective]) and change of state ([+ perfective]) that is expressed in the SC. In other words, this aspectual selection of the SC predicate brings about the semantic difference between individual-level and stage-level SCs, in Kratzer's (1988) terms.

I depart from the traditional concept of perfective/nonperfective in that etymologically *perfective* implies to become perfect or complete, while *nonperfective* means already perfect or complete (see Bosque 1990). Traditionally, the definition of these two terms is just the opposite.

Contra Stowell (1983) and following Kitagawa (1985), I assume that the selection between matrix verb and SC predicate is semantic rather than syntactic. However, this constraint in my proposal is mediated by an Aspect Phrase (AspP), which selects the whole SC as its complement. Now the difference between *consider* and *expect* can be captured as follows: the former can cooccur with an SC predicate denoting either a state of affairs or a change of state, whereas the latter can only select a change of state. There cannot be a conflict of aspectual features if the derivation of the SC is to converge. This is why the contrast in (1) is obtained:

- (1) a. I consider Mary intelligent.  
 b. I consider Mary already dead.  
 c. I expect Mary dead.  
 d. \*I expect Mary intelligent.

*Intelligent* is a [- perfective] predicate and *dead* is a [+ perfective] predicate. Both of them will be possible in the SC subcategorised by *consider*; nevertheless, only *dead* can appear in the SC selected by *expect*. The reason is that the aspectual feature of *dead* and the nature of the SC Asp dictated by the matrix verb in (1c) are compatible. Both are marked as [+ perfective]. In (1d) there is a mismatch of aspectual features which drives the derivation to crash. The existence of aspectual adverbs in SCs is also an indication that these constructions involve some AspP to which these adverbs adjoin. Note the occurrence of the aspectual adverb *already* in (1b).

In line with this proposal, I now intend to deal with the interdependence of Asp and T in SCs within Chomsky's (1995) Minimalist Program, claiming that the aspectual feature selected in Asp by the matrix verb influences the interpretation of T in these constructions. Sometimes the SC T refers back to matrix T, but on other occasions this SC T will contain its own time reference.

I will show first the need for positing an Asp category in the derivation of SCs. Then I will account for the existence of T as an independent category in the derivation of SCs. Finally, I will make a difference between those SCs whose T takes its reference from the matrix T, not allowing for adverbials in clear conflict with the temporal interpretation of the matrix clause, and those SCs whose T is interpreted as different from matrix T, admitting temporal adverbials with a semantic value distinct from that in the matrix clause.

The different temporal readings of SCs will be claimed to be due to the adjunction of Asp to T, making it perfective or imperfective, before Spell-Out. What I want to

demonstrate is that in SCs Asp and its lexical aspect feature play a crucial role in the right interpretation of T.

I will also hold that the DP subject of the SC will raise to [Spec, T] to check its categorial feature [D], which provides theory-internal evidence for including T in SCs. At LF the formal features of this DP continue moving up to matrix T, where the complex made up of the light verb *v* and V has previously adjoined. It is the complex [V *v*] against which the SC subject checks its accusative feature. The SC predicate will raise at LF to the complex category [Asp T], where its aspectual feature is checked against Asp. If there is no conflict of aspectual features the derivation converges.

## 2. ASPECT AND THE DISTINCTION OF SMALL CLAUSE PREDICATES

### 2.1. SOME BACKGROUND ON THE TREATMENT OF DIFFERENT TYPES OF PREDICATES

Some approaches to SC predicates have established a difference between stage level predicates, those that express a transient property about the subject, and individual level predicates, those that indicate a permanent characteristic. Basically this is a lexico-semantic difference which is dealt with by Carlson (1977), Kratzer (1988), Schmitt (1993) and Raposo & Uriagereka (1995), *inter al.* If the following two sentences are compared,

- (2) a. I consider Mary beautiful.  
 b. I consider Mary too busy.

it will be obvious that the SC predicate *beautiful* assigns a standing property to the subject *Mary*, whereas *busy* in (2b) expresses a temporary characteristic of *Mary*. The former will be classified as an IL predicate and the latter as a SL predicate.

Linguists like Iatridou (1990) or Doherty (1992) have suggested that this lexico-semantic distinction is captured by positing an event argument *e* in the thematic structure of predicates (in the sense of Higginbotham 1985). The same solution is presented by Hernanz (1988) for Spanish. Other linguists like Raposo & Uriagereka (1995) propose that the difference between IL predicates and SL predicates lies in that their syntactic structures involve two types of Agr(eement), a categorial-agr and an argumental-agr. The subject of different predicates will be marked with a different case to be checked in the domain of the functional category Agr.

I will assume that there is a difference between IL predicates and SL predicates. This will be an aspectual distinction in the sense of Schmitt (1993), which is translated as different aspectual features assigned to each predicate in the Lexicon and checked in an appropriate site through the derivation of the SC.

Following Demonte (1991) and De Miguel (1992), I claim that any predicate is given a particular aspectual feature in the Lexicon. These aspectual values are [+ perfective] or [- perfective], depending on whether the predicate expresses a transient or permanent property respectively —change of state or state of affairs in Kitagawa's (1985) terms. The SC predicate is aspectually selected by the matrix verb. *Expect* in (3a) selects an SC predicate marked with the feature [+ perfective], otherwise the sentence is ungrammatical, as (3b) shows:

- (3) a. I expect the classroom empty.  
 b. \*I expect the classroom beautiful.

