

# Tense and Aspect in Non-Finite Clauses

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Following the analysis of tense developed by Partee (1973) and Enç (1987), among others, we will claim that in natural languages tense categories have a referential character—they denote temporal intervals—and show a syntactic behaviour similar to that of nominal categories. From this point of view, after having commented that the simple past of English stative verbs (and also Romance imperfect) behaves like pronominals and that the simple past of English non-stative verbs (and also Romance preterite) behaves like R-expressions, we focus on the hypothesis that non-finite clauses have an aspect category with features and phonetic content and a tense category which lacks of both features and phonetic content, as the anaphor-pronominal PRO. To explicitate these proposals, we adopt a temporal characterization as formulated by Reichenbach (1947) and a syntactic analysis based on the hypothesis that the functional categories of tense and aspect are heads of maximal projections.

## 0. Introduction

The syntactic and semantic properties of tense have generally been analyzed on the basis that tenses behave like clausal operators and establish scope relations at Logical Form (LF). In our view, however, a more realistic perspective is that tense is a referential category that denotes intervals. According to this hypothesis, we will try to demonstrate that tense categories show a clear parallelism with nominal categories. Moreover they can be classified on the basis of Binding Theory. Specifically, we will suggest that non-finite clauses (NFCs) include an aspectual category that contains features and phonetic content, and a temporal category that

lacks both features and phonetic content and behaves syntactically like a pronominal anaphor (i.e., like PRO).

### 1. Tense (and Aspect) as Referential Categories

Following these assumptions, it has been claimed in a previous paper (cf. Pérez Saldanya (1991)) that the Romance imperfect and the past tense of stative English verbs have a referential behaviour similar to that of pronominals (i.e., *she*, *him*), and are also accounted for Principle B of Binding Theory.<sup>1</sup> The parallelism existing between the past tense of stative verbs and pronominals can be demonstrated by the examples in (1), and the correspondent representation in (2), where the coreferential relations are indicated by means of coindexation:

- (1) a. Sally told me that she was sick.  
b. I saw Mary. She was pregnant.
- (2) a. Sally<sub>i</sub> PAST<sub>k</sub> tell me that she<sub>{i/j}</sub> PAST<sub>{k/l}</sub> be sick.  
b. I PAST<sub>k</sub> see Mary<sub>i</sub>. She<sub>i</sub> PAST<sub>k</sub> be pregnant.

As the coindexation in (2) shows, the past tense of the stative verb *to be* and the pronominal *she* have the same coreferential relations: in (2a) the pronominal *she* and the embedded perfect tense can be both coreferential (and bound) with elements in the matrix sentence or not coreferential (and unbound). Conversely, in (2b) the coreferential relations of *she* and the past tense of the stative verb may occur in syntactically independent sentences.<sup>2</sup>

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<sup>1</sup> Under this principle, a pronominal must be free in its governing category —i.e., the minimal sentence or nominal phrase containing the pronominal, a governor of the pronominal and an accessible SUBJECT, in which the term SUBJECT means either lexical subject or agreement (cf. Chomsky (1981)).

<sup>2</sup> The Romance imperfect shows the same syntactic behaviour as the simple past of a stative verb. In the sentence in (i), equivalent to (1a), imperfect tense can be simultaneous with the past tense in the matrix or not. On the other hand, in (ii), parallel to (1b), the imperfect of the second sentence is simultaneous with the past in the first one.

The claim that temporal correlations show parallelisms with nominal categories is not a new idea in the study of tense. Partee (1973), for example, suggests that past tense functions like a variable which can be bound either textually or contextually. Enç (1987), on the other hand, states that tenses denote temporal intervals, and that temporal coreferences are subject to certain locality conditions.<sup>3</sup> Our proposal, although starting from the main assumptions of Partee and Enç, extends beyond the analyses of these researchers as it is based on the hypothesis that temporal categories are identical to nominals and are subject to the same locality conditions.

If this point of view is proved to be correct, it would be predictable, and up to a certain point desirable, that in addition to temporal-aspectual categories equivalent to pronominals, other categories exist that are equivalent to R-expressions (i.e., *Mary* or *John*), to anaphors (i.e., *himself* or *herself*) and to the pronominal anaphor PRO. Concerning temporal R-expressions, we will simply comment that the referential behaviour of Romance preterites or that of the English past tense of non-stative verbs, can be easily accounted for considering that these tenses are R-expressions. As a matter of fact, they introduce a new temporal reference in discourse, which cannot coincide with any of the previous tenses. A simple way to explain this behaviour is assuming that they are temporal R-expressions and thus they cannot have any kind of antecedent and must be unbound. The substitution of a stative verb by a non-stative one in sentences (1) and (2) illustrate these ideas:

- (3) a. Sally told me that she broke her arm.  
b. I saw Mary. She explained me that...

