THE CONFIGURATION OF ECM STRUCTURES*

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Abstract. In this paper we offer an analysis of both verbal and non-verbal exceptional Case-marking structures, discussing their temporal interpretation and the presence vs. absence of a T(ense)P(hrase) projection. A major issue is the parametric variation between English and Spanish, which renders Spanish ECM verbal structures impossible with predicates other than verbs of perception. It is argued that DP subjects (of verbal predicates) have a tense feature to check against a feature in TP and that Spanish TPs lack this feature, which therefore prevents the subject from being temporally interpreted. The exceptional case of perception predicates correlates with the meaning of simultaneity associated with them. Also, the possibility is explored that ECM structures where no TP is instantiated are instances of Asp(ectual)P projections.

1. Introduction

The aim of this paper is to provide an analysis of the underlying structure of the exceptional Case-marking (hence ECM) constructions illustrated in (1)–(3) below, and the corresponding temporal interpretation assigned in each case:

(1) a. I consider [John to be intelligent]
      b. You want [John to win the elections]

(2) a. I saw [Mary open the door]
      b. They heard [Mary leave]

(3) a. I consider [John intelligent]
      b. They believe [his a good book]
      c. The boss wants [John in his office at 8].

Crucially, we will compare English and Spanish ECM structures, suggesting an account of the fact that Spanish lacks a correspondence to the type where an infinitive is preceded by the particle *to* in English. Thus, English *to*-infinitival ECM constructions – cf. (1) above – have no Spanish counterparts, although the same does not hold for structures where the clausal object is subcategorized for by a verb of (direct) perception, in which case, as (2) shows, the infinitive occurs in its bare form. Cf. the ill-formedness of the epistemic and volitional exceptional clauses of (4) as opposed to the grammaticality of the verbal small clauses in (5):

(4)   a.   *Considero [a Juan ser   inteligente]
            I-consider   to-Juan to-be intelligent
       b.   *Quieres [a Juan ganar las elecciones]
            you-want to-Juan to-win the elections

(5)   a.   Vi   [a María abrir la puerta]
            I-saw to-María open the door
       b.   Oyeron   [a María salir]
            they-heard to-María leave.

In a similar fashion to (2) and (5), small clauses whose predicate has non-verbal status can be found in both languages:

(6)   a.   Considero [a Juan inteligente]
            I-consider to-Juan intelligent
       b.   Creen   [el suyo un buen libro]
            they-believe the his   a   good book
       c.   El jefe quiere [a Juan en su oficina a las 8]
            the boss wants to-Juan in his office at the 8.

This paper assumes generally the Minimalist Program as outlined in Chomsky (1995), a framework in which the parametric variations found among languages are ultimately related to the (strong/weak) features that certain items have to check against the corresponding functional projections. The claim made here is that all the matrix verbs in the sequences illustrated are Case-assigners and that the partial lack of correspondence between the two languages can be best expressed in terms of a Tense Criterion, according to which a feature of T has to stand in a Spec-head relation with a corresponding feature of the DP subject. The parametric difference in question is assumed to be that Spanish infinitival TP – contrary to its English homologue – lacks this feature, with the result that the Tense Criterion cannot be satisfied. The account presented here relies crucially on tense features of subject DPs, and will be compared both with the traditional analysis and, in a more detailed fashion, with Boskovic's (1996) analysis as based on Case properties of PRO and infinitives. Thus, most importantly, a characterisation of control structures will be in order, as is naturally the case whenever the phenomenon of ECM is involved – note e.g. the paradigmatic contrast between the ungrammatical (4a) and the structure *Juan considera [PRO ser inteligente]* 'Juan considers himself to be intelligent', which renders Spanish epistemic verbs in such configurations as predicates of control.

   Given that, as will be argued, it is infinitival TP which differs between the two languages, the well-formedness of (5) and (6), together with that of their English counterparts (2) and (3), is due to TP being crucially missing in these cases, in spite of the fact that, as will be shown, there is no ban on the occurrence of temporal adverbials in these structures. Further, subjects to non-verbal complements such as (3) and (6) will be argued to

lack tense features, this being a property of subjects in verbal sequences. Thus, the (non-)verbal status of a given structure will play a significant part in our approach.

Some observations in connection with the ensuing discussion might be pertinent here. First, it is a well-known fact that Spanish is not alone in exhibiting a contrast with respect to English in cases like (1)–(3): many other languages, both Romance, like French or Italian, and non-Romance, like German or Dutch, pattern the same way – cf. Kayne (1981), Rizzi (1981), Bennis & Hoekstra (1989), Demonte (1989), Mittwoch (1990), among others. Hence, although this paper uses data exclusively from Spanish – with the exception of certain cases in section 2.2 which are illustrated in Italian – the discussion may be assumed to carry over to other languages.

Another comment is relevant here which, as a matter of fact, affects the core of the overall discussion given that it is related to the very analysis of the sequences presented in this paper. It is assumed here that the material between brackets in the sentences above can and should be best analysed as complex syntactic constituents where the main predicate subcategorises for a clause acting as direct object, whose subject is assigned a thematic role by the embedded predicate[1] – cf. among others, Safir (1983), Stowell (1983), Aarts (1992), or more recent analyses such as Boivin (1998) and Felser (1998).

The paper is organised as follows. In section 2 we will provide a way to encode the partial contrast between English and Spanish ECM constructions and related structures of control. Specifically, 2.2 will be dedicated to perception predicates,[2] and to a characterisation of the corresponding passive structures, along the lines already set up in 2.1 in relation to the presence/absence of TP, and the Tense Criterion. Finally, in section 3 we will outline a proposal of what the structure of non-tensed complements of any predicate-type might look like.

2. The structure of infinitival ECM complements

English small clauses with a non-verbal predicate – a DP, an AP, or a PP – have identical Spanish counterparts, except for the occurrence of the dummy preposition *a* 'to', in front of [+Human] DPs, see (3) and (6) above.[3] The two languages vary, however, as to the acceptability of an

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[1] Specifically, the analysis of structures with perception predicates is particularly controversial, since they can also be taken as adjunct small clauses with a PRO subject – cf. Hornstein & Lightfoot (1987) and Aarts (1992).

[2] Causative predicates have been excluded from the discussion in spite of their similarities with verbs of perception, the reason being that these verbs deserve a separate study – cf. their status as complex predicates.

[3] It must also be noted that there exists another order for all Spanish ECM structures illustrated here, where the lower predicate occupies the position immediately to the right of the main verb, cf. Contreras (1987):

infinitival predicate in the clausal complement. Thus, whereas English allows for both (1) and (2), the Spanish equivalent of (1) is ill-formed, cf. (4)–(5), repeated below as (7)–(8):

(7) a. *Considero [a Juan ser   inteligente]
          I-consider   to-Juan to-be intelligent
     b. *Quieres [a Juan ganar las elecciones]
          you-want to-Juan to-win the elections

(8) a. Vi   [a María abrir la puerta]
          I-saw to-María open the door
     b. Oyeron   [a María salir]
          they-heard to-María leave.

Spanish has exceptional Case-marking, but it is more restrictively used than in English: there is no ECM in those cases where the English equivalents contain a *to*-infinitive. Since the English infinitival marker *to* presumably is the head of TP, whose Spec position is occupied by the subject (see (9)–(10)), we conclude that no ECM subject is allowed in TP in Spanish, i.e. *[a Juan ser inteligente]* '[Juan to be intelligent]' is impossible.