The SC predicate's selection by the matrix verb is mediated by the category Asp and the aspectual feature of this predicate must be checked against the same feature in Asp. Taking as a base Chomsky's (1995) ideas that movement in derivations is morphology-driven and that LF movement is less costly, I maintain that the SC predicate's aspectual feature moves at LF to Asp to be checked. Asp in English is weak, so by Procrastinate the aspectual feature waits until LF.

## 2.2. ASPECTUAL FEATURES AND THE DERIVATION OF SCs

In this section I will account for the existence of the category Asp in the derivation of an argument SC, which may justify the semantic and aspectual differences which constrain the distribution of the predicates included in these constructions. Evidence for positing a category without lexical representation is provided by the acceptability of certain adverbs which are adjoined to such a functional category.

In the linguistic literature it is assumed that there exist some kinds of adverbs which modify functional categories and as a result these elements are generated via adjunction within the functional projection (e.g. Sportiche 1988, Bobaljik 1995, Cinque 1999 and Costa & Gonçalves 1999). As regards the category Asp, as I have already pointed out, some aspectual adverbs can be found which make clearer the inner temporality of an event. Demonte (1991:147) makes a difference between temporal adverbs, aspectual adverbs and *Aktionsart* adverbs. My attention will be paid to the last two classes, leaving aside temporal adverbs by now as they will be dealt with later.

Referring to Spanish, within aspectual adverbs Demonte includes items like *ya* "already," *hace un momento* "a moment ago," *todavía* "still" or *continuamente* "continuously;" among *Aktionsart* adverbs she singles out *a menudo* "often," *con frecuencia* "frequently," *dos veces* "twice," or *siempre* "always." Because morphological aspect and *Aktionsart* are very closely related I assume that both types of adverbs are adjoined to the same category Asp, which can be conceived of as a fused or syncretic category, involving the two concepts.

Bosque (1990:193-194) adds some other aspectual adverbs like *completamente* "completely," *enteramente* "entirely," and *del todo* "totally." These adverbs modify predicates which denote a non-completed or non-standing event. This is why they can only occur with predicates which show the feature [+ perfective]:

- (4) a. *Completamente vacío* "completely empty," *limpio del todo* "totally clean,"  
*una vez vacío* "once empty."  
 b. \**Completamente bueno* "completely good," \**enteramente alto* "totally tall," \**una vez inteligente* "once intelligent."

It is quite natural to extend this restriction to all aspectual adverbs because a permanent event cannot be modified by any of them. Otherwise, the state expressed by the IL predicate would be split into different substates and this is just not possible. Only predicates denoting a change of state —SL predicates marked with the feature [+ perfective]— can occur with aspectual adverbs.

With respect to English, Ojea (1997:177) defends an atomic concept of aspectual adverbs which makes no distinction between aspect and *Aktionsart*. The aspectual adverbs analysed by Ojea are the following: *always, ever, never, already, still, yet, frequently, often, normally, sometimes, generally, usually, scarcely, rarely*, etc.

What is interesting about the aspectual classification of adverbs is their possibility of occurrence within an argumental SC. If the presence of at least certain aspectual adverbs in an SC could be attested, this would constitute an argument for positing the category Asp to which these adverbs must adjoin. The examples below show that this hypothesis is correct:

- (5) a. I find [him often trustworthy].  
 b. I find [him always in good humour].  
 c. ?I consider [him usually clumsy].  
 d. I consider [it already empty].

The fact that adverbs like *already, usually, often, always*, etc. may modify the predicate in SCs justifies the existence of Asp in the derivation of these constructions. Note also that these adverbs cannot occur within an SC whose predicate is assigned the feature [-perfective]:

- (6) a. \*I consider [him usually tall].  
 b. \*I find [him often a good man].  
 c. \*I find [it already perfect].

The subordinate predicates in (6) include the aspectual feature [- perfective] and this disallows their being modified by an aspectual adverb, due to their lexico-semantic incompatibility.

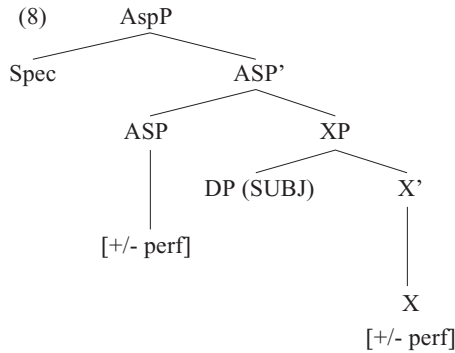
If examples like (5c) are taken into account, it can be observed that the predicate *clumsy* is intrinsically marked as [- perfective] and as such this sentence should be ungrammatical. However, in an appropriate context, (5c) may be rendered acceptable. This is due to the fact that a change in context may cause a change in the selection of aspectual features. *Clumsy* in (5c) is interpreted as a transient state. This is translated in Spanish as a contrast between two different copulas, *ser* or *estar*:

- (7) a. \*Considero que él es normalmente torpe.  
 "I-consider that he is [- perfective] usually clumsy"  
 b. Considero que él está normalmente torpe.  
 "I-consider that he is [+ perfective] usually clumsy"

Although the parallelism between aspect and the dichotomy *ser/estar* is not very trustworthy, when comparing sentences in (5c) and (7) I conclude that (5c) is grammatical only when it has the [+ perfective] reading of (7b), but ungrammatical if we force the nonperfective interpretation of (7a).