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(i) Sally em digué (PAST) que estava malalta (IMPERFECT).  
(ii) Vaig veure (PAST) la Maria. Estava embarassada (IMPERFECT).

<sup>3</sup> In Enç's terminology these conditions are called *anchoring conditions*.

The only interpretation allowed in these cases is a non-referential one, as shown in the following representations:<sup>4</sup>

- (4) a. Sally PAST<sub>i</sub> tell me that she PAST<sub>{\*i/j}</sub> break  
b. I PAST<sub>i</sub> see Mary. She PAST<sub>j</sub> explain me that ...

## 2. Tense in NFCs

If our point of view is correct, the question that arises is to which referential category non-finite tense belongs. To answer it, we will begin by analyzing the grammaticality differences of participle clauses such as those in (5):

- (5) a. \*convocada pel president  
called by-the president  
b. assistírem a la reunió [convocada pel president]  
attended-1pl to the meeting called by-the president

The contrast in grammaticality between examples (5a) and (5b)<sup>5</sup> could be explained if we suppose that NFCs contain a non-overt subject (the nominal PRO), which must be controlled in order to be licensed.<sup>6</sup> The ungrammaticality of (5a) would thus be attributed to the lack of

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<sup>4</sup>The same holds for Catalan sentences with preterites equivalent to the English sentences above:

- (i) Sally em digué que es trencà el braç.  
(ii) Vaig veure la Maria. Em va explicar que...

<sup>5</sup>We will not focus on the passive value of the participle clause.

<sup>6</sup>We will not develop the licensing of arbitrary PRO in sentences as *És necessari dir-li-ho* ('It is necessary to tell it to him'). We will just notice the possibility of considering that the arbitrary interpretation in these cases can be accounted for if we assume that the null subject is also a controlled PRO and that there is an implicit argument in the matrix sentence (a dative or even the non-referential subject) to control it.

element to control PRO, and therefore to the fact that this nominal has not any referential interpretation. The grammaticality of (5b), in contrast, would then be attributed to the fact that the NP *la reunió* ('the meeting') is the antecedent that controls nominal PRO and gives it referential value. Nevertheless, it should be noticed that the construction remains ungrammatical even in contexts with a lexical subject, and thus without PRO:

- (6) \*convocada la reunió pel president  
called the meeting by-the president

This problem can be easily solved by accepting that tense (or the absence of tense) in NFCs is a temporal category which behaves in a comparable manner to PRO. From this new perspective, (5a) is ungrammatical because it contains two uninterpreted non-overt categories, i.e., the null subject PRO and the unspecified tense of participle. In contrast, the grammaticality of (5b) can then be attributed to the fact that both categories are controlled by antecedents in the matrix sentence: the NP *la reunió* ('the meeting') controls the subject PRO, and the past tense of the matrix sentence controls the tense of the participle.<sup>7</sup> In order to represent and to formalize these control relations properly, we will first briefly describe the tense framework that we assume.

### 3. A Neo-Reichenbachian Analysis of Tense and Aspect

The idea that temporal-aspectual categories have a referential character can be easily formalized by appealing to the analysis developed by Reichenbach (1947). Recall that Reichenbach, who approaches tense from a logicist perspective, was among the first of a series of researchers to

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<sup>7</sup> Hernanz (1982) adopts a similar view in her analysis of the Spanish infinitive. She claims that the infinitive has "un carácter abierto en cuanto al *sujeto* — éste es una variable cuyo valor se extrae, en última instancia, de las redes de coreferencia que afectan al verbo principal — y en cuanto al *tiempo* — una 'variable', por así decirlo, cuyo valor se extrae, a su vez, de las coordenadas temporales el que sitúa a la proposición subordinada el verbo de la matriz" (Hernanz (1982: 145)).

postulate that tense does not behave like a clausal operator. Rather he considers that the value of verbal tense is related to the interactions that are established between three temporal points: the speech point (S), the reference point (R), and the event point (E). In our view, Reichenbach's proposal could be modified in the following way:

a) S, R and E are intervals rather than temporal points.