(9) I consider [$_{TP}$[$_{Spec}$John$_i$][$_{T'}$[to][$_{VP}$[be][$_{AP}$t$_i$intelligent]]]]

(10) You want [$_{TP}$[$_{Spec}$John$_i$][$_{T'}$[to][$_{VP}$t$_i$[win][$_{DP}$the elections]]]].

The grammaticality of (8), a case with a verb of perception, would seem to be related to the fact that no (infinitival) TP is present here. In English, the absence of TP is signaled by the bare infinitive.

Whereas Spanish cannot use infinitival ECM with epistemic or volitional verbs, it can use control infinitives, as illustrated in (11).

(11) a. Juan$_i$ creía   [PRO$_i$ correr más rápido que ellos]
          Juan believed PRO to-run faster   than them
          Juan believed himself to run faster than them
     b. Juan$_i$ considera [PRO$_i$ ser   un buen político]
          Juan considers PRO   to-be a   good politician
          Juan considers himself to be a good politician
     c. María$_i$ quiere/espera [PRO$_i$ llegar   pronto]
          María wants/expects PRO   to-arrive soon.

In 2.1 we will provide an account of the structural differences between ECM predicates and predicates of control which is not exclusively based

  (i) Considero inteligente a Juan
       I-consider intelligent   to-Juan
       I consider Juan intelligent
 (ii) Vi   abrir la puerta a María
       I-saw open the door to-María
       I saw María open the door.

on the checking of Case features. Before doing so, we will present the basic tenets of two previous analyses.

Chomsky (1981) proposes that a certain class of verbs in English, the *believe*-class, has the ability to govern and assign Case over a clausal boundary to the NP subject in the subordinate complement. Most other verbs, like *try*, cannot govern in this way, with the result that the subordinate subject must be PRO, since it is ungoverned and does not receive Case either from the *to*-infinitive or from the matrix predicate. Given this account, the contrast in (1) and (4) between English and Spanish would reduce to a lexical difference: Spanish epistemic (and volitional) verbs cannot govern and assign Case over a clause boundary, that is they behave as *try*. Thus, structures such as (4)/(7) above would be ruled out by the Case filter. The basic assumption behind this approach is that the categorial status of the embedded complement is CP, which is reduced to IP in the case of the *believe*-class, cf. the simplified structures below:

(12) a. John tried [$_{CP}$ PRO/*him to be a good politician]
    b. John believed [$_{IP}$ him/*PRO to be a good politician].

Boskovic (1996), working within the framework of the Minimalist Programme, presents an analysis where CP-deletion is eliminated. Guided by the requirement that a derivation must be as economical as possible, Boskovic presents convincing arguments in favour of the IP status of the clausal complement to *believe*-verbs. Once the IP status has been proven, the discussion centres around the instantiation of PRO – which is crucially assumed to check null Case (cf. Chomsky 1995). Thus, the presence of PRO is dependent upon the ability of the infinitive to check its Case-features.

Boskovic furthermore argues that there are semantic differences between the infinitival complements of *believe*-verbs and those of verbs like *try*: the latter type s-selects *irrealis*, which means that the complement of such verbs is specified for tense, which is capable of checking (null) Case. *Believe*-type predicates, on the other hand, s-select a *proposition*, which means absence of tense and hence absence of any Case-checking abilities – cf. the ungrammaticality of **He believes [PRO to be honest]*. Thus, the differences in the temporal properties of the two predicate-types ultimately determine whether PRO can be licensed or not. When it cannot be licensed, the matrix verb must be able to check the Case-features of the infinitival subject, hence ECM.

Boskovic's account is superior to Chomsky's, since it does not have to rely on a particular CP-deletion rule. Unfortunately, Boskovic's analysis does not give a coherent account of the English/Spanish contrast that is in the center of interest for this paper.

Boskovic's (1996) claim is, as mentioned, that *try*-class verbs s-select for *irrealis*, which has as syntactic correlate an infinitive checking (null)

Case, whereas *believe*-type verbs s-select for *proposition*, whose infinitive does not check Case. This implies that the meaning of *irrealis* is the expression of a separate or distinct time with respect to the matrix predicate: that would be the semantic significance of the subject in the subordinate clause checking Case from within.

However, as shown in (11), Spanish verbs belonging to the *believe*-class are predicates of control on a par with verbs belonging to the *try*-class. Boskovic thus predicts an interpretive difference between English and Spanish *believe*-type verbs that simply does not exist.

Also related to the English/Spanish contrast is the crucial fact noted in Kayne (1981, 1984) and Rizzi (1981, 1990) that exceptional Case-marking seems to be possible in French and Italian interrogative and relative clauses – cf. the parallel Spanish case in (13) below. In these cases the subordinate DP subject has moved away from the position immediately before the infinitival predicate. In order to account for these facts, Boskovic (1996) argues that *croire*-class verbs lexically select a null complementiser, and thus a case like (13b) is well-formed since the subject can check its Case when raised to the Spec of this complementiser.[4]

(13) a. *María considera [este libro merecer   el   premio]
        María   considers this book to-deserve the prize
    b. ¿Cuál$_i$ considera María   [t$_i$ merecer el   premio]?
        Which does-María-consider to-deserve the prize.

Again, it would be desirable if facts like these could be shown to follow from general syntactic principles. Such an account will be presented below.

A further potential problem that is not contemplated in Boskovic (1996) is related to *want*-class verbs. The fact that these predicates allow for a clausal complement whose subject can be either PRO or else a lexical DP seems to be most successfully explained in his account by evoking a null complementiser (cf. also Kayne 1981).

(14) a. He$_i$ wants [PRO$_i$ to win the elections]
    b. I want [John to win the elections].

Thus, while the Case of PRO would be checked against the infinitive in (14a), that of the DP *John* would also be checked from the inside of the subordinate clause, specifically by the abstract complementiser *for*. In this way, it can be maintained that *want*-class verbs belong, in Boskovic's terms, to the group of predicates which, like *try*, s-select for *irrealis* and therefore have no part in checking the Case of the subordinate subject.

Though it is a correct prediction that the temporal interpretation of the

[4] Cf. Rooryck (1997), who argues that, in this construction-type, French licences Case, not in the [Spec,AgrOP] position of the higher verb, but internally to the CP complement. According to Rooryck (1997), this property is shared by all (subordinate) clauses.

clausal complement of *want* coincides with that of *try* – the two would therefore s-select for *irrealis* – arguing that the DP subject in (14b) above does not check its Case in the [Spec,AgrOP] of the matrix verb means that Case-checking is obtained differently in (14b) and in (3c), repeated here as (15a), where no Infl is instantiated:

(15) a. The boss wants [John in his office at 8]
     b. I consider [John intelligent].

The fact that *John* in (15a) must necessarily be Case-licensed by *want* would indicate that *want-* and *believe*-type verbs should be grouped together, cf. (15b). A further argument that could be invoked for this grouping is that perfective *have*, which seems to be impossible with *irrealis* infinitivals – cf. **John tried to have won (*Boskovic 1996:282) vs. *I believed him to have failed* -is not banned with *want*: *I wanted him to have been a good politician*. This seems to indicate that, from a semantic point of view, *want* is not as *irrealis* as *try*, or that *want* shares with *believe*-verbs some crucial lexical property.