The presence of Asp and aspectual adverbs in argument SCs argues for the insertion of the whole SC within an AspP as its complement. In more formal terms, once the lexical items which make up the clause are selected along with their grammatical

and semantic features, a Stowell (1983) structure is formed and merges with an AspP. The syntactic representation of the SC will look like this:



This configuration is the consequence of the first step of the derivation in the computational system, no matter what the syntactic category of the SC predicate. This is why I use the general term XP (see Aarts 1992).

Syntactic or semantic selection of an item relies in the compatibility of features between a head and its complement. This minimalist assumption is shown in derivation (8) by means of the relation between the head Asp and its complement XP. In other words, the aspectual feature of Asp must be compatible with the same feature in X. The feature [? perfective] would be [+ Interpretable] in the sense of Chomsky (1995), because it has semantic content and it is accessible at any point of the derivation, but Asp in English is weak, and as such the predicate aspectual feature is checked at LF.

An important consequence of the derivation proposed in (8) is that it provides a syntactic device to explain the (un)acceptability of sentences (9) and (10) used by Stowell (1983) to postulate that matrix verbs subcategorise for the syntactic category of the SC predicate:

- (9) a. I consider John very stupid.  
 b. I expect that sailor off my ship by midnight.
- (10) a. \*I consider John off the ship.  
 b. \*I expect that sailor very stupid.<sup>1</sup>

The difference in grammaticality between (9) and (10) may receive an elegant explanation by establishing several kinds of aspectual relations between Asp and XP. The matrix verb requires a specific aspectual feature for the subordinate Asp which must be compatible with the feature that the SC predicate is assigned. Otherwise a crash in the derivation will take place due to features conflict. This explains the acceptability of (9a):

- (9) a. I consider [ Asp John very stupid]  
           [- perf]       [- perf]

If the SC predicate is marked as [+ perfective], Asp must contain the same feature supplied by the main verb, so that no mismatch of features occurs. Now we can account for the aspectual selection in (9b) and (10a-b):

- (9) b. I expect [ Asp that sailor off my ship by midnight]  
           [+ perf]                    [+ perf]
- (10) a. \*I consider [ Asp John off the ship]  
           [ - perf]                   [+ perf]
- b. \*I expect [ Asp that sailor very stupid]  
           [+ perf]                   [- perf]

Derivations for (10a-b) crash due to the mismatch of aspectual features between Asp and the PP *off the ship* and the AP *very stupid*, which prevents checking from being applied.<sup>2</sup>

My last point about aspect is that a predicate may be assigned both aspectual features and that a matrix verb may require any feature depending on the context. In this case, Asp is neutral but in the derivation this aspectual feature must appear and be checked.<sup>3</sup> Due to this neutral aspect both sentences in (11) will have a convergent derivation and (10a) will be acceptable if the context is appropriate:

- (11) a. I consider [ Asp him fat]  
           [- perf]    [- perf]
- b. I consider [ Asp him fat now], although he was very thin last year.  
           [+ perf]    [+ perf]

The question at issue is what causes Asp and the SC predicate to be assigned a specific feature. The answer lies in the aspectual nature of the matrix verb. There are verbs which select a state of affairs, a change of state or both. *Expect*, for example, determines the perfective Asp of the SC, which allows only a predicate marked with the feature [+ perfective]. However, *consider* may require the SC Asp to be marked with the features [- perfective] or [+ perfective], depending on the context. Obviously, we can consider a permanent state as well as a temporary state. People can always be fat, or be fat at a specific moment only. This is the difference that underlies the contrast in (11).

My conclusion is that the aspectual selection of the SC predicate on the part of the matrix verb is mediated by the functional category Asp, which may be assigned either a [+ perfective] or [- perfective] feature, compatible with the aspectual property of the SC predicate.

### 3. ON THE EXISTENCE OF TENSE IN SCS

Cardinaletti & Guasti (1995:14) deny the existence of TP in argument SCS arguing that these constructions show no tense morphology similar to the features that a finite clause includes. Evidence for their statement is provided by temporal adverbs.

Bobaljik (1995) holds that an adverb is generated via adjunction to the maximal category it modifies. This idea leads Marantz (1984) and Cardinaletti & Guasti (1995) to assume that a temporal adverb is adjoined to TP. If, by any reason, this projection is not present in the derivation of a clause, its structure cannot include any temporal adverb. Consider the following Italian sentences:

- (12) a. Oggi ritengo che Gianni era malato, ieri.  
 “Today I consider that John was sick yesterday.”  
 b. \*Oggi ritengo Gianni malato, ieri.  
 “Today I consider John sick yesterday.”

From sentences in (12) Cardinaletti & Guasti deduce that the occurrence of two adverbs in clear temporal conflict like *oggi* “today” and *ieri* “yesterday” implies the presence of two TPs, one in the matrix clause and the other in the subordinate clause. The ungrammaticality of (12b) shows that the SC does not contain any TP.

Several counterarguments can be found to prove that this conclusion is not very felicitous. First, there are some SCs which include their own temporal adverbial. As Demonte & Uriagereka (p.c.) suggest, this argument will be stronger where different time adverbials modify matrix clause and SC in the same sentence. The Spanish examples in (13) illustrate this assertion.

