

Replacing expletive pro by verb movement in Romance languages

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The subject of this paper is expletive pro as it is alleged to appear in the preverbal subject position of sentences with a realized postverbal subject. My aim is to show that it is impossible to use expletive pro for analyzing Romance inversion structures because an account with expletive pro entails both empirical and conceptual problems. I will propose a radicalized version of the Chomsky (1998) account wherein verb movement replaces expletive pro. This radicalized version of Chomsky (1998) allows to incorporate the Romance data. Independent empirical evidence is offered by the position of the Spanish adverb *siempre*.

1. Introduction

In sentences with a realized postverbal subject as the Italian (1a), the Extended Projection Principle (EPP)¹ is seemingly not satisfied, and the sentence should be ungrammatical, contrary to fact:

- (1) a. Ha mangiato Gianni. (I)
has eaten John
'John has eaten.'

To solve this paradox, traditional generative grammar postulates the appearance of an *expletive pro* (Pro_{expl}) in the preverbal subject position, whose only function is to satisfy strong EPP:

- (1) b. [_{specTP} Pro_{expl} [_{T°} ha mangiato [_{VP} Gianni]]] (I)
has eaten John
'John has eaten.'

¹ Following the EPP, the *Extended Projection Principle*, verbs should always have a subject in the preverbal subject position, the SpecTP position.

However, this notion of expletive *pro* meets serious empirical and conceptual problems and I will argue that expletive *pro* cannot be used to analyse Romance inversion structures. I will propose a radicalized version of the Chomsky (1998) account, wherein the strong EPP-feature of the verb in T is satisfied by movement of the lexical subject to SpecTP (the preverbal subject position). In such an account, there is no need for expletive *pro*, given that strong EPP is satisfied by the lexical subject. The verb-subject order in inversion structures is then obtained by moving the verb out of TP to a higher position in the left periphery.

Independent empirical evidence for this verb movement out of TP will be offered by the position of the Spanish temporal adverb *siempre* ‘always’. This adverb is base-generated on the left of the verb or on the left of the object. Following Cinque (1999), I assume that adverbs move along with the constituent they were attached to in their base-generation position. This means that, if *siempre* is base-generated with the verb, it moves along with the verb. It follows then that *siempre* can be used to indicate the position of the verb; if *siempre* occupies a peripheral position, the verb will also be in the left periphery, out of TP.

2. The impossibility of an account with expletive *pro*

In this section, I will first show the conceptual problems expletive *pro* meets (2.1.). Then, I will show that, of all the conceptually possible models, the only satisfying model is the one with strong EPP, with argumental *pro* and without expletive *pro* (2.2.).

2.1. The inherent problems for expletive *pro*

The notion of expletive *pro* has always been a controversial notion in generative grammar. Many authors have argued that it does not exist and others use it as a *deus ex machina* to explain inversion cases, without considering the status of this element, which is very problematic.²

The postulation of expletive *pro* indeed meets a large number of inherent conceptual problems. First, the presence of expletive *pro* has been postulated only for theory-internal reasons, to satisfy strong EPP, and there is no empirical evidence in favor of the existence of such an element. Second, the existence of this element is a *contradictio in terminis*: expletives are by definition elements needed to fill positions that cannot be empty. Then, how can an expletive be empty itself? Third, the introduction of an empty expletive subject in sentences where there is already a subject that bears the Case, Agreement and thematic properties is largely superfluous. Fourth, its presence entails a not unitary *pro*

² Among others, Alexiadou & Anagnostopoulou (1999), Manzini & Savoia (1997), Piccolo (1998) and Platzack (1998) argue that expletive *pro* does not exist.

phenomenon: if expletive pro exists, the pro phenomenon contains two elements that occupy the same position but that have a totally different function: expletive pro on the one hand, and argumental pro, the empty subject of sentences without realized subject, on the other hand. Fifth, with the presence of expletive pro, sentences with preverbal lexical subject and postverbal lexical subject have a different numeration, an undesirable consequence.³ Sixth, expletive pro does not even explain all the inversion cases. For example, the Italian (2) should be grammatical if expletive pro were present, contrary to fact:

- (2) *Pro_{expl} sembra partire Gianni in anticipo (I)
 seems to leave John earlier
 ‘John seems to leave earlier.’