2.1 *The tense-feature of DP subjects*

Having found earlier accounts of ECM complements insufficient, we proceed now to present an alternative account. In the traditional vein, we propose that exceptional Case-marker verbs such as *believe* license the Case of a DP which is the notional subject of a clausal complement. Verbs like *try*, on the other hand, are not Case-assigners, and cannot therefore take an ECM complement. This account could seem to be flawed by the fact that a sentence like *They tried something* is well-formed but, following a suggestion by Platzack (p.c.), we will here rely on the lexical/structural Case distinction, arguing that verbs like *try* only assign lexical Case to its complement and therefore are unable to check the Case of a part of this complement, as is the subject of its (infinitival) complement. Whether the distinction between lexical and structural Case would have a semantic or interpretive correlate in the present case, we leave for further study.

The fact that epistemic verbs allow for ECM complements means that they must have object agreement features to check. Although we assume that the thematic object of an ECM-verb is the whole non-finite complement, this cannot check for structural Case, since infinitivals are not Case-marked (see Stowell 1982). Therefore, verbs of the *believe*-type must get access to the embedded subject DP which consequently is Case-marked by the matrix verb. Since *try*-verbs do not check for structural Case, they do not have a similar relation to the subject of its infinitival complement.

A piece of evidence that can be provided in favour of this proposal is the fact that *try*-verbs cannot take complements without an infinitive, where the infinitival subject PRO presumably is marked for null Case by

the infinitive. The ungrammaticality of (16d) and (17d) follows if neither *try* nor the adjective assign Case to *John/a Juan*.

As mentioned, verbs belonging to the *want*-class pattern in this respect with epistemic verbs, which indicates that they check for structural Case.[5] However, they differ from epistemic predicates in being optionally intransitive, cf. (18a) vs. (18b).

(16) a. I consider [John intelligent]
     b. They believe [his a good book]
     c. I want [the father in my office]
     d. *I tried [John intelligent]

(17) a. Considero [a Juan inteligente]
     b. Creen [el suyo un buen libro].
     c. Quiero [al padre en mi oficina]
     d. *Intenté [a Juan inteligente]

(18) a. He wants [PRO to win the elections]
     b. I want [him to win the elections].

Perception verbs also check for structural Case, as indicated by the fact that the DP co-occurring with a perceptional verb like *see* – e.g. *Mary* in (19a) or *him* in (19b) – could be argued to be its real thematic object, cf. footnote 1 and the references cited there.

(19) a. I saw [Mary open the door]
     b. I saw [him tired while on holidays].

Summing up, though it may seem too simplistic an account, we would like to argue that the availability to check for structural Case which is shared by epistemic, volitional and perception verbs explains why these predicates can take ECM complements, and that the absence of ECM complements with verbs like *try* signals that these verbs cannot check for structural Case.[6] As will be noted below, there is however another crucial factor involved, related to tense.

To start with, we would like to argue that all relations of predication need a temporal interpretation, which is evidenced by the use of (temporal) adverbials:

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[5] In Boskovic's terms, it could be argued that *want* does check Case whenever it s-selects for *state of affairs* – cf. *[the father in my office]* in (16c) – but, nonetheless, that would be a property shared with epistemic predicates.

[6] This difference between the two as regards Case does not invalidate the fact pointed out in Boskovic (1996) that control verbs (in English) display temporal properties distinct from those of epistemic predicates. Thus, the situation denoted by the subordinate in (i) below coextends in time with that of the matrix clause, whereas no such overlapping exists in (ii). However, such a difference may well be stipulated to belong exclusively in the lexicon.

  (i) I believed John to walk to the university
  (ii) I tried to walk to the university.

(20) a. John wanted[i] [Mary to leave] at 8[i]
    b. John wanted [Mary to leave[i] at 8[i]].

As the superscripts indicate, construing the adverbial either within the higher predicate or the lower one has crucial consequences: under the reading in (20a) – the sequence where *at 8* is adjoined to the matrix TP – the adverbial clearly refers to the time of John's wanting, whereas in (20b), where it is an adjunct to the subordinate TP, the adverbial indicates the time of Mary's leaving.

    Further, the fact that a location in time must be presupposed for any event does not entail that all relations of predication are instances of TP: temporal adverbs can be expanded in TP, as in the cases above, or in a configuration which is not a functional projection, such as VP, NP, AP, or PP, as in (21)-(22) below[7] (cf. the *Adjunct Projection Principle* in Sportiche (1988), according to which adverbials occur as adjuncts to the category they modify).[8]

(21) a. John saw[i] [Mary leave[i]] at 8[i]
    b. John saw[i] [Mary leave[i] at 8[i]]

(22) a. I believe/consider[i] John ill[h] today[i/h]
    b. He wants[i] you in your office[h] tomorrow[h]
    c. I remember[i] him attractive[h] in 1942[h]
    d. I remembered[i] him attractive[h] in 1942[i/h].

Thus, there is nothing preventing a categorial projection from having adjoined positions.

    Returning to the core of the discussion, since all relations of predication need a temporal interpretation, and it is subjects that typically instantiate a relation of predication with the predicate, it can be inferred that subjects need to be temporally interpreted. We will argue that this is represented as a temporal feature on the subject (see e.g. Grimshaw (1991), Safir (1993), Guéron & Hoekstra (1995), Branigan (1996), Platzack & Rosengren (1998), and Pesetsky & Torrego (2000) for different implementations of this idea).[9] The difference between Spanish and

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  [7] The use of the superscripts in (21)–(22) will be commented on in 2.2.

  [8] In this respect, it must be noted that the illustration offered in Cardinaletti & Guasti (1995:14) – which we here reproduce as (ia) – as evidence that no TP projection is present in small clauses should also serve the purpose of showing that the occurrence of temporal adjuncts is perfectly valid in these structures provided they are appropriately selected by the semantics of the matrix predicate. Thus, *consider* does not select either for a past or a future situation when it takes a small clause, which is why (ia) is ill-formed – cf. the grammatical (ib):

  (i) a. *Today I consider him sick yesterday
      b. Today I remember him sick yesterday.

  [9] It will also be recalled that Kratzer (1989) argues in favour of subjects of [stage-level] or [+perfective] predicates, as opposed to those of [individual-level] or [-perfective] predicates, as having an abstract spatiotemporal argument that is associated with their occupying different syntactic positions in the clausal structure.

English that is in the center of our interest (see (1) and (4) above) will be explained in terms of this temporal feature.

Verbal predicates, which could be characterised as expressing *eventualities per se* or *inherent eventualities* (cf. e.g. Rooryck 1992:359), are syntactically distinct from non-verbal predicates – or *states of affairs* in Safir's (1993) terminology – in relation to tense. This is demonstrated by the examples in (23):

(23) a. I consider [him honest]
   b. *I consider [him be honest]
   c. I consider [him to be honest]
   d. I consider [him to have been honest].

If it were the case that verbal predicates did not require the presence of a TP, as opposed to e.g. adjectival ones, cf. (23a), then a sequence such as (23b), where a bare VP is instantiated, would be grammatical (in the case of perception predicates, no TP is instantiated – see (21) above and section 2.2 – but that can be ascribed to the meaning of simultaneity enhanced by perception predicates, which is not shared by the other predicates). Further, verbal predicates make it possible to locate the situation unambiguously in a time-period distinct from that of the matrix predicate: see (23d), where the use of perfective *have*, which significantly requires the presence of TP, correlates with a time prior to the matrix time, a reading which is impossible in (23a). Also, the passive of perception verbs – which will be discussed in 2.2 – shows that verbal predicates need a TP, in contrast to non-verbal predicates, cf. **He was seen jump all the fences* vs. the well-formed *He was seen in the hall/He is considered a good politician*.