- (13) a. Ahora no puedo imaginarte en casa todo el día de ayer.  
 “Now I can’t imagine you at home all day yesterday.”  
 b. Hoy quiero el coche reparado para mañana a las seis.  
 “Today I want the car repaired for tomorrow at six.”

These sentences will be correct in an appropriate context. Imagine that you want your car repaired for tomorrow, but this willingness is expressed at the present time of the utterance. In this context sentence (13b) will be quite natural.

Secondly, following Enç (1987), the contrast in (12) may be due to the anaphoric nature of T in some argument clauses. From this perspective the temporal reference in the SC must be identical with that of the matrix clause. This is why sentence (14) is grammatical.

- (14) Oggi ritengo Gianni malato.  
 “Today I consider John sick.”

The scope of the temporal reference [+ present] in the matrix clause is extended to include the SC, whose T is linked directly to the matrix T, forming a Tense-chain (see Guéron & Hoekstra 1995:78-79). The main clause contains a Tense Operator (TO) in its Comp(lementiser) position which dictates the temporal reference in the rest of the sentence. According to this hypothesis, sentence (14) will show the following representation:

- (15) TO<sub>i</sub> T<sub>i</sub> oggi ritengo [<sub>TP</sub> Gianni T<sub>i</sub> malato]



Now, the ungrammaticality of sentence (12b) can be explained as follows: the temporal adverb *ieri* refers to the past and the anaphoric T in the SC is linked to the matrix TO, whose reference is [+ present]. This conflict between present and past features makes the derivation of sentence (12b) crash. Nevertheless, not every SC contains an anaphoric T. The SC T may be referentially independent from the matrix T, as can be seen in sentences (13a-b). How can this temporal difference be accounted for?

#### 4. TIME INTERPRETATIONS IN SUBORDINATE CLAUSES

There exists a classical proposal in generative grammar about the interpretation of tense in different types of clauses. This is the work by Enç (1987), who makes a difference between shifted reading and simultaneous reading of tense. As I have said before, any clause contains a TO which is directly related to the time of utterance and is placed in the Comp position. T may be interpreted as simultaneous to or dissociated from this TO through a series of anchoring conditions.

Concerning complement clauses, both readings of T may be involved: this T may be simultaneous or shifted with respect to the matrix T. The two readings are possible in an argument clause like the one in (16), taken from Enç (1987:635).

(16) John heard that Mary was pregnant.

T in the *that*-clause is interpreted as simultaneous with the T of *hear* if the time of pregnancy is coindexed directly with the time of hearing. The shifted reading is obtained when the complement clause T is anchored to the matrix T through the Comp *that*.

From the different temporal readings of complement clauses the following statement is deduced: argument SCs do not contain a Comp, otherwise these SCs could receive a shifted reading:

- (17) a. I consider [that John is ill].  
 b. I consider [that John was ill yesterday].  
 c. I consider [John ill]  
 d. \*I consider [John ill yesterday].

In (17a) the simultaneous reading is plausible because subordinate T and matrix T are identical. Both refer to the present and are linked to the TO in the matrix Comp. (17b) illustrates the shifted reading as matrix T is coindexed to the TO, but the subordinate T is given a different coindex through its Comp. This is why an adverb like *yesterday* is not in conflict with the *that*-clause T.

The paradigm in (17c-d) shows that the SC cannot be interpreted as temporally dissociated from matrix T. (17c) is interpretable only if *ill* denotes the same time as *consider*. Otherwise, the ungrammatical result in (17d) obtains. My deduction from this fact is that there is no Comp in argument SCs through which a shifted reading is made possible.<sup>4</sup>

Rather than being identity of temporal reference, the relation between matrix and subordinate T in argument SCs is one of inclusion, in the sense of Enç (1987:648). Demonte (1991:152) points out that this temporal inclusion takes place in adjunct SCs. The time in the main clause must be included in the interval denoted by the secondary predicate, the latter being the former's antecedent, as in the Spanish example (18).

- (18) Luis ascendió al Pichincha emocionado.  
 "Luis climbed up the Pichincha emotionally touched."

The time of *ascender* "climb up" is included in the interval denoted by *emocionado* "emotionally touched" and, therefore, the adjunct SC T is interpreted before the matrix T.

Enç (1987:651) postulates that one of the situations in which  $\alpha$  acts as the temporal antecedent for  $\beta$  is that in which  $\alpha$  c-commands  $\beta$ . As regards argument SCs, its T is interpreted as antecedent for the matrix T, which is included in the former. This is illustrated by the unacceptability of (17d), as well as by the grammaticality of the following Spanish sentence:

- (19) Ayer consideré [a Juan enfermo por entonces], pero hoy considero [a este individuo sanísimo por ahora].  
 "Yesterday I considered John sick by then, but today I consider this man very well by now."

In a context where an employee takes sick leave every single day this sentence might be perfectly licit on the employer's part. The point is that *ayer* "yesterday" and *por entonces* "by then" are temporally compatible, both refer to the same past interval, whereas *hoy* "today" and *por ahora* "by now" are coreferential with respect to present time.