2.2. Empty elements and the EPP: eight conceptual possibilities

The presence of empty elements, such as argumental and expletive pro, relies mainly on the EPP: the existence of expletive pro depends uniquely on the EPP, and argumental pro is derived from a combination of the Projection Principle, the EPP and the Theta criterion. Varying the number of empty elements in the model (there can be no pro, only argumental pro, only expletive pro or both expletive and argumental pro), and varying the nature of EPP (it can be weak or strong), there are eight conceptual possibilities:

	No pro	Pro arg	Pro expl	Pro arg + pro expl
Strong EPP	Alexiadou & Anagnostopoulou (1999)	Lahousse (2000)	unconceivable	Chomsky (1998)
Weak EPP	Manzini & Savoia (1997) Picallo (1998)	Platzack (1995)	unconceivable	unconceivable

Three of the eight possibilities are unconceivable. On the one hand, a model with weak EPP and expletive pro is conceptually impossible: given that the only reason for the postulation of expletive pro is to satisfy strong EPP, expletive pro has no reason to exist if EPP is weak. On the other hand, argumental pro must be present in a model with strong EPP because otherwise, sentences without an expressed subject would be ungrammatical (because strong EPP is not satisfied), contrary to fact.

However, in my opinion, not all of the remaining five cases are optimal and equal solutions. First, there are serious reasons to believe that argumental pro

³ The sentences *Juan llega* and *Llega Juan* (‘John arrives.’) would have respectively the following numerations: [*Juan, llega*] and [*expletive pro, Juan, llega*].

exists: on the one hand, argumental *pro* represents the external theta role of the verb and on the other hand, without argumental *pro*, it is impossible to explain the grammaticality of (3), where the anaphor *si* has to be locally bound.

- (3) Si vedono spesso (I)
 REFL3P see often
 ‘They often see each other.’

Second, the possibility that EPP is weak is ruled out: if EPP was weak, expletive *pro* would - by definition - not exist, a desirable consequence, but it would also be impossible to explain verb-subject agreement in inversion cases without feature movement, a mechanism that I reject, along with Chomsky (1998/1999) and many others.⁴ The conclusion is straightforward: EPP must be strong.

So, an ideal model would be the case wherein EPP is strong and wherein there is only place for argumental *pro*. My following step is then to investigate whether the Chomsky (1998) model - which has strong EPP but both expletive and argumental *pro* - can be adapted in such a way as to account for Romance inversion facts.

3. Chomsky (1998)

In Chomsky (1998), the EPP principle is accounted for by a strong D-feature on T. In particular, EPP can be satisfied in three ways: (a) by merge of an expletive, as in *There arrives a man*, (b) by merge of an associate, as in *A man arrives* and (c) by merge of α closer to T than the associate.⁵

This account is problematic for Romance inversion cases. First consider stylistic inversion in French (4a) and free inversion in Trentino (4b), a North Italian dialect:

- (4) a. Quand arrive l'été, il est temps de penser aux vacances (F)
 when arrives the summer, it is time to think on holidays
 ‘When the summer arrives, it is time to think about the holidays.’
 b. Magna el Mario (Safir 1985) (T)
 eats the Mario
 ‘Mario eats.’

⁴ To explain the verb-subject agreement in their model with weak EPP, Manzini & Savoia (1997) and Picallo (1998) have to rely on feature movement, and Platzack (1995) on covert raising of the subject to SpecIP, a mechanism very similar to feature movement. However, in a model with weak EPP and without feature movement, the structure of inversion cases is the following:

[_{SpecTP} [_T verb [_{VP} subject _v]]]. It is not clear, then, how the verb-subject agreement can be accounted for, given that it is generally assumed that verb-subject agreement takes place in TP between the head and the specifier, via the phi-features on T.