Thus, in the account presented here, a verbal head, whether in a matrix or non-matrix clause, assigns a tense feature Tn to the DP in its Spec position. Following Rizzi (1991, 1997) and Haegeman (1995), we will propose that there is a *Tense Criterion*, according to which an (interpretable) Tn feature of T has to stand in a Spec-head relation with a corresponding Tn feature of the DP subject. In this way, a subordinate subject is temporally interpreted in its own clause, and a matrix subject is interpreted in the matrix TP.

The distinction between English and Spanish, illustrated in (1)-(4), can now be accounted for in the following way: Spanish infinitival TP lacks the Tn feature and therefore the Tense Criterion cannot be satisfied. The lack of ECM in Spanish cases like (4) is then argued to be a result of the impossibility to check Tn in the subject, and has nothing to do with Case-checking.

Before considering the potential advantages of our account of ECM, we will briefly provide some evidence that what we consider to be tense features of DPs on the one hand and Case features on the other do not seem to reduce to each other, at least not in the present state of the theory.

The evidence, which has to do with ECM itself, is twofold. On the one hand, the existence of ECM structures whose predicate is not a verb – e.g. *I consider [him intelligent]* – trivially argues in favour of keeping Case and the Tn-feature apart, since the embedded DP subject has Case but not Tn, which crucially requires a verbal predicate in the subordinate clause.

The second piece of evidence concerns null object *pro*, which, as argued in Rizzi (1986), requires licensing both with respect to Case features, and in relation to its interpretation. In (24a,b), *pro* is the object of the main verb and it shares the same index as PROarb and the anaphor, respectively:

(24) a. La música invita pro_i a [PRO_i descansar]
         Music invites one to rest
     b. La música reconcilia pro_i con uno mismo$_i$
         Music reconciles one with oneself.

However, whenever no such coindexation is possible, which is the case in ECM structures such as (25)–(27), only verbal predicates are possible. In a parallel way to (25), *pro* checks Case in the matrix [Spec,AgrOP] in (26)–(27).[10] The ungrammaticality of (26) must then be due solely to the licensing of its interpretation, which is understood here as the licensing of tense features. As can be noted, this argument also differentiates verbal from non-verbal predicates.

(25) a. Vi   [mucha gente feliz]
         I-saw many   people happy

(26) a. *Vi   [pro_{arb} feliz/felices]
         I-saw pro_{arb} happy(sing./plu.)
     b. *Oigo [pro_{arb} enfadado/-s]
         I-hear pro_{arb} angry(sing./plu.)

(27) a. Vi   [pro_{arb} saltar la   valla]
         I-saw pro_{arb} jump the fence
     b. Oigo   [pro_{arb} cantar]
         I-hear pro_{arb} sing.

The insight of our account would then be that ECM is impossible in Spanish due to the impossibility for infinitival TPs to check tense features, with the result that the Tense Criterion is not satisfied. In the approach presented here, control is possible in Spanish infinitivals since PRO, on a par with not having to check Case features, also does not have to check tense features. Its temporal interpretation would then be enhanced by

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[10] The null category cannot be an instance of PRO since it would have to check accusative against the matrix verb *ver* 'see'. On the other hand, it cannot be the case that PRO checks (null) Case either, since there is no TP in the subordinate; furthermore, if it had been PRO with null Case, the matrix verb would be unable to check its own Case.

virtue of its being anaphorically related to its controller – *cf*. the line of research starting in Bouchard (1984) and arguing in favour of a governed anaphora account of the interpretation of PRO.

All relations of predication therefore presuppose a temporal interpretation which, in the case of verbal predicates, is syntactically expressed in the form of a Tense Criterion: in order for the Tense Criterion to be realised, there must be a TP having a Tn-feature; if there is no TP, as e.g. is the case with perception verbs (see section 2.2), temporal interpretation is ensured by establishing an identity relation with the matrix VP. If, on the other hand, TP is instantiated but lacks the Tn-feature, then it cannot have a (lexical) DP as its subject but PRO, which in its turn is interpreted in relation to its controller.

Summing up the main discussion in this section, the advantages that the account of ECM presented here might have are the following.

a. Since relations of control are not associated exclusively with *irrealis*, this connection with interpretive facts need not be claimed to be non-existent in e.g. Spanish.

b. Both verbal and non-verbal ECM structures are made possible by the ability of the matrix verb to check the Case of the embedded subject – cf. such pairs as *I believed him to be honest/I believed him honest*. In the case of the infinitival complement there is, crucially, an additional checking of (tense) features.

c. As a result, volitional verbs such as *want* would be grouped together with epistemic verbs – see (15), (16) and (17) above – with which they seem to share basic properties.

d. On a par with determining the (un)grammaticality of infinitival ECM constructions, the requirement of tense features on DP subjects will enable us to account for the distinctive properties of the passive of perception predicates, as will be shown in 2.2.

e. Finally, an explanation can be invoked for the well-formedness of Spanish ECM infinitival structures like (13b) above without recurring to the presence of a null complementiser, which we will demonstrate in the remainder of this section.

As noted above, it is a problem for Boskovic's analysis that structures like (13b), here repeated as (28b), are grammatical: how do we understand the fact that *wh*-raising of the ECM subject turns an ungrammatical sentence grammatical?

(28) a. *María considera [este libro merecer el premio]
           María considers this book to-deserve the prize
      b. ¿Cuál$_i$ considera María [t$_i$ merecer el premio]?
           which does-María-consider to-deserve the prize.

To account for this, Boskovic had to assume the presence of a lexically-selected null complementiser which can check accusative under Spec-head

agreement, predicting that the infinitival complement of epistemic verbs in Spanish (and French, Italian, . . .) are CPs. In the account presented here, there is no need for such an ad hoc solution. Given that the ungrammaticality of the ECM structure in (28a) is due to the absence of tense features on the infinitival TP in Spanish, the well-formedness of (28b) indicates that the Tense Criterion is properly satisfied in the matrix CP.[11] That CP positions are inherently associated with tense has been argued for convincingly by many scholars, including Stowell (1982), Enç (1987), Branigan (1996), Rizzi (1997), or Pesetsky & Torrego (2000). Consider also the high degree of temporal independence that we find in a CP-complement as (30), compared to the IP-complement of (29):

(29) a. I believe [him to be sick today/*yesterday]
     b. He considered [her to attend the auction yesterday/*today]

(30) a. I believe [that he is/was sick today/yesterday]
     b. He considered [that she attended the auction yesterday/ today].

2.2. *The absence of TP in infinitival complements*

Small clause complements to perception verbs are possible both in English and in Spanish – cf. (2) and (5) above – which in our account is explained as being due to the absence of TP in these instances, a statement which, otherwise, has always found general consensus in the literature. The absence of an embedded TP, which keeps perception verbs apart from epistemic and volitional predicates, finds a clear semantic correlate in the notion of *simultaneity* or *coincidence in time*: the act of perception and the event actually perceived constitute a single truth-value domain. However, this does not mean that the absence of TP is necessarily linked to the meaning of simultaneity: as will be shown later in (41b–e), epistemic and volitional verbs do not s-select for a simultaneous situation. Rather, the meaning of simultaneity, which is imposed by the selectional restrictions of perception predicates, is associated with the lack of TP.