In order for the SC T to be the antecedent of the matrix T the former must c-command the latter. This is not the situation, as Demonte (1991:153) suggests with respect to adjunct SCs. It seems that the subordinate T is interpreted as included in the interval denoted by the matrix T, and not *vice versa*. This is indicated by the temporal reference of *por entonces* and *por ahora*, which refer back to the temporal interpretation of the matrix clause. Notice, for example, that the interval denoted by *por entonces* is included in the interval denoted by *ayer* in the main clause.

The condition to be satisfied by argument SCs is that matrix T must be interpreted first in order for the subordinate T to take its reference. In this case matrix T will c-command the SC T. For this reason, sentence (12b) is clearly anomalous, while sentence (12a) is acceptable because the shifted reading of the subordinate clause is carried out through its Comp.

What I am asserting is that in the derivation of argument SCs the insertion of a TP is necessary, as is demonstrated by the occurrence of temporal adverbs in the SC. On the other hand, these time adverbs must be compatible; the temporal reference of the subordinate adverb depends on the temporal denotation of the matrix adverb, required by the inclusion relationship.

4.1. HOMOGENEOUS OR HETEROGENEOUS BEHAVIOUR OF T IN SCs

Up to now I have shown that, with regard to matrix verbs like *consider*, the SC T is anaphoric, allowing for a temporal modification which denotes an interval included in the time expressed by matrix T. The interpretation of the subordinate T depends crucially on the matrix T. However, if sentences (13a-b) are taken into account, it can be seen that inclusion does not always hold in SCs. Adverbs like *yesterday* and *tomorrow* involve a temporal conflict which does not impede their cooccurrence when the matrix verb is Spanish *querer* or English *want*.

Note also that with respect to *expect* the situation is quite similar:

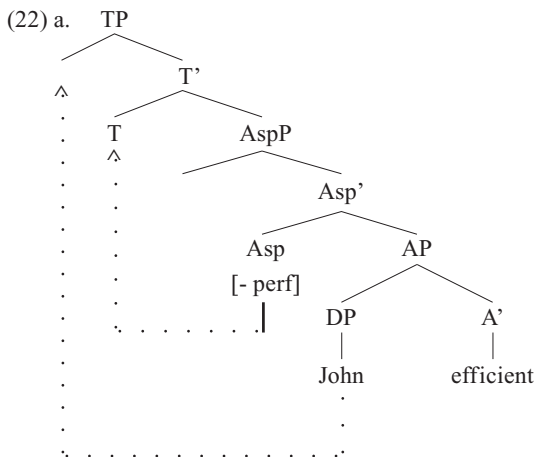
- (20) a. Now I expect [the patient dead by tomorrow].
- b. Yesterday I expected [the patient dead by now].

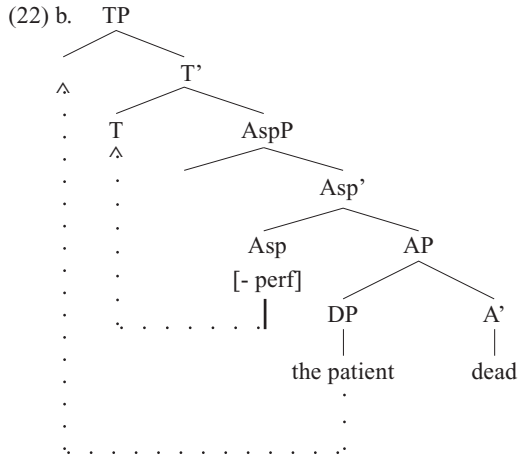
In (20a-b) a temporally shifted reading is required. This would mean in Enç's system that the SC should be dominated by a CP so that its Comp determines the temporal reference of the SC T. This would lead us to undesirable results as there is no other evidence for positing a Comp in the structure of SCs.

My hypothesis is that Asp in the SC influences its temporal reading decisively. In other words, I claim that in the derivation of an argument SC there is an interaction between inner temporality (aspect) and outer temporality (tense), which controls the temporal reading of the SC.

It seems that predicates marked with the aspectual feature [- perfective] favour an inclusion reading, whereas [+ perfective] predicates may be interpreted as dissociated from the matrix T. This is because features of T and Asp must be compatible. A change of state suggests a temporal shift; a permanent state of affairs never implies time variation. We will compare the SCs in sentences (21) and (20a) having a look at their respective derivations in (22a) and (22b).

- (21) I consider John very efficient.
- (20) a. Now I expect the patient dead by tomorrow.





What these derivations suggest is that before Spell-Out Asp raises and adjoins to T, making it perfective or imperfective.<sup>5</sup> An argument which supports the merging of the complex category [<sub>T</sub> Asp T] involves the existence of synthetic morphemes in Spanish or Italian (see De Miguel 1992). A verbal form like Spanish *cantaba* (“I/he was singing”) or Italian *leggevano* (“they were reading”) has become perfective in that they imply an iteration of intervals due to the fusion of Asp and T, resulting in the affixes *-ba* and *-va-*, which comprise temporal and aspectual values.<sup>6</sup> Following Bobaljik (1995:33), I assume that if an item expresses features of more than one head in the syntax, these nodes must be fused in order to allow for the insertion of the item in question. In the domain of this complex category, the Extended Projection Principle (EPP) features are checked.

A similar situation holds in SCs. The SC T is neutral, but it acquires a certain aspectual property when the feature under Asp moves up to it. Once the configuration [Asp T] is obtained, the EPP features are checked against the nominal feature of the DP subject of the SC, necessary for the convergence of the derivation.