⁵ This case occurs in languages like Icelandic, but not in Romance languages. In what follows, we will not take it into account.

These inversion structures do not correspond to the Chomsky (1998) (a) and (b) cases: strong EPP is apparently not satisfied, nor by merge of the associate, nor by insertion of an expletive, which is even prohibited, as you see by the ungrammaticality of (5a) and (5b):

- (5) a. *Quand il arrive l'été,... (F)
 when EXPL arrives the summer
 'When there arrives the summer...'
 b. *El magna el Mario... (T)
 EXPL eats the Mario

Additionally, it seems impossible to maintain the strong nature of EPP in Spanish and Italian free inversion structures where there is apparently no element that satisfies strong EPP.

The paradox is traditionally solved by introducing an expletive pro in these inversion structures:

- (6) [_{specTP} Pro_{expl} [_{T'} verb_{D/phi} [_{VP} subject_{t_{phi}}]]]

Expletive pro checks the strong D-feature on T, while the postverbal lexical subject satisfies the phi-features on the verb.

However, the combination of expletive pro and the Chomsky (1998) EPP mechanism meets serious empirical and conceptual problems in Romance languages. First, like I showed before (2.1.), the notion of expletive pro itself has some serious conceptual problems, and here again, its only function is to satisfy the strong D feature on T. Second, although the presence of expletive pro offers a possible explanation for inversion cases in Italian and Spanish, expletive pro does not account for two characteristics normally associated with expletive-associate constructions (Chomsky 1998:41): T-associate agreement and the definiteness effect. Indeed, on the one hand, the T-associate agreement is not regulated via expletive pro but via the phi-features on T. On the other hand, there is no definiteness effect in Spanish and Italian inversion structures like (1a). Third, in French and Trentino, like in Spanish and Italian, expletive pro does not explain the T-associate agreement nor the lack of definiteness effect in inversion structures.

In what precedes, I have shown that the French, Spanish, Italian and Trentino data cannot be explained with expletive pro, nor can they be explained without expletive pro because strong EPP would not be satisfied. Given that the Chomsky (a) and (b) cases, in combination with expletive pro, do not give a satisfying account of Romance inversion structures, I will try to adapt the model to accommodate the Romance inversion structures.

4. *My proposal : a radicalization of Chomsky (1998)*

Radicalizing the Chomsky (a) and (b) cases, I state that strong EPP can be satisfied by : (a) insertion of an overt expletive, with the definiteness effect and the agreement of T depending on the type of expletive that is merged (7)⁶ or (b) subject raising to SpecTP, with agreement between T and the subject, and without the definiteness effect:

(7) Il arrive un homme (F)
 EXPL arrives a man
 'There arrives a man.'

(8) a. Jean mange (F)
 b. El Mario el magna (T)
 c. Gianni mangia (I)
 d. Juan come (S)
 John eats
 'John eats.'

This allows to explain all the Romance examples with lexical or expletive preverbal subjects without having recourse to expletive pro.

However, I need an additional element to incorporate inversion structures in this radicalized Chomsky (1998) model. So, the only possibility⁷ is to make use of syntactic ordering: the inverted word order can be explained by assuming an additional verb movement: after the raising of the subject to SpecTP⁸, the verb already raised to T° (see Pollock 1989) makes an additional move to a higher functional projection XP in the CP layer and the inversion structure (9) is obtained:

(9) [_{X°} verb_v [_{SpecTP} subject_s [_{T°} t_v [_{VP} t_s t_v]]

Up till now, I have shown that a model with expletive pro is highly undesirable and that the Romance inversion cases can be explained with a model in which expletive pro has been replaced by verb movement.

⁶ Following Chomsky (1998), there are two types of empty expletives: *it-like* expletives, which agree with the verb, as in the French *Il arrive un homme*, or *there-like* expletives, which let the verb agree with the postverbal lexical subject, as in English *There arrives a man*.