b) The intervals S, R and E are related two by two; they thus do not appear along the same temporal line ordered one after the other (cf. Comrie (1985:§ 6.3) and Giorgi and Pianesi (1992)).

c) The relation established between R and S limits the tense category, whereas the relation established between E and R defines the traditional category of aspect (cf. Johnson (1981)) or else what has been called the sequencing category (cf. Traugott (1978:§ 2.2)).<sup>8</sup>

d) The relations between intervals are classified as one of three types: prior, concurrent and overlapped.<sup>9</sup>

Following these ideas, we define in (7) the temporal-aspectual value of Catalan indicative forms. In these representations the symbols '⊂', '=' and '⊃' indicated respectively that the interval to the right is subsequent, concurrent or overlapped to that on the left.

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<sup>8</sup> Traugott (1978:§ 2.2) defines this category as "the system whereby events and situations  $E_1, E_2, \dots, E_n$  are ordered with respect to each other. They may be ordered as being in succession ( $E_1$  before  $E_2$ ), as simultaneous ( $E_1$  and at the same time  $E_2$ ) or overlapping (e. g. during  $E_1, E_2$ ). While the time reference of tense shifts with the 'now' of the speaker, the relative relation of this event does not".

<sup>9</sup> Reichenbach considers only relations of subsequence and concurrence. Our viewpoint is that an overlapped relation (or inclusion) is required to capture the value of imperfective forms such as the present, the imperfect or the gerund. Under Reichenbach's analysis such forms are treated in an *ad hoc* manner.

- (7) a. Present —*canto* ('I sing')—: S,R & R0E  
 b. Perfect —*he cantat* ('I have sung')—: S,R & E\_R  
 c. Preterite —*cantí* or *vaig cantar* ('I sang')—: R\_S & R,E  
 d. Imperfect —*cantava* ('I was singing')—: R\_S & R0E  
 e. Pluperfect —*havia cantat* ('I had sung')—: R\_S & E\_R  
 f. Futur —*cantaré* ('I will sing')—: S,R & R\_E  
 g. Conditional —*cantaria* ('I would sing')—: R\_S & R\_E

As for the tense category, this characterization leads to the distinction between two general systems of forms: the present tense system —present, perfect, future—, defined by the fact that S and R are concurrent (S,R), and the past tense system —preterite, imperfect, pluperfect and conditional—, defined by the fact that R is prior to S (R\_S). Regarding aspect and sequencing, on the other hand, the characterization in (7) results in four types of forms: imperfective forms —present and imperfect—, where the event overlaps the reference (R0E), prospective forms (future and conditional), where the event is subsequent to the reference (R\_E), retrospective forms —indefinite and pluperfect—, where the event is prior to the reference (E\_R), and a global or perfective form —preterite—, where the event is concurrent with the reference (E,R).<sup>10</sup> The systems are illustrated in the chart in (8):<sup>11</sup>

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<sup>10</sup> It may be striking that in this proposal aspect is identified with the relation that R establishes with E. The advantage of this consideration, however, is that it allows aspect to take on the value which it has traditionally been assigned. Comrie (1973:3), for example, characterizes aspect as the way in which the internal temporal constituency of a situation is viewed, and supports this definition on the basis of contrasts such as that between the perfect and the imperfect (i.e., *cantà/cantava* ('he sang/he was singing')). He indicates that the perfect looks at the situation from outside, whereas the imperfect looks at the situation from inside, from its internal structure. According to this hypothesis, the aspectual contrast consists of the fact that with the imperfect, the event is overlapped to the reference (R0E), while with the perfect, reference and event coincide (R,E).

<sup>11</sup> The point of view adopted here and in Pérez Saldanya (1991) is similar to that adopted by Giorgi and Pianesi (1992). The main difference with the perspective presented by Giorgi and Pianesi is connected to the nature of the relation established between R and E. We consider that this relation defines aspect while for the Italian linguists it defines a second tense which incorporates the auxiliary *haber/avere*.