The contrast between (31) and (32) clearly shows that (only) perception verbs trigger simultaneity: whereas different readings obtain in the first pair depending on whether or not the (temporal) adverbial is contained within the embedded clause, both (32a) and (32b) have the same semantics regardless of the position of the adverbial. In this latter case, it is possible to think of the two events as a single one from a temporal point of view, though syntactically, the adverbial in (32a) should be

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[11] In the case of relative clauses, the corresponding CP would be located in the subordinate, cf. *El libro [$_{CP}$ que$_i$ creías [t$_i$ merecer el premio . . .]]* 'The book that you believed to deserve the prize . . .

[12] The neutral positioning of temporal adverbs in perception constructions is unique to this class of adjuncts and therefore does not carry over to e.g. aspectual adverbs, in spite of the latter being predicate adjuncts like the temporal ones. As can be easily guessed, this has

adjoined to the (matrix) TP, and in (32b) it should be a VP adjunct.[12] As will be argued in section 3 of this paper, there is a functional structure above VP in small clause complements. However this does not interfere with the occurrence of time adverbials.

(31) a. John wanted[i] [Mary to leave] at 8[i]
     b. John wanted [Mary to leave[i] at 8[i]]

(32) a. John saw[i] [Mary leave[i]] at 8[i]
     b. John saw[i] [Mary leave[i] at 8[i]].

We will first briefly consider the negative relation that exists between the expression of simultaneity and such syntactic constructs as auxiliary *have* and NegP. Secondly, we will outline the mechanism by means of which the embedded DP subject in the complement to perception verbs is temporally interpreted. Thirdly, we will discuss the passive of perception predicates. Whenever the Spanish facts are identical to the English ones, we will exclusively consider English examples.

   From the fact that perception verbs s-select for a simultaneous situation, it trivially follows that perfective *have* is barred from the configuration of the complement clause, as are temporal adverbials signalling a time which does not coincide with that of the matrix predicate, cf. the contrast between (33)–(34) and (35)–(36) respectively:

(33) He saw Mary open/*have opened* the door

(34) a. He believes her to be/*to have been* a good student
     b. I wanted him to win the elections/*to have won* the elections

(35) He will see/*saw Mary open the door tomorrow

(36) They want/wanted him to win the elections next month.

The distribution of the perfective auxiliary in English clearly indicates that it requires the presence of tense – either finite or non-finite, as in (34) – or otherwise of a lexically filled imperative head[13] – cf. the contrast *Have made your bed by 10* vs. *Do have made your bed by 10* – which indicates that English *have* is parasitic on either TP or ImpP. Thus, it comes as no

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to do with aspect being a non-transferable property of predicates, that is, aspectual adverbs are constituents specifying the internal temporal structure of predicates.

   Thus, whereas the inclusion of the frequency adverb in the small clause complement in (ia) below denotes the existence of several events of the individual's leaving at the time indicated, if the adverbial has scope over the main predicate – as in (ib) – it is several happenings of the event of seeing that is referred to.

   (i) a. I saw [him always leave at 8]
       b. I always saw [him leave at 8].

   [13] It is assumed here that imperatives lack the TP projection: see Beukema & Coopmans (1989), Zanuttini (1996) and Platzack & Rosengren (1998).

surprise that *have* is not possible in the complement of a perception verb, in which the absence of TP is seen as a requirement of simultaneity.

Another property distinguishing perception predicates from epistemic/volitional ones is the fact that perception verbs do not readily permit a negative complement: the affirmative polarity of the higher predicate entails affirmative polarity in the subordinate verb or, in other words, an act of perception entails or presupposes the occurrence of the event perceived:

(37) a. ?*He saw Mary not open the door
     b. ?*He heard Mary not leave.

(38) a. I consider him not to be able to win the elections
     b. She wants John not to deliver the books.

Recent approaches analyse in depth the close relation between NegP and TP – see Haegeman (1995) or Zanuttini (1996), where the choice of imperative vs. subjunctive forms, or the (un)grammaticality of past participle absolute constructions, are taken to be dependent on the availability of negation. Thus, perception verbs, which do not select a TP complement, do not readily accept the occurrence of the negative marker either, as opposed to epistemic and volitional predicates, which take a TP projection.

We will now proceed to show how the DP subject in the complement of perception verbs receives its temporal interpretation. Remember that DP subjects are assigned a tense feature by the verbal predicate, and that the Tense Criterion cannot be satisfied in the subordinate clause of perception verbs because of the absence of a TP. The simultaneity of the matrix clause and the small clause can now be accounted for as an anaphoric relation between the tense feature of the subordinate verb and the corresponding tense feature of the matrix verb – see the simplified structure in (39) below.[14] Thus, when the embedded DP subject moves to [Spec, AgrOP] of the matrix verb, its temporal interpretation is ensured through the Tense Criterion being realized in the matrix clause. Recall from section 2.1 that the same type of (anaphoric) relation is established between PRO and its controller whenever a TP is instantiated which does not have the pertinent tense features – cf. English verbs of the *try*-class, and Spanish *try*-verbs, as well as *believe/want*-verbs.

(39) $[_{TP}[_{AgrOP}[_{VP}I$ see^i [Mary open^i the door]]]]

(40) a. John$_i$ tried [PRO$_i$ to be a good politician]
     b. Juan$_i$ intentó [PRO$_i$ ser   un buen político]
        Juan tried   PRO   to-bea good politician

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[14] Chomsky (1995, ch.4) suggests that the AgrO-notation we use here is replaced by multiple specifers on VP. This change does not influence our account.

c. Juan$_i$ cree   [PRO$_i$ ser   un buen político]
    Juan believes PRO   to-be a   good politician.

As a consequence, subjects to verbal complements of non-perception verbs receive their temporal interpretation through the TP of their own (subordinate) clause, whereas corresponding subjects embedded under perception verbs have to rely on an anaphoric relation between the tense features of the matrix verb and the embedded verb. Obviously, in the case of non-verbal complements to both perception and non-perception verbs, where there is no (embedded) TP projections and no tense features, the corresponding DP subjects are temporally interpreted simply through the selectional restrictions imposed by the matrix predicate, without any additional syntactic mechanism:

(41) a. I felt/saw^i him in the hall^h early$^{i/h}$
      b. I believe/consider^i John ill^i today$^{i/h}$
      c. He wants^i you in your office^h tomorrow^h
      d. I remember^i him attractive^h in 1942^h
      e. I remembered^i him attractive^h in 1942$^{i/h}$.

Given that the meaning of simultaneity is restricted to the case of perception predicates, the adverbial is syntactically – and semantically – interchangeable only in (41a): whether it is taken as an adjunct of the (matrix) TP or of the PP predicate, the meaning does not change. As for *want* and *remember*, these ECM predicates select for a future and a past situation respectively, which means that the adverbial in (41c) can only be construed within the small clause predicate, whereas the adjunct in (41d) and (41e) can occupy one and two syntactic positions respectively. Finally, in the absence of an embedded TP, epistemic predicates are closest to verbs of perception, since they select for a quasi-simultaneous situation: the time of the complement in (41b) cannot be said to coincide with that of the main predicate, but it coextends at some interval with the latter. As in all remaining cases, it is the inherent meaning of the matrix predicate that is responsible for the overlapping of the two situations in (41b).[15]

To end this section, we will discuss the passive of perception predicates. The requirement that epistemic verbs take a TP complement could alone explain the ungrammaticality of the sequence in (42a) as long as it is assumed that perception verbs in the passive become, as a rule, epistemic

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[15] The following sequences could serve as possible paraphrases for the readings in (41b): in (ia), the situation expressed by the embedded predicate is a habitual state, and therefore the time of the main predicate is included or covered under the time of the subordinate; on the other hand in (ib), the embedded predicate does not express a habitual state, but it must cover the time of the mental attituted expressed by the main verb.