⁷ In 2.2., I already showed that the number of empty elements cannot be modified, nor the value of EPP: EPP has to be strong and only argumental pro can exist. The only possibility that is left to explain the inverted word order is to make use of syntactic ordering, and more particularly of verb movement.

⁸ This is my (b) case: the lexical subject raises to SpecTP in order to satisfy strong EPP when no overt expletive is selected.

5. The Spanish temporal adverb *siempre* indicates verb movement out of TP

The goal of the following sections is to give independent evidence in favor of verb movement out of TP in Spanish inversion structures. I will investigate different types of inversion structures with *siempre*, and I will show that in these constructions, the position of *siempre* does indeed indicate a verb movement out of TP. Then, given that so-called free inversion structures behave in exactly the same way, they also involve a movement of the verb out of TP. This will be the confirmation of my hypothesis that the verb moves out of TP in free inversion cases, and that there is no need to postulate expletive *pro*.

5.1. Basic hypotheses

5.1.1. There is no non-motivated movement

My basic hypothesis is largely intuitive: I assume that every type of movement has to be motivated. So, verbs can only move to the left periphery for wh-reasons, for focus-reasons or for discourse reasons.⁹ Adverbs also move, and when they do, it also has to be motivated. If they do not move independently for focus-reasons or wh-reasons, they have to move, following Cinque (1999), together with another phrase that moves.¹⁰ I will show that the adverb *siempre* moves along with the constituent it is attached to in its base-generation position.

5.2.2. The minimal structure of the Spanish left periphery

Because I am concerned with the movement of the verb to a high position, I should first determine the possible positions in the left periphery of Spanish sentences. I adhere to the vision that CP is a layer that encompasses multiple projections where diverse elements such as topics, focused constituents, wh-phrases end up (cf. Cinque 1990, Rizzi 1997, Poletto 2000). Similarly to what Rizzi (1997) does for Italian, I derive the order in the Spanish periphery on the basis of a number of pairs of related sentences. First, the contrast between (10a) and (10b) shows that topics have to precede *simple wh-phrases*, and the examples (11) show that topics can precede and follow *complex wh-phrases*:¹¹

⁹ It is generally assumed that in cases of 'free' inversion, the verb moves to a higher position in order to focus the subject. Zubizarreta (2000) calls this *prosodically motivated movement*.

¹⁰ Following (Cinque 1999:16-17), an adverb can be questioned itself, as in *How elegantly do you think he was he dressed?*, and can also be focalized, as in *MAI Gianni ti farebbe del male* ('Never (focus movement) G. would hurt you').

¹¹ Following Ordóñez (1998), I distinguish between on the one hand *non complex* or *simple* (my term) wh-phrases, like *cuándo* 'when', *dónde* 'where', *qué* 'what', *quién* 'who', *cómo* 'how' and on the other hand *complex wh-phrases*, like *en qué momento* 'in which moment' and *de qué manera* 'in what way', *por qué* 'why' and *cómo qué* 'how'. Simple wh-phrases, unlike complex wh-phrases, trigger obligatory inversion.

- (10) a. *¿Dónde los bolsos los encontró Juan?
 whereWH the bagsTOP them found John
 b. Los bolsos, ¿dónde los encontró Juan?
 the bagsTOP whereWH them found John
 ‘Where did John find the bags?’
- (11) a. ¿Por qué los ejercicios los hace Juan?
 whyWH the exercisesTOP them makes John
 ‘Why does John make the exercises?’
 b. La carne, ¿por qué la prepara Juan?
 the meatTOP whyWH it prepares John
 ‘Why does John prepare the meat?’