(8)

	R,S	R,S
ROE	canto	cantava
E,R	he cantat	havia cantat
R,E	cantaré	cantaria
R,E	—	vaig cantar

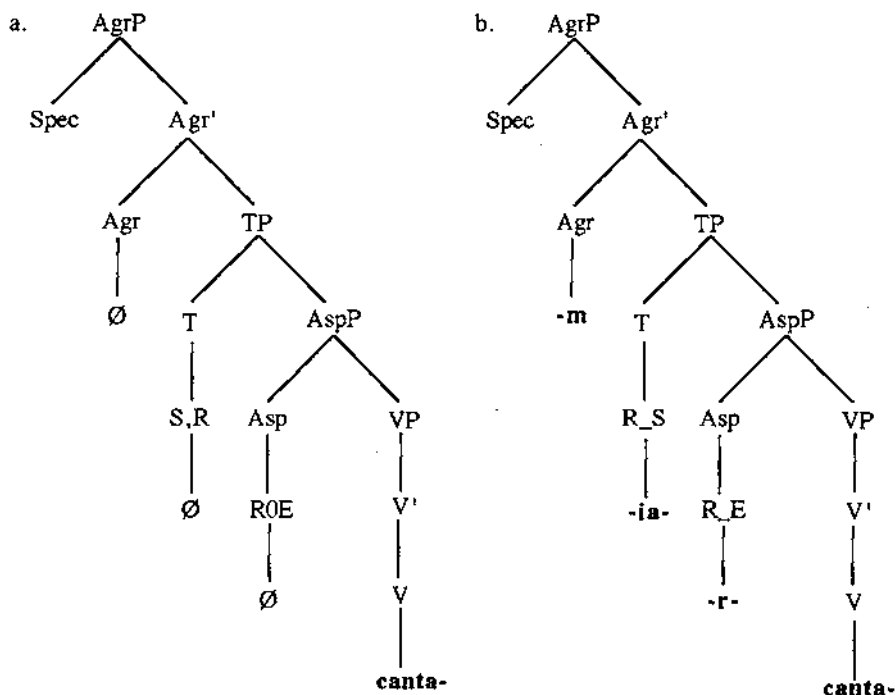
This characterization of tense and aspect (and sequencing) can easily be captured in the syntax if it is assumed that: (i) inflectional categories are the heads of maximal projections (cf. Pollock (1989) and Chomsky (1989)); (ii) all sentences possess both a temporal category —that defines the relation of R with S— and an aspectual category —that defines the relation of E with R—; and (iii) all inflectional categories can have the  $\emptyset$  morpheme as the non-marked option.<sup>12</sup> These ideas can be exemplified with the verbal forms *canta* ('he sings') and *cantariem* ('we would sing'), which, according to the hypothesis we have presented so far, would correspond respectively to the D-structures in (9a) and (9b):

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<sup>12</sup> Following Hornstein (1990) and Pérez Saldanya (1993), we assume that unmarked tense and aspect forms are those which concur or overlap in the two intervals of every inflective category. Marked forms, on the contrary, are those in which there is a relation of priority (or posteriority) between the two intervals. As for agreement, the third person is not marked in contrast to the other two, and singular is not marked in contrast to plural.



(9)



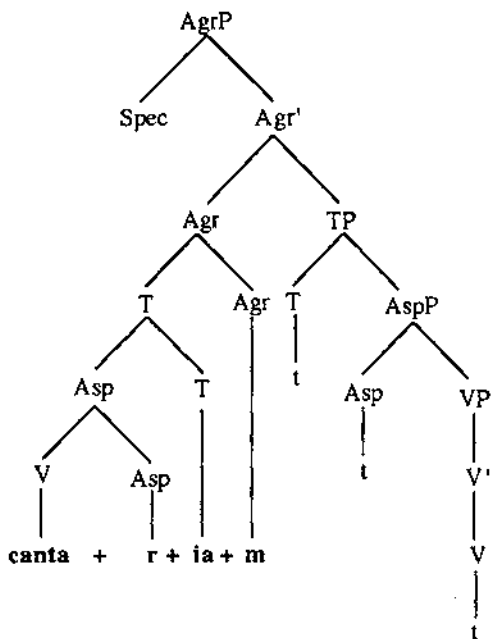
As (9a) indicates, the form *canta* is completely unmarked, so it has no agreement affix (it is third person singular), no tense one (R coincides with S) and no aspect one (E overlaps R). The representation in (9b), on the contrary, shows that *cantariem* is marked so that it has three affixes corresponding to the three inflectional categories. Assuming that conditional is a future of the past, from the point of view of tense,<sup>13</sup> it can be said that the affix *-r* has an aspectual/sequencing value and indicates that E is subsequent to R; the affix *-ia* has a temporal value and indicates that R is prior to S. The affix *-m*, finally, is an agreement marker of first person plural.