(i) a. Today^i I consider^i that John is always^h ill^h
     b. Now^i I consider^i that John is ill^h today^h.

predicates, cf. Higginbotham (1983), Declerck (1983). That is, the sequences in question would no longer refer to cases of direct perception, but would instead involve some meaning of inference or logical deduction (which would, furthermore, mean that direct perception predicates have no *semantic* passive counterpart).

(42) a. *John$_i$ was seen [t$_i$ jump all the fences]
    b. John$_i$ was seen [t$_i$ to jump all the fences].

The semantic import of logical deduction would explain e.g. the possibility for perfective *have* to occur in this type of sequence:

(43) a. *I saw [John have jumped all the fences]
    b. John$_i$ was seen [t$_i$ to have jumped all the fences].

On the other hand, it has also been argued that while it is true that an epistemic reading should be favoured in (42b) – or, in Declerck's terms, that it involves a case of indirect perception – it does not seem to be completely accurate to say that the direct perception reading is cancelled out by it – cf. Mittwoch (1990), Safir (1993). Whether we take one position or the other,[16] the fact must be accounted for that the complements to passive perception verbs must include a TP. According to the theory presented in this paper, DP subjects have tense features assigned to them by their verbal predicates. Given that, as argued before, verbal predicates embedded under perception verbs must bear an anaphoric relation with the perception verbs themselves, the ungrammaticality of (42a) must be sought in the DS (44a):

(44) a. *[e] was seen [John jump all the fences]
    b. [e] was seen [John to jump all the fences].

It is, thus, a question of the passive predicate not being able to establish an appropriate relation with the embedded predicate. As a result, the DP *John* is left uninterpreted in relation to *jump*, in spite of the fact that it should later move to the matrix [Spec,TP] to check the corresponding features. The defective character of the passive,[17] which could perhaps be explained in semantic terms as its failing to be the expression of a

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[16] The data below would seem to indicate that the direct perception reading is not completely lost. Whereas (i) and (ii), and (iii) and (iv), respectively, are not synonymous, (va) and (vb) are interchangeable, which should mean that they are given a direct perception reading:

  (i) I believed him to have jumped all the fences
 (ii) I had believed him to jump all the fencs
(iii) He was believed to have jumped all the fences
(iv) He had been believed to jump all the fences
 (v) a. He was seen to have jumped all the fences
     b. He had been seen to jump all the fences.

[17] Traditionally passive sentences have been taken to be *defective* with respect to active ones as regards the impossibility of the participle to assign accusative Case.

full eventuality, makes it necessary for the lower clause to be generated with a TP projection of its own, where the DP subject would check its tense features, and hence the Tense Criterion would be realised, cf. (44b).[18] Recall that, in our account, both PRO and verbs in the clausal complement to perception verbs are in an anaphoric relation with an item in the matrix clause: the subordinate verb is coindexed with the matrix perceptional predicate, and PRO shares the same index as the matrix subject. The fact that a passive predicate fails to provide an event with the appropriate interpretation could have a parallel in the raising structure illustrated in (45), whose ungrammaticality could be argued to be due to PRO not an appropriate controller:

(45) *It seemed [PRO to be happy].

Non-verbal complements are not subject to the constraint illustrated in (42a), a fact that is consistent with the conclusion that they lack TP. They do not even have tense features: the selectional restrictions directly imposed by the matrix predicates are enough for them to be properly interpreted.

(46) a.   He was considered honest
     a′. [e] was considered [he honest]
     b.   She is believed a good politician
     c.   They were expected at home
     d.   He has been seen/felt in the hall.

It remains to note that, as expected, the passive of perception predicates in Spanish has a marginal status: the Tense Criterion would fail to be realised, given the lack of tense features on the part of T, with the result that the embedded DP subject would not receive a temporal interpretation.

(47) a.   ?*[e] fue visto [Juan saltar   todas las vallas]
           [e]   was seen Juan to-jump all   the fences
     b.   ?*Juan$_i$ fue visto [t$_i$ saltar todas las vallas].

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[18] An exceptional case in relation to verbal complements is illustrated below:

(i) a.   He was seen jumping all the fences
    b.   [e] was seen [he jumping all the fences].

Though the issue of the contrast between the bare infinitive and the *-ing* form is obviously significant both from an interpretive and a structural point of view – cf. among others, van der Meer (1994) or Felser (1998) – we will confine ourselves to point out that the grammaticality of (i) where the complement has verbal status – as opposed to the ungrammaticality of (42a) in the main text – may be due to the *-ing* suffix having a temporal value. That way, its subject would be temporally interpreted, just as the subject of a *to*-infinitive is. Whether the presence of the *-ing* suffix should be taken as the instantiation of a TP projection is a matter that we leave for further research.

[19] Note that variation also exists in the case of causative structures, which have a lot in common with perception structures, cf. Guasti (1997).

It must be pointed out, however, that Spanish differs from other Romance languages such as e.g. Italian on this point.[19]

The basic fact is that the passive of perception verbs in Spanish has a marginal status, whereas they are fine in Italian. This poses a problem for the approach taken here since Italian patterns with Spanish in the construction-types illustrated thus far. Cf. (48), taken from Burzio (1986):

(48) a. *Maria ritiene Giovanni esser   partito
        Maria   believes Giovanni to-have left
     b. Alcuni prigionieri furono visti fuggire
        a few   prisoners   were   seen to-flee.

A possible explanation for the acceptability of (48b) could be that Italian has reanalysis here; if so, the main verb and the infinitive form a complex verb. The real subject of the infinitive – i.e. *alcuni prigionieri* – would become the direct object of the complex verb, with the result that it does not have to interpret any tense features in the subordinate clause. It is not clear to us, however, why a similar reanalysis cannot take place in Spanish.

3. Small clauses as AspP projections

In this section a proposal will be presented of what might be the specific status of small clause complements, i.e. those ECM structures that lack an embedded TP. It should be emphasised that the analysis offered here will be rather schematic and that we leave for further research a more thorough explanation of some of the pertinent facts.

We will suggest that ECM structures lacking a TP should not be analysed as bare VPs, but VPs embedded in an Asp(ect)P. We will thus propose the same basic configuration for all untensed complements, whether the matrix verbs are perception predicates, epistemic ones or volitional ones. The variations among them will be spelled out in the form of feature matrices making up the functional projection in question.

Since Carlson (1977), the aspectual distinction between [individual-level] vs. [stage-level] predicates – i.e. predicates denoting permanent vs. temporary qualities, or with the terms we will use below, [-perfective] vs. [+perfective] predicates – has proved productive in many types of semantic studies, some of which address the basic idea of Aspect as intermediary between the lexical and the syntactic configuration of a sentence (cf. among others, Tenny (1987), Hernanz (1988), Bosque (1990), and Demonte (1991)).

The argument that is offered in this paper in favour of the instantiation of an AspP projection dominating small clause complements is based on the grammaticality-facts of the sentences below:

(49) a. I expect him off my ship by midnight/*very stupid

[20] Any possible *imaginative* reading – cf. Boivin (1998) – is excluded.

    b. I want him in my office/*intelligent
    c. I consider him tired/honest/a good politician
    d. She saw him jump/jumping/tired/*intelligent.[20]

The judgements above indicate that predicates such as *expect* or *want* demand a [+perfective] predicate as their complement, whereas e.g. *consider* selects for either type of predicate: [+perfective] as *tired*, or [-perfective] as *honest* or *a good politician*.