On the basis of these examples, it is possible to establish a preliminary ordering of topics and wh-phrases of the Spanish left periphery as in (12):

- (12) topic < complex wh-phrase < topic < simple wh-phrase

The opposition between sentences as (13a) and (13b) is often alleged as a proof for saying that focalized constituents and simple wh-phrases compete for the same position:

- (13) a. *¿Dónde MANZANAS compró Pedro (y no peras)?
 whereWH apples(FOC) bought Peter (and no pears)
 b. *MANZANAS, ¿dónde compró Pedro (y no peras)?
 APPLES(FOC) whereWH bought Peter (and no pears)
 ‘Where did Peter buy APPLES (and no pears)?’

However, I do not agree with this view. Rather, I think that (13a) is ungrammatical because the wh-criterion is not respected, the focalized constituent intervening between the wh-phrase and the verb.¹² Example (13b), then, is ungrammatical because the focus-criterion is not respected, the wh-phrase intervening between the focalized constituent and the verb. Similarly, the example (14a) is ruled out because the focalized constituent is not adjacent to the verb and the focus-criterion is not respected.¹³

- (14) a. *MANZANAS, ¿por qué compró Pedro?
 APPLES(FOC) whyWH bought Peter

¹² I will not discuss the precise formulation of the wh-criterion and the focus-criterion here, for more details, see Rizzi (1996). I just assume that they at least involve a linear adjacency between respectively the wh-phrase and the verb and the focalized element and the verb. Remark that non-arguments as *siempre* cannot violate the wh-criterion.

¹³ In fact, in order to avoid redundancy in the grammar, if one principle (the wh-criterion or the focus-criterion) suffices to rule out an ungrammatical sentence, there should be no other principle in the grammar (the restriction that only one element can occupy a position) having the same effect.

- b. *Por qué MANZANAS compró Pedro?
 whyWH APPLES(FOC) bought Peter
 ‘Why did Peter buy APPLES?’

In (14b), on the contrary, there is no violation of the wh-criterion, nor of the focus-criterion, and yet, the sentence is ungrammatical.¹⁴ This indicates that complex wh-phrases and foci occupy the same position.

I conclude that the ordering of topics, focused elements, complex and simple wh-phrases in the Spanish left periphery is the following:

- (15) topic < complex wh-phrase + focus < topic < simple wh-phrase

5.2. The possible positions of *siempre*

In this section, I will determine the positions *siempre* can occupy. To do so, I will first determine the basic position(s) of the adverb, i.e. the position(s) where the adverb can be generated. Then, I will determine the derived positions of the adverb, i.e. the positions of the left periphery the adverb can move to.

5.2.1. Initial indication of the base generation positions of *siempre*

Following Zagona (1988), in normal declarative sentences, *siempre* precedes or follows the verb, but does not appear VP-finally. In other words, *siempre* is situated before the verb (16a), or between the verb and its objects (16b), but does not appear in final position (16c) or before the subject (16d):

- (16) a. Juan siempre come una manzana.
 John always eats an apple
 ‘John always eats an apple.’
 b. Juan come siempre una manzana.
 c. *Juan come una manzana siempre.
 d. *Siempre Juan come una manzana.¹⁵

This already indicates that *siempre* can be generated to the left of the verb, or on the right of the verb, but not on the left of the subject or in final position. In what follows, I will base upon a corpus of *El País* journal articles to confirm this hypothesis.¹⁶

¹⁴ Remember that the wh-criterion only counts for simple wh-phrases. *Por qué* is a complex wh-phrase and is not subject to the wh-criterion.

¹⁵ Remark that this sentence is grammatical if *siempre* is focalized. In what follows, I will ignore these cases, given that they are not important for my concern.

¹⁶ I will indicate these examples by *EP*. The corpus counts 300.000 words and collects *El País* journal articles written in 1996, 1998 and 1999. It has been established by P. Goethals for his PhD thesis. I gratefully acknowledge P. Goethals for putting his corpus on my disposal. For more details, cf. Goethals (2000). I want to stress that my concern is not to give a statistical analysis of

5.2.2. Base generation positions of *siempre*¹⁷

Given that in the declarative sentences of the corpus, *siempre* mostly occurs immediately before the verb, as in (17), I conclude that *siempre* can indeed be generated on the left of the verb:

- (17) EP Franco siempre tuvo mucho cuidado, ¿tal vez miedo?
 Franco always had much care maybe fear
 ‘Franco always had much care, maybe fear?’