The S-structure, on the other hand, is obtained by application of a rule that moves the verb from head to head allowing incorporation of the verbal affixes (cf. Baker (1988)), as we can

<sup>13</sup> We will not focus on the modal value of irreality of the conditional.

see in the representation in (10), parallel to the one in (9b):

(10)

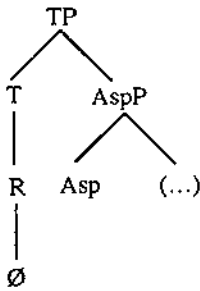


The rules of Phonetic Form (PF), finally, adjust the verbal head and its affixes to the phonological principles of Catalan (/kəntər'fərn/).

#### 4. The Functional Category of Tense in NFCs

Let us turn to NFCs. To this end, we have suggested that tense in NFCs depends on the matrix sentence. In order to capture this property in a simple, precise manner at the syntax level, we propose that non-finite forms do not establish a relation between the intervals S and R, and thus, that the temporal category of NFCs lacks both features and phonetic realization. The diagram in (11) represents this idea:

(11)



As indicated in (11), the tense of a non-finite form is an empty category associated to a non defined interval R which must be controlled in order to be interpreted. The parallel between this temporal category and the pronominal category PRO is clear enough: both categories lack phonological realization and both exhibit the syntactic behaviour of unspecified categories that are controlled by elements of the matrix sentence.<sup>14</sup> Consider again example (5b) as evidence of this parallelism:

(5) b. assistírem a la reunió [convocada pel president]

The formalism of coindexation seen below in (12a) shows the control relations in this sentence. In (12b) the symbols of temporal intervals have been replaced by conventional symbols in order to facilitate interpretation:

- (12) a. [R<sub>S</sub> [R, E<sub>j</sub>] assistírem a la reunió<sub>j</sub> [PRO<sub>j</sub> [R'<sub>i</sub> convocada pel president]]]  
b. [PAST<sub>i</sub> assistírem a la reunió<sub>j</sub> [PRO<sub>j</sub> [Ø<sub>i</sub> convocada pel president]]]

As the representation in (12a) shows, R' and PRO are interpreted in the same way: PRO is

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<sup>14</sup> Both categories are ungoverned too. If we postulate a sentence structure in which the subject NP is the specifier of Agr and TP is the complement of Agr, then both NP and TP would be ungoverned in the same conditions, that is, when there is no subject agreement.

controlled by —and is coreferential with— the NP *la reunió* ('the meeting'), and R' is controlled by —and is coreferential with— the interval E of the matrix sentence.<sup>15</sup>

As generally known, PRO's referential behaviour is accounted for in the theory of Government and Binding by the claim that PRO is a pronominal anaphor. In other words, PRO has both anaphoric properties like the anaphor *himself* and pronominal properties like the pronouns *she* or *her*. In keeping with this line of reasoning, a similar claim would have to be made about the interval R of non-finite forms. In fact, PRO and R both resemble pronominals in that neither has an antecedent in the minimal AgrP —in the minimal sentence— in which they are contained. Moreover, they resemble anaphors first in that both are subject to fairly strict locality requirements, and second in that neither can have an antecedent in syntactically independent sentences.

### 5. The Functional Category of Aspect in NFCs.

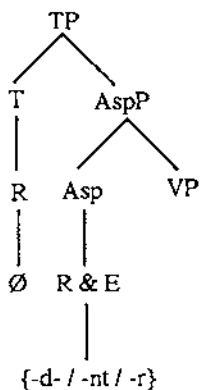
Up to now we have maintained that the tense of non-finite forms is a category lacking both features and phonological content. Concerning aspect, on the contrary, NFCs do present features and phonological realization corresponding to the relation established between the interval E and the interval R. For concreteness, NFCs would correspond to the following temporal-aspectual structure:

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<sup>15</sup> For Reichenbach, the antecedent would not be the interval E, but rather the interval R of the matrix sentence. Reichenbach postulates a rule according to which the R of the matrix sentence is maintained in all subordinate clauses. This idea, however, appears to be contradicted by sentences such as (i). The temporal relations of (i) are illustrated in (ii):

- (i) Li havien dit que arribaria a les quatre.  
 3sgDat had-3pl told that arrive-COND-3sg at the four  
 'They had told him that he/she would arrive at four o'clock.'
- (ii) R<sub>i</sub>\_S & E<sub>i</sub>\_R... R'<sub>i</sub>\_S & R'\_E'