  As for perception verbs, (49d) shows that they are incompatible with [-perfective] expressions, obviously because their embedded complements (most generally) refer to actions or events in the narrow sense, which could be said to show perfectivity in its highest degree, *cf. She saw him jump/jumping*.[21] As for the contrast bare infinitive/-*ing* form, it could be noted that the feature [+perfective], which is the only one matching verbal-type predicates, could be further marked as [+/-progressive].[22]

  Thus, it can be argued that, for a small clause to be licensed, its predicate must be appropriately selected by the matrix, which would have a syntactic reflex in the occurrence of an AspP projection immediately dominating the small clause. The head Asp would carry a [+/-perfective] feature, which should match those on the small clause predicate. Thus, the relevant part of the structure of (50a) below, where the predicate in question is [-perfective], should have the configuration in (50b). The categorial and the semantic selection would therefore match each other on the basis of identical features being shared by a head and its complement.

(50) a. I consider [him intelligent]
     b.

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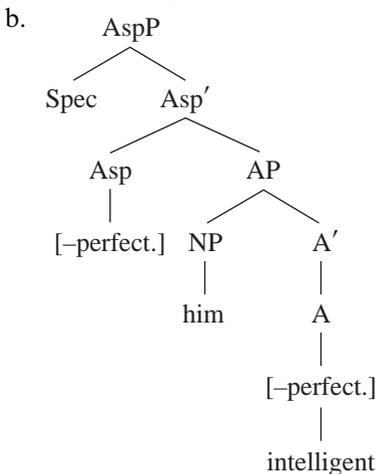
[21] Cf. Mittwoch (1990), where they are referred to as *bare events*.

[22] In Felser (1998), aspect is viewed as a two-term system comprising the values [+progressive] and [-progressive] which serves the purpose of distinguishing -*ing* complement clauses from clauses in the bare infinitive – cf. note 7 above. Her analysis revolves around the

Whereas the *to*-infinitival ECM complements have the status of TP projections, as argued above, the corresponding ECM small clauses would in this first approximation be analysed as AspPs. This indicates that aspect, contrary to tense, does not need a verbal element, since small clauses can have not only VPs as predicates, but also DPs, APs, and PPs. Aspect, contrary to tense, can therefore function simply as a predicate operator.

As was pointed out in footnote 12, a consequence of this analysis is that aspectual adverbs occur with all kinds of predicates, not just VPs. Thus, whereas the adverb in (51a) modifies a verbal predicate, those in (51b,c) are modifiers of non-verbal ones. It is also worth mentioning that an aspectual adverb can only take scope over the clause to which it is adjoined, since it refers to the internal temporal structure of its predicate.

(51) a. I saw [him always leave at 8]
     b. I consider [the glass already full]
     c. They believed [him completely crazy].

The point must also be made that since aspectual adverbs are [+perfective] in nature, they must occur with [+perfective] predicates, cf. the ill-formedness of *We consider Peter already/completely intelligent*.

Small clause predicates are further subject to semantic or interpretive restrictions that are not covered by the opposition [+/-perfective]. Thus, a verb like consider can take small clauses with both [+perfective] and [-perfective] predicates (see (49) above). Nevertheless, although (52a–d) are well-formed, (52e) is not:

(52) a. I consider him intelligent
     b. I consider him tired
     c. I consider him in a good humour
     d. Unfortunately, our pilot considers that island off the route
         (example from Kitagawa 1985)
     e. *I consider him in the swimming-pool.

The reason why (52e) is out, we will claim, is that a second AspP projection is instantiated below the [+/-perfective] AspP and immediately above the small clause. This (second) AspP would be the locus for the opposition [+/-attributive], where the negative value would be further specified as [+locative] or [+eventive]. The latter parameter [+/-eventive] would distinguish verbal predicates from non-verbal ones.[23] The schema

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idea that only [stage-level] predicates are realized as AspPs, since [individual-level] expressions cannot appear in the progressive.

[23] I am indebted here to two *SL* reviewers, who suggested that such values as [+/-attributive, locative, . . .] should be taken as aspectual ones.

in (53) could serve as a first approximation to the proposed distinctions, which are nevertheless in need of further study:

(53)   [+attributive]: e.g. *tired*, *ready*
        [+perfective]<   [+locative]:*in the pool*
                          [-attributive]
                                    [+eventive]: *jump*, *leave*
                          [+attributive]: *intelligent*
        [-perfective]<
                          [-attributive]: *off the route* (see 52d)

The contrast verbal/non-verbal, which has been a significant distinction throughout this paper, is now seen to be syntactically located in the head of AspP, specifically as one possible feature matrix contained within it. Thus, it trivially follows that [+eventive] will be a value typically selected by perception predicates – which, nevertheless, can also select for [+attributive] or [+locative] complements, cf. *I saw him tired/in the hall* – in contrast to the small clause complements of epistemic and volitional verbs, which do not refer to events, but to relations of attribution and location (recall that small clauses are generally assumed in the literature to be the canonical structural realisation of states, cf. also the term 'states of affairs').

   The ungrammaticality of a construction such as (52e) above now follows: the verb *consider* can take either a perfective or a non-perfective predicate, as indicated at the beginning of this section, as long as it is [+attributive]; hence [+locative], as in (52e), is impossible, since [+locative] goes with [-attributive]. As for *want*, this verb would select for both [+attributive] and [-attributive] AspPs, provided that whenever it is attributive, the embedded predicate is [+perfective] – cf. the ill-formedness of (54c). In its turn, the perception verb *see* requires a [+perfective] predicate, but in this case it is allowed to be embedded under an [+eventive] AspP, which is generally the case – cf. (55a).

(54) a. I want him friendly to her/I want the car ready tomorrow
     b. I want him in his office at 8
     c. *I want him intelligent

(55) a. I saw him leave
     b. I saw him tired/I saw it ready/in the hall
     c. *I saw him intelligent.

We are now in a position to offer the complete structure of a small clause such as that in e.g. (50a) above, which would be one in which an AspP specified [-perfective] would select for another AspP with the feature [+attributive] – cf. (56a). The structure in (56b) represents another small clause complement-type, this time that of a perception verb. Both would contrast with (56c), where the clausal complement is a TP. In this last