In the corpus, I found 40 examples with *siempre* in postverbal position. Nine of these examples do not have to be considered, as they concern special cases where *siempre* occurs in a gapping structure, in a fixed expression or in the adjectival locution *N de siempre* (‘N of always’). I summarize the different constructions in the following scheme:

<i>Siempre</i> in final position ¹⁸ (14 cases)	<i>Siempre</i> postverbal but not final (26 cases)
leftward movement of the object (7 cases)	leftward movement of the object (9 cases)
gapping (3 cases)	<i>siempre</i> precedes the lexical object (15 cases)
adjectival locution <i>N de siempre</i> (4 cases)	<i>siempre</i> appears in a fixed expression (2 cases)

In 15 of the remaining 31 cases, *siempre* is followed by the lexical object, like in (18):

- (18) EP Por cierto, el presidente decía siempre que el resultado era
 for sure, the president said always that the result was
 vinculante, en contra de mi criterio que debía ser consultivo
 decisive, contrary to my criterion that (it) should be consultive
 ‘For sure, the president always said that the result was decisive,
 contrary to my criterion that it should be consultative.’

In the other 16 cases, the object has been moved leftwards, whether it concerns the relativization of the object, as in (19), or the topicalization of the object, as

the occurrences of *siempre* in the *El País* corpus. The data will only be used to check my hypotheses.

¹⁷ Because declarative sentences are generally considered as the basis structures, from which movement takes place, I will base myself upon declarative sentences to derive the generation positions of *siempre*.

¹⁸ This is an apparent contradiction of Zagona’s (1988) hypothesis that *siempre* cannot appear in postverbal position. However, as we will see, in all the cases where *siempre* appears in an apparent VP-final position, the object has been moved, so that we can state that *siempre* is followed by the trace of the object and only seemingly appears in VP-final position.

in (20). This indicates that *siempre* can appear in final position if it is followed by the trace of the object:

- (19) EP Francotuvo en sus manos las decisiones que había tenido siempre.
 Francoheld in his hands the decisions that had had always
 ‘Franco held in his hands the decisions that he had always had.’
- (20) EP Esa manera de pensar la tenía siempre, y la sigue teniendo.
 this way of thinking her had always, and her keeps having
 ‘This way of thinking, he always had her, and he keeps on having her.’

So, we can conclude that *siempre* has two base generation positions: *siempre* can be generated to the left of the verb, and then the structure corresponds to (21), or *siempre* can be generated on the left of the object, and then the structure corresponds to (22a) where *siempre* is followed by the lexical object or to (22b) when *siempre* is followed by the trace of a moved object:¹⁹

- (21) [_{TP} subject [_T *siempre* [_T verb [_{VP} [_{XP} object]
- (22) a. [_{TP} subject [_T verb [_{VP} [_{XP} *siempre* [_{XP} object]
- b. [object [_{TP} subject [_T verb [_{VP} [_{XP} *siempre* [_{XP} t_{object}]

5.2.3. The derived positions of *siempre*

In this section, I will try to find the position *siempre* occupies in the left periphery, and more particularly in the positions of the scheme (15) I already established.

First consider the examples (23a-c). It is clear that *siempre* can co-occur with a focalized element (23a), a topic element (23b) or a complex wh-phrase (23c). This means that *siempre* does not occupy these positions:

- (23) a. MANZANAS siempre comió Juan.
 apples(FOC) always ate John
 ‘John always ate APPLES.’
- b. La carne, siempre la preparó Juan.
 the meat^{TOP} always it prepared John
 ‘The meat, John always prepared it.’