(13)

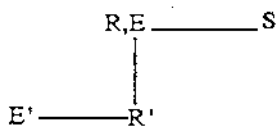


Thus, while NFCs do not specify the temporal category, they are differentiated by the type of aspectual affix they take (*-d-*, *-nt* or *-r*) and by the type of relation the intervals E and R establish. The affix *-d-* of the participle, for example, has a perfective value and indicates that the event denoted by the verb ends before the reference interval (i.e., E\_R). Given this analysis, the temporal-aspectual interpretation of sentence (5a) would be the following:

(14) [R\_S [R,E<sub>i</sub>] assistírem a la reunió [R'<sub>i</sub> [E'\_R' convocada pel president]]]

As the representation in (14) indicates, the interval R' of the participle clause coincides with the interval E of the matrix sentence — the interval of attending the meeting. Furthermore the interval E' — the interval in which the meeting is called — is prior to R'. These temporal-aspectual relations are further clarified if, according to Reichenbach, the intervals are ordered in two separate temporal lines:

(15)



The same analysis holds for gerunds and infinitives. The gerundial affix *-nt* has an imperfect value, which indicates that E overlaps R, while the infinitival affix *-r* has a global value that can indicate either that E coincides with R or that E is prior to R depending on the context. The aspectual differences associated with the affixes of the three non-finite forms appear in (16):

- (16) a. Participle: *-d-*, perfectivity (E\_R)<sup>16</sup>  
 b. Gerund: *-nt*, imperfectivity (EOR)  
 c. Infinitive: *-r*, subsequence (R\_E) or concurrence (R,E)

If we add these non-finite forms to the chart in (8), the resulting system of tense-aspect oppositions is as illustrated in (17):

(17)

	R,S	R,S	∅
ROE	canto	cantava	cantant
E,R	he cantat	havia cantat	cantat
R,E	cantaré	cantaria	cantar
R,E	—	vaig cantar	cantar

As for the infinitive, in section 2.1 we have noticed that the ambivalence of this form is related to the lexical properties of the matrix verb. In fact, this behaviour is predicted to a certain extent by Control Theory: just as certain properties of controlled PRO in infinitival clauses depend on the meaning of the matrix verb, certain properties of the temporal-aspectual expression of infinitives are also related to the meaning of the matrix verb or predicate. From this perspective, we should distinguish not only subject control verbs —*voler* ('to want')—, direct object

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<sup>16</sup> The perfective value of the affix *-d-* not only indicates that the event denoted by the verb is prior to the interval R, but also that due to this event change of condition occurs. To simplify the formalization, we indicate perfectivity only on the basis of the relation E\_R.

('to be sorry')—, but also subsequent control verbs —*voler* ('to want')— and concurrent control verbs or predicates —*saber greu* ('to be sorry').<sup>17</sup>

## 6. NFCs with Temporal or Modal Value

The analysis adopted herein accommodates the behaviour of NFCs that occurs in subcategorization contexts. Problems arise, however, with sentences such as (18), in which the non-finite form is part of a temporal or modal adjunct:

- (18) a. Després d'anar-te'n,      ningú no va      dir res.  
after    of-leave-you-EN nobody not PAST say anything  
'After you left, no one said anything.'
- b. Un cop preses les decisions, començarem    el projecte.  
one time taken the decisions begin-FUT-1pl the project  
'Once the decisions are taken, we will begin the project.'

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<sup>17</sup> A similar idea is the possibility of considering that besides the controlled tense there also exists an arbitrary tense in NFCs in contexts as:

- (i)    Li      agrada jugar a futbol.  
3sgDat pleases play to football  
'He likes to play football.'
- (ii)    En Joan és bo    jugant a futbol.  
the Joan is good playing to football

In those cases, the action of playing football is not simultaneous to the speech interval; it occurs in a sequence of unspecified intervals, which are, therefore, arbitrary. The arbitrary interpretation can be easily explained by assuming the idea exposed before (see fn. 6): arbitrary PRO is controlled by a matrix argument, which can be explicit or implicit. Extending this hypothesis to tense PRO, we can consider that the arbitrary interpretation of the infinitives in (i) and (ii) is due to the fact that they are controlled by a tense (the present tense in the matrix sentence) which has a generic or habitual value and, therefore, it does not refer to the speech act interval.