The difference between *dead* and *efficient* lies in that in their respective contexts the former is marked as [+ perfective], while the latter is specified as [- perfective]. *Efficient* implies a state not divisible in intervals at the moment of considering; *dead* expresses a state which can split into stages with respect to the process of expecting. Also *efficient* might denote the permanent state selected by *consider*, whereas *dead* represents a transient property, an achieved state required by the semantics of *expect*.

Only those TPs which have been perfectivised admit a shifted reading. This explains the temporal contrast between matrix T and subordinate T in (13a-b) and (20a-b)<sup>7</sup>. Imperfectivised TPs allow for the generation of temporal adverbs only in the case where these are anaphorically compatible with the matrix T. This explains the contrast in (12a-b).

When a clause contains a Comp, this head determines its own inflection system, as in (12a). Because there is no Comp in SCs, it is Asp the category in charge of dictating the temporal reference of T, making it perfective or imperfective. Notice

also that the feature under Asp is selected by the matrix verb, accounting for the difference between *consider* and *expect*.

Another issue is the cooccurrence of temporal adverbials and aspectual adverbials in the structures under investigation. Demonte (1991:148) and De Miguel (1992:59) point out that the relative order of adverbs suggests that T selects Asp and not the other way round. Therefore, in sentences like (23), extracted from De Miguel (1992), there is a grammaticality contrast due to the inversion of the functional categories T and Asp which is nonexistent in Spanish.

- (23) a. Ahora siempre cena en casa.  
 b. \*Siempre ahora cena en casa.  
 “Now he always has dinner at home.”

The structure of argument SCs provides further evidence for the merging of Asp to T and not the reverse order, as it is illustrated in the following examples:

- (24) a. Considero a Juan ahora siempre feliz.  
 b. \*Considero a Juan siempre ahora feliz.  
 “I consider John now always happy.”

A possible counterexample is found when comparing sentences in (25).

- (25) a. I expected that patient already dead by now.  
 b. I expected that patient by now already dead.  
 c. \*I expected that patient already by now dead.

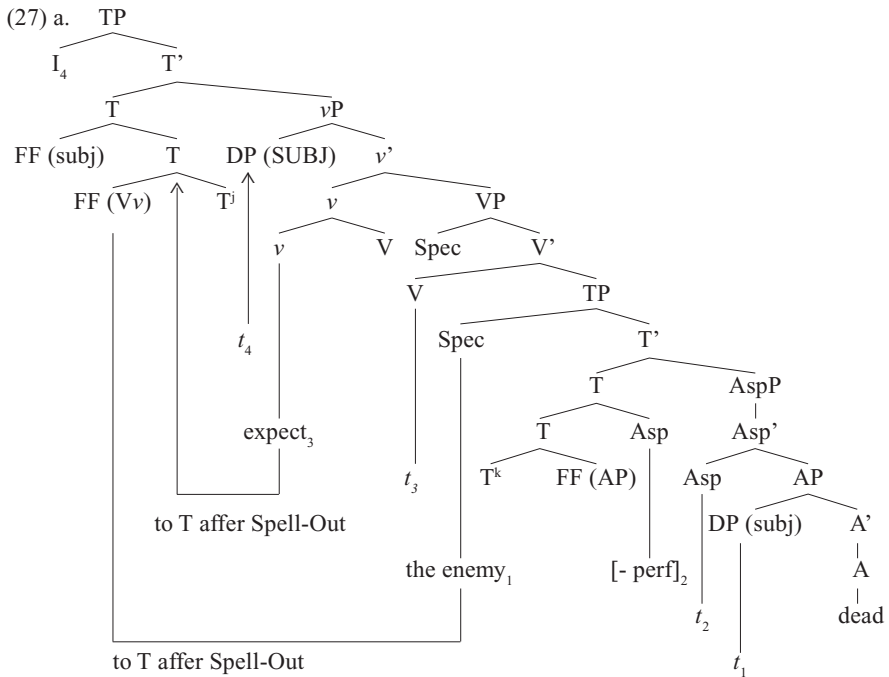
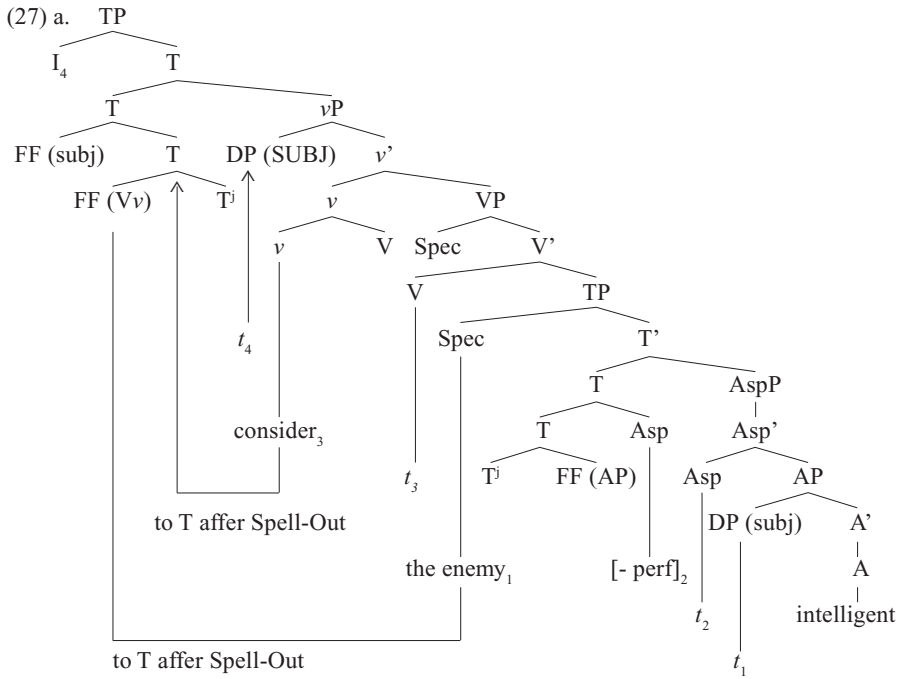
Sentences (25a-b) are convergent because the time adverb is adjoined to the SC TP. A property of these adverbs is that they may attach to the left or to the right of a TP (see Ojea 1997:178). So in (25a) *by now* is adjoined to the right, whereas the same adverb is adjoined to the left of TP in (25b). However, sentence (25c) crashes because its derivation is based on the dominance of T by Asp, leading to the illicit order [aspectual adv. + temporal adv.], which does not satisfy the bare output conditions.