¹⁹ For expository reasons, I will consider the derivations from the moment that the verb reaches TP. On the one hand, this entails a coherent methodology: I also derive the generation position of *siempre* from declarative sentences and it is generally assumed that the position of the verb in declarative sentences is T° (Pollock 1989). On the other hand, it is rather intuitive to assume that *siempre*, a temporal adverb, is generated in the TP projection. Nevertheless, remark that the alternative hypothesis that *siempre* is merged with the verb in VP, and then moves along with the verb to TP, does not have any consequences for my account.

- c. Trabajo duro,pero ¿por qué siempre dicen cosas los profesores?
 (I) work hard but why_{WH} always say things the professors
 ‘I work hard, but why do the professors always say things?’

However, as indicated by the ungrammaticality of (23d), *siempre* can not occur between the simple wh-phrase and the verb in interrogatives:

- (23) d. *¿A quién siempre prestaba el diccionario Juan?
 to whom_{WH} always lent the dictionary John
 ‘To whom did John always lend the dictionary?’

This leads us to the conclusion that *siempre* occupies the same position as simple wh-phrases, and so, the scheme (15) can be adapted as follows:

- (24) topic < complex wh-phrase/focus < topic < simple wh-phrase/**siempre**

Given that it is generally assumed that all these positions correspond to a specific projection, SpecSimplewhP is the derived position of *siempre*²⁰:

- (25) [TopicP [ComplexwhP/FocusP[TopicP [SpecSimplewhP**siempre**[Simplewh° [TP [VP]]]]]]]]

5.3. *Siempre* as indicator of the verb movement

Having determined the base generated positions of *siempre*, i.e. to the left of the verb and to the left of the object, and the derived positions of *siempre*, i.e. SpecSimplewhP, I will show that *siempre* moves to its derived position together with the verb, and, consequently, that *siempre* indicates the position of the verb in the left periphery, i.e. the movement of the verb out of TP.

If non focused *siempre* could move independently to SpecSimplewhP, (26) should be grammatical, but it is not:

- (26) a. *Siempre Juan comió una manzana.
 always John ate an apple
 b. *[SpecSimpleWh **siempre** [SimpleWh° [SpecVPJuan [V° comió [la manzana]]]]]

On the contrary, (27), where *siempre* immediately precedes the verb, is grammatical:

- (27) a. Siempre comió una manzana Juan.
 always ate an apple John
 b. [SpecSimpleWh **siempre** [SimpleWh° comió [una manzana [SpecVPJuan]]]]

²⁰ I will not consider another derived position of *siempre*, SpecFocusP, where the adverb moves if it is focused.

This contrast indicates that *siempre* can only move to its derived position if the verb has also moved to the left periphery. It follows then that the movement of *siempre* to SpecSimplewhP is parasitic on the verb movement to the left periphery. Consequently, the position of *siempre* can be used as an indicator for the position of the verb: if *siempre* is in its derived position in the left periphery, the verb is also in the left periphery, and clearly made a movement out of TP.

5.4. *Siempre* with inversion structures

In all the contexts where there is an attested verb movement to the CP field, *siempre* appears in front of the verb, whether it concerns obligatory inversion, like in (23a), where the object is focalized, or not obligatory inversion, like in topicalization structures (23b), interrogatives with complex wh-phrases (23c) or yes/no questions (28):

- (28) EP ¿Siempre tuvo Ud. detrás a su partido?
 always had you behind your party
 'Did you always have your party behind you?'

This position can not be its base generation position (on the left of the verb, i.e. between the subject and the verb), so *siempre* has to be in SpecSimplewhP.

As you see in the following scheme, all the positions I determined earlier (25) on the basis of independent evidence suffice to analyse all types of inversion structures where *siempre* appears:²¹

²¹ I omit the first topic projection for practical reasons.

	complexwh focus		topic		simplewh siempre		object ²²		TP
	Spec	X°	Spec	X°	Spec	X°	Spec	X°	Spec
(23d)					A quién *siempre	prestaba		el libro	Juan?
(23a)	MANZANAS				siempre	comió			Juan.
(23b)			La carne		siempre	la prepara			Juan.
(23c)	Por qué				siempre	dicen		cosas	los profesores?
(28)					Siempre	tuvo			Usted...