The principal properties of such NFCs can be summarized as follows:

a) They consist of absolute constructions or constructions governed by a preposition, but never governed by matrix verb.

b) They tend to occupy the adjunct position of the CP – that of topic in previous frameworks – as in (18), even though they can also appear as VP adjuncts as in (19):

- (19) a. Ningú no deia res        després d'anar-te'n        tu.  
          nobody not said anything after    of-leave-you-EN you  
          'No one said anything after you left.'
- b. Començarem el projecte després de preses les decisions.  
          begin-FUT-1pl the project after    of taken the decisions  
          'We will begin the project after the decisions have been taken.'

c) The null subject that can alternate in these constructions with the lexical subject does not behave like PRO, but rather like pronominal *pro*.<sup>18</sup> Note that in a sentence such as (18a), the null subject is not coreferential with any NP of the matrix sentence (and has not an arbitrary interpretation).

d) In a similar way, the non-overt tense of the NFC is not controlled by the interval E of the matrix sentence.

In the following discussion, we will attempt to explain the special temporal behaviour of these sentences and the fact that subject licensing is closely related to this temporal behaviour. To account for this behaviour, we will assume that all NFCs are characterized as having a reference interval (R') that is related not to the speech act interval (S), but rather to the event interval of the main sentence (E). Differences among NFCs, however, occur because of the

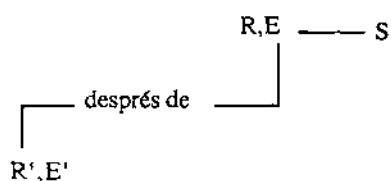
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<sup>18</sup> See Rigau (1991, 1992) on this issue.



actual type of relation established between an R' and an E. As we have tried to show above, the more neutral relation is established whenever E is the antecedent of R' and controls it. There is a second type of relation, however, which is generally characterized by the fact that it is mediated by a temporal preposition (*abans de, després de, en, etc.*) or by an aspectual NP (such as *un cop, una vegada, etc.*). With these facts in mind, we propose the hypothesis that in these sentences the unspecified R' is interpreted to function as an internal argument of a predicate that takes the interval E of the matrix sentence as the external argument. Consider again (18a). For such a sentence, the relation between the unspecified R' of the NFC and the interval E of the main sentence is not established in a direct way, but rather by means of the predicative relation triggered by the preposition *després de* (E after of R'), which can be represented as in (20):

(20)



The preposition and the predicative relation of temporal character establish the relation between E and R' which allows the latter to be interpreted. Nevertheless, the predicative relation imposes certain structural requirements; in particular, the predicative relation requires the preposition to govern the unspecified R'. Therefore, the verb must climb to the C position, after the inflectional categories are incorporated, in order to allow the preposition to establish government.<sup>19</sup>

Moreover, such a perspective justifies to a certain extent the problematic issue of subject legitimation in these sentences. One of the more common ideas within the studies on NFCs

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<sup>19</sup> Based on the idea that an element that binds a phrase also governs its head, we can conclude that the preposition governs the tense of the NFC and relates it to the tense and aspect of the matrix sentence.

consists in accounting for this legitimation on the basis of the temporal-aspectual properties of these sentences. Hernanz (1991), for example, claims that the lack of tense in Spanish absolute participle constructions causes the verb to climb to the complementizer position in order to make the internal temporality visible, and that from this position, the verb governs and assigns exceptional nominative Case to the subject. Adopting other assumptions, Rigau (1991, 1992) suggests that the tense of NFCs is characterized by weakness, and that given this weakness, tense must incorporate to another operator —the preposition that usually governs these NFCs— so that the subject can be easily assigned nominative Case by Agr.

In conclusion, the peculiar temporal properties of these constructions and the requirement that the verb climbs to C in order to license the tense of the NFC cause the verb to occupy a structural position from where it can govern and assign nominative Case to the subject —whether it be lexical or pro.<sup>20</sup>

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<sup>20</sup> Absolute constructions that lack a relational element pose a crucial problem. In principle, we can assume that in these contexts the lack of an explicit predicative element indicates that it is a question of a neutral temporal relation, according to which the interval R of the NFC is equal to the interval E of the matrix sentence. In other words, in such contexts, the neutral property of the temporal relation is made apparent precisely because of the absence of a predicative element, or, from another point of view, because of the existence of an abstract predicative element of the type *in*: E in R'.

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