(56) a. I consider him intelligent

```
...                     AspP₁
              ┌───────────┴───────────┐
            Spec                     Asp′
                          ┌───────────┴───────────┐
                        Asp                     AspP₂
                          │              ┌─────────┴─────────┐
                    [–perfect.]        Spec              Asp′
                                              ┌───────────┴───────────┐
                                            Asp                     AP
                                              │              ┌────────┴────────┐
                                        [+attrib.]         Spec            A′
                                                             │              │
                                                            him             A
                                                                            │
                                                                      [–perfect.]
                                                                      [+attribut.]
                                                                            │
                                                                      intelligent
```
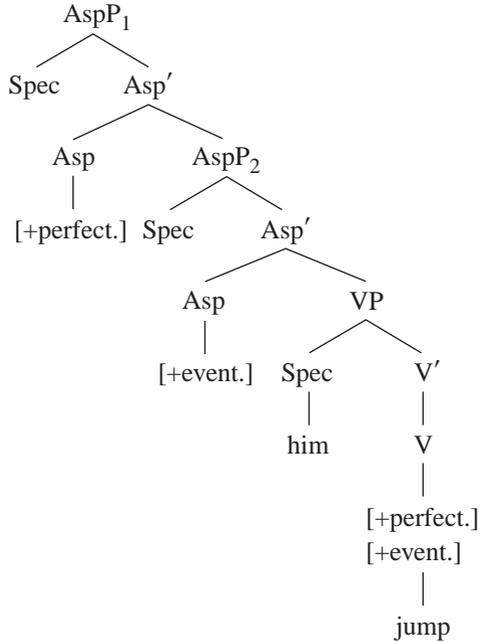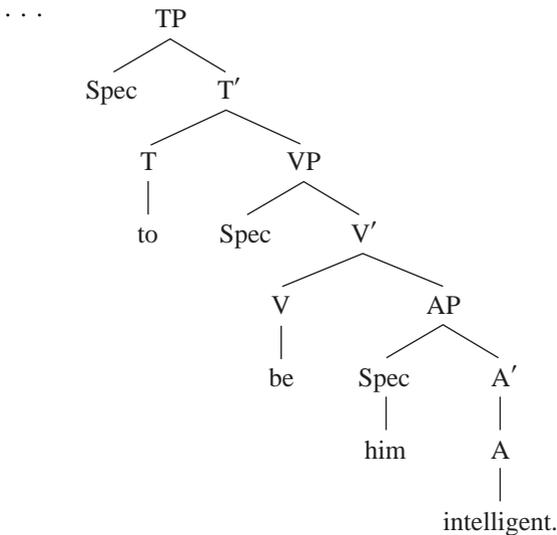
b. I saw him jump

```
...                     AspP₁
              ┌───────────┴───────────┐
            Spec                     Asp′
                          ┌───────────┴───────────┐
                        Asp                     AspP₂
                          │              ┌─────────┴─────────┐
                    [+perfect.]        Spec              Asp′
                                              ┌───────────┴───────────┐
                                            Asp                     VP
                                              │              ┌────────┴────────┐
                                         [+event.]         Spec            V′
                                                             │              │
                                                            him             V
                                                                            │
                                                                      [+perfect.]
                                                                      [+event.]
                                                                            │
                                                                          jump
```

c. I consider him to be intelligent
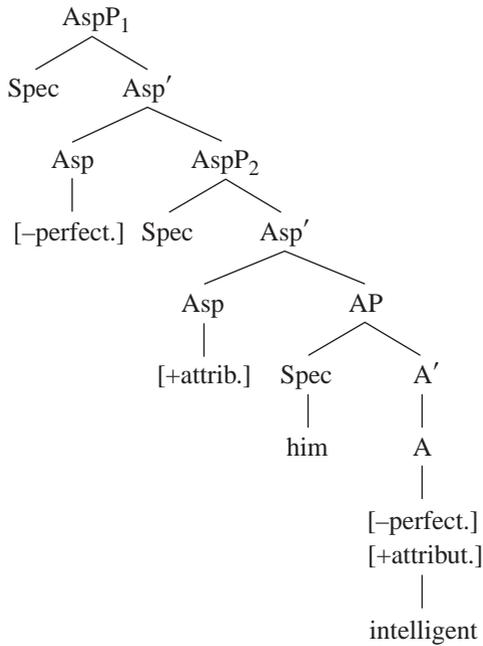
```
 · · ·            TP
              /        \
          Spec          T′
                     /      \
                   T          VP
                   |        /    \
                  to     Spec      V′
                              /        \
                            V            AP
                            |          /     \
                           be       Spec       A′
                                     |          |
                                    him         A
                                                |
                                          intelligent.
```

instance, no AspPs would be projected, given that they are not necessary: the very instantiation of a TP makes it possible for the predicate embedded under it to have any aspectual features, cf. *I expect him *(to be) very stupid*, *I consider him *(to be) in the swimming-pool*.

The analysis presented here of the selection of small clauses carried out by ECM verbs can also be applied to the selection carried out by raising predicates. Suffice it to say here that the grammaticality facts in (57)–(59) below could be explained by arguing that *seem* demands an $AspP_1$ and an $AspP_2$ with the features [+/-perfective] and [+attributive] respectively – cf. the ungrammaticality of (56d) – whereas *appear* is further restricted in that it licenses a complement with the features [+attributive] and [+perfective]. In addition, all raising predicates may select a TP, in identical fashion to epistemic and volitional predicates. As for the raising predicate *happen*, the only possibility is a TP projection.

(57) a. He seemed to grant the permission
     b. He seemed (to be) intelligent/stupid
     c. He seemed (to be) surprised/tired
     d. He seemed *(to be) in the theatre

(58) a. He appeared to grant the permission
     b. He appeared (to be) distracted/tired
     c. He appeared *(to be) intelligent/stupid
     d. He appeared *(to be) in the theatre[24]

---

[24] This sequence is grammatical with an existential meaning.

(59) a. He happened to grant the permission
     b. He happened *(to be) intelligent/stupid
     c. He happened *(to be) surprised/distracted
     d. He happened *(to be) in the theatre.

4. Conclusion

Our discussion has revolved around the idea of the presence vs. absence of a TP projection in ECM verbal structures. We have shown that perception verbs, which do not have a TP complement, differ from the other predicate types in selecting for a situation where the complement time is interpreted as simultaneous with the matrix time.

In spite of this difference, it has been argued that all verbal predicates are alike in requiring their DP subject to check a tense feature against the corresponding functional projection, an assumption which can be held to explain both the parametric variation existing between English and Spanish with respect to the lack in Spanish of epistemic and volitional ECM tensed complements, and the constraints holding on the passive of perception predicates. In the first case, the ungrammaticality of such sequences as *Considero a Juan ser inteligente* 'I consider Juan to be intelligent' or *Quiero a Juan ganar las elecciones* 'I want Juan to win the elections' – which has a correlate in many other well-known languages – has been explained by positing that Spanish TP has no tense feature to check against the corresponding DP subject, which prevents the latter from being temporally interpreted. Similarly, the ill-formedness of passive constructions in the bare infinitive – cf. *He was seen jump all the fences* – is attributed to the matrix predicate failing to establish an appropriate anaphoric relation with the embedded verb, which renders the temporal interpretation of the corresponding DP impossible.

Given that subjects to verbal predicates need to be temporally interpreted, and that not all T heads have the corresponding tense features, structures of control embedded under any verb-type, whether in English or in Spanish, are ensured through an anaphoric relation between PRO and its controller.

The non-occurrence of a TP projection is the criterion assumed here to analyse all types of small clauses – whether verbal, and therefore selected for by perception predicates, or non-verbal, and selected for by epistemic, volitional, or else perception verbs – which means that the same amount of structure has been argued to be configurated throughout, namely a multiple AspP projecting such features as [+/-perfective] or [+/-attributive].

In several places in this paper it has proven to be fruitful to invoke the correspondence between syntax and semantics. However, this correspondence can only be partial, since there exist mismatches between semantic

values and grammatical constituents, e.g. the radically different syntactic configurations for such sequences as *I consider him to be intelligent* and *I consider him intelligent* as caused by T needing to get affixed to a verbal item, and therefore being absent in the second construction. Another mismatch between syntax and semantics which would be pertinent to our approach is that perception verbs select for the same functional structure as epistemic and volitional predicates whenever the latter take non-verbal complements, in spite of the fact that only epistemic and volitional predicates can have their own temporal specification as distinct from that of the main predicate, cf. *I saw^i him leave^i at 8^i* vs. *The boss wants^i John in his office^h tomorrow$^{h/*i}$*.

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