In all these inversion cases, *siempre* is in SimplewhP, in the left periphery, which indicates that the verb also moved out of TP to the left periphery, as is generally assumed.

But now, what about free inversion cases? Recall that I argued that in these cases, expletive *pro* should ideally be replaced by verb movement out of TP. Does *siempre* indicate here too verb movement out of TP? Consider the following free inversion examples:

- (29) a. Cuando el profesor hizo una pregunta, siempre contestó
 when the professor made a question always answered
 Carina y Susana no dijo nada.
 Carina and Susana not said anything
 ‘When the professor asked a question, Carina always answered, and Susana didn’t say anything.’
- b. Incluso cuando trabajo duro, siempre dicen cosas los profesores.
 even when (I) work hard, always say things the professors
 ‘Even when I work hard, the professors always say things.’

It is obvious that in these examples, *siempre* precedes the verb and is in its derived position, SpecSimplewhP. I already concluded that if *siempre* is in this position, the verb is also in the left periphery, i.e. out of TP. So, the verb is out of TP in the free inversion cases. This conclusion, together with the conceptual problems with expletive *pro*, leads us to the conclusion that expletive *pro* can be replaced by verb movement in Spanish.

²² Thanks to Jeroen van Craenenbroeck for pointing out to me that the precise position of the object is a problem for my account. If I assume that the verb is in Simplewh°, a plausible hypothesis, it is clear that the object cannot be in the same position, and I have to postulate another projection for the object. It would also be possible to assume that the object right-adjoins to the X° position of the verb or left-adjoins to TP (however, this seems contra-intuitive). I will not go into the details of this discussion, because my main goal is to show that the verb leaves TP in free inversion cases, and the position of *siempre* clearly indicates this.

6. Conclusion

In this paper, I showed that there is strong empirical and conceptual evidence against the existence of expletive *pro*, and that an ideal model should be characterized by strong EPP and only argumental *pro*. In addition, I showed that the framework of Chomsky (1998), with strong EPP and both expletive and argumental *pro*, cannot account for inversion structures in French, Trentino, Spanish and Italian. My alternative hypothesis, then, is a radicalization of Chomsky (1998), wherein strong EPP can only be satisfied by merge of an overt expletive or by raising of the lexical subject to SpecTP, and wherein expletive *pro* is replaced by verb movement out of TP. Independent empirical evidence for this hypothesis has been offered by the position of the Spanish temporal adverb *siempre*. Indeed, given that *siempre* cannot occupy its derived position in the left periphery without the verb also being there, I argued that the movement of *siempre* to the left periphery is parasitic on that of the verb and that, consequently, *siempre* can be used as an indicator of the position of the verb in the left periphery, i.e. out of TP. Then, I showed that in free inversion cases, like in other kinds of inversion structures, the position of *siempre* indeed indicates a movement of the verb out of TP.

In my account, the free inversion structures with *siempre* have been derived in the following way: the subject is merged in SpecVP, the verb is merged in V° and then moves to T° (Pollock 1989) (30a). After this, *siempre* is merged to the left of the verb (30b). Then, the subject moves to the SpecTP position in order to satisfy strong EPP (30c). Finally, the verb moves to the left periphery and *siempre* moves along with the verb to the SpecSimplewhP position (30d):

- (30) a. [_{SpecTP} [_T verb [_{VP} subject t_v]]]
 b. [_{SpecTP} [_T *siempre* [_T verb [_{VP} subject t_v]]]]
 c. [_{SpecTP} subject_s [_T *siempre* [_T verb [_{VP} t_s t_v]]]]
 d. [_{SpecSimplewhP} *siempre* [_{Simplewh°} verb_v [_{SpecTP} subject_s [_T t_v [_{VP} t_s t_v]]]]

I conclude that expletive *pro* is an epiphenomenon of verb movement to the left periphery.

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