From what has been said it can be concluded that the derivation of an argument SC involves the head T to which Asp is adjoined so that the SC outer temporality may be interpreted as included in or shifted from the matrix T. The reason for this temporal difference lies in the SC predicate's aspectual features [ $\pm$  perfective], which depend entirely on the aspectual selection of the matrix verb. This selection of the SC predicate by the matrix predicate is mediated in the derivation by the functional head Asp of the SC. Only [+ perfective] predicates admit a temporal reading shifted from the matrix temporality, which is why a perfectivised T allows for the occurrence of an adverb in clear temporal conflict with the matrix T.

#### 4.2. TWO TEMPORAL READINGS IN AN OPTIMAL DERIVATION OF SCs

In this section, I will compare the inclusion reading and the shifted reading of SCs in order to see their differences in derivational terms. My exposition will be based on the two sentences in (26) and their respective derivations in (27):

- (26) a. I consider the enemy intelligent.  
 b. I expect the enemy dead by tomorrow.



As a starting point, I have assumed Chomsky's (1995:381) idea that a richer use of formal devices may be allowed where it does not imply any complication of the computational system and only when this addition is justified. This is why when I have postulated the syntactic category Asp in argument SCs the compatibility of aspectual features has been assimilated to the already existent checking theory, thus avoiding any computational complexity.

I have maintained that aspectual features contain some semantic information, although some morphological information is also present, accounting for the syntactic devices which depend on the existence of the category Asp. For this reason, aspectual values are subject to checking and their movement is morphology-driven.

The features [ $\pm$  perfective] of an SC predicate need moving to Asp to explain the aspectual constraints that are involved in sentences (1). So, once Spell-Out has taken place, the aspectual feature of the predicate raises to Asp and is eliminated, though not erased, at LF, as it is supposed to be [+ Interpretable].

From the two derivations in (27) it can be deduced that it is at LF where matrix T c-commands the complex category [Asp T], marking it with the same coindex where Asp contains the feature [- perfective]. This is represented in the derivation by superindexes. In (27a) the SC T is anaphoric, being included in the temporal reference of matrix T. However, the distinct superindex in the SC T in (27b) indicates that its temporal reference has nothing to do with matrix T because this subordinate T has been made perfective by the adjunction of a perfective Asp. If the SC T has a shifted interpretation, this means that it may accept a time adverbial not referentially compatible with the time of expecting. This is the case with *by tomorrow*.

In languages like English where movement of V and object is covert, the formal features (FFs) of these categories raise at LF. Therefore, the nonfinite DP subject *the enemy* remains in the specifier of the subordinate T and its FFs move up to adjoin to the configuration [V *v*] in the matrix clause. Derivations in (27a-b) also show that the FFs of the SC DP subject raise to matrix T, to which the complex V*v* has previously adjoined. In this domain the DP enters a checking relationship with the formal features of V so that the [- Interpretable] feature ACCUS is eliminated.

Why do the DP's FFs raise to matrix T? The answer is quite simple. Matrix V moves overtly to the light verb *v*. The FFs of the complex V*v* keep on moving up to matrix T to check the verbal features. Chomsky (1995:265) holds that a feature does not raise alone, but it brings all the FFs of the lexical item with it. Consequently, if V's verbal features move to *v*, V's nominal features are also moved to the light verb and all FFs of the combination V*v* raise to matrix T. Therefore, the accusative feature of *the enemy* raises covertly to adjoin to matrix T and in this domain it is checked against the nominal feature of V at LF.

The derivations in (27) are convergent and optimal in that they satisfy the economy restrictions imposed by the bare output conditions. In addition, these derivations fulfill the principle of locality of movement, as syntactic categories move to projecting heads, never to adjoined heads. An example of this local movement is the raising of the aspectual feature of the SC predicate.

The category Asp moves to the SC T in overt syntax, accounting for the interselection between internal temporality and external temporality. The DP subject of the SC raises to the specifier of TP to satisfy the EPP features. Once Spell-Out has

produced, the aspectual feature of the SC predicate moves to adjoin to subordinate T to check its [ $\pm$  perfective] feature against Asp, which has previously adjoined to T<sup>8</sup>. Note that this FF cannot adjoin directly to Asp, as this category is an adjoined and nonprojecting head itself, if Chomsky's (1995:234) assumption that nothing can attach to a nonprojecting category is correct.

Finally, we are now in a position to explain why sentences like (1d) crash. The matrix V *expect* selects only an SC predicate marked with the aspectual feature [+ perfective]. This selection is mediated by Asp in the SC. The [+ perfective] feature under Asp moves to subordinate T, making it perfective. However, when the predicate *intelligent* raises to the complex category [Asp T] at LF, a mismatch of aspectual features arises because the [- perfective] value of *intelligent* is not compatible with the feature in Asp. This makes the derivation crash at LF.

## 5. CONCLUDING REMARKS

I have shown through this paper that argument SCs can be divided into two subgroups, according to the interpretation of T. The reference of the SC T can be included in the time denoted by the matrix T. However, in some other cases the subordinate T is interpreted as shifted from the matrix T. This temporal difference has been claimed to be due to the aspectual selection of the matrix verbs, giving an account of the difference between *consider* and *expect*.

The matrix verb is taken from the Lexicon with some aspectual constraints upon the type of predicate that can occur within the SC. The relation between matrix verb and subordinate predicate has been said to be mediated by Asp in the SC. This aspectual category raises before Spell-Out to T, making it perfective or imperfective. Now the complex category [Asp T] is subject to linking to the matrix T in case Asp is marked as [- perfective]. In this case the SC T is anaphoric with respect to matrix T and they will be coindexed. Another possibility implies an Asp specified as [+ perfective] and the interpretation of the SC T will be independent from matrix T and they will be given different indices. These aspectual differences account for the inclusion or shifted interpretation of the SC temporal reference. In conclusion, the only functional projections involved in the derivation of argument SCs are Asp and T.

## Notes

I am grateful to Violeta Demonte and Juan Uriagereka for helpful comments. I am also thankful to Mary O'Sullivan for revising the English.

<sup>1</sup> Kitagawa (1985) claims that the selection between matrix verb and SC predicate is not syntactic but rather semantic. He justifies this claim by giving examples like *\*The doctors consider that patient dead tomorrow* and *\*I expect that island off the route*. These sentences provide evidence that what the matrix predicate selects is not a specific syntactic category in the SC predicate, but any predicate which is somehow compatible with the semantics of the main verb.

<sup>2</sup> Kitagawa (1985) explains the difference between *consider* and *expect* in sentences (9-10) in terms of selection of state of affairs or change of state. In my own terms, this distinction is



equivalent with the dichotomy individual-level/stage-level, which is reflected in syntax by means of the aspectual features [ $\pm$  perfective].

<sup>3</sup> This neutral Asp leads Schmitt (1993) to postulate that IL predicates lack aspect. In order to avoid complexity, I will maintain that neutral aspect may also be selected if compatible with the neutral aspectual feature required by matrix verbs like *consider*.

<sup>4</sup> For an analysis of argument SCs as including a Comp, see Hantson (1989) and Starke (1995).

<sup>5</sup> Although overt movement is more costly than covert movement, raising of Asp must take place before Spell-Out because there are some SCs which include particles like *as* or *for*. These elements are best analysed as aspectual morphemes, contra Starke (1995), who classifies them as complementisers. The motivation I find for this analysis is that when the SC contains such particles its predicate must be marked as [- perfective], otherwise the structure will be ill-formed:

(i) a. I regard Mary as intelligent.

b. \*I regard Mary as pleased.

The reason why (ib) is anomalous is that *pleased* is a [+ perfective] predicate and *as* generates under Asp with the feature [- perfective]. This mismatch of features makes the derivation crash. In order to account for the order [DP *as* AP] bare output conditions require that movement of aspectual *as* to T be overt.

<sup>6</sup> In the linguistic literature the form *cantaba* (“I was singing”) is classified as *imperfectum*, though here it is given the aspectual feature [+ perfective] as opposed to *canté* (“I sang”), which receives a [- perfective] feature. Note that I am using the term “perfective” in a rather different sense. Following Bosque (1990), in this work perfective means worth perfectivizing, subject to change and divisible in stages, while imperfective means not divisible in intervals.

<sup>7</sup> Because T in the SC can become perfective, verbs like *expect* cooccur with perfective predicates which must be temporally contextualised by inserting an appropriate temporal adverb. For this reason, we find contrasts like that in *??I expect Joe dead* versus *I expect Joe dead by noon tomorrow*. The adverbial *by noon tomorrow* makes explicit the change of state which is denoted by the predicate *dead*, as Hale & Keyser (p.c.) suggest. The SC T seems to need perfectivizing by the adjunction of Asp in order to allow for adverbs which imply a temporal change. In other words, the occurrence of time adverbs requires the adjunction of Asp to T, providing a motivation for claiming that there exists interdependence between T and Asp.

<sup>8</sup> One main difference between English and Spanish concerns word order in SCs. In Spanish both [DP XP] and [XP DP] are correct, while in English only the first one is acceptable.

(i) a. Considero a María inteligente.

b. Considero inteligente a María.

“I consider Mary intelligent.”

In order to capture this distinction, the optional raising of the SC predicate in overt syntax can take place and the aspectual feature may be checked either before or after the Spell-Out.

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