
On Tense, agreement, and the syntax of null and overt subjects: Evidence from Romance infinitives

Gerardo Fernández-Salgueiro

National Taiwan Normal University

gfsayang@ntnu.edu.tw



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Abstract

In this paper I argue that the position and realization of subjects in adverbial non-finite clauses in Italian, Spanish, Galician, and European Portuguese can provide valuable insight into the licensing conditions for *pro* and postverbal subjects in finite clauses in these *pro*-drop languages. I first provide evidence that Tense and Agreement constitute separate syntactic heads in these languages, as argued by Belletti (1990) among others, and also apply this analysis to non-finite clauses in Spanish, Galician, and Portuguese. I will also argue, after analyzing the syntactic variation exhibited by subjects in non-finite clauses (containing regular and inflected infinitives) in Spanish, Galician, and European Portuguese, that (i) postverbal overt subject DPs are licensed by a full set of ϕ -features in Agr (overt or covert), (ii) *pro* is licensed by an Agr head that is overtly realized by either overt ϕ -features or verb movement, and (iii) preverbal overt subject DPs are licensed by verb movement to Agr.

Keywords: null subjects, *pro*-drop, infinitives, agreement, Romance languages.

1. Introduction

As is well known, in languages like Spanish or Italian, subjects in finite clauses can appear in both preverbal and postverbal positions and may also be null (see e.g., Rizzi 1982, 1986), as illustrated in the Spanish examples in (1):

- (1) a. Juan habla italiano b. Hoy habla Juan
 John speaks Italian today speaks John
 c. Habla italiano
 speaks Italian

These facts have been thoroughly studied in the history of generative grammar and have been analyzed as stemming from the so-called *pro*-drop parameter, also dubbed the null subject parameter in more recent approaches (see e.g., D’Alessandro 2015 and references therein). However, despite the amount of attention that these phenomena have received in the literature, the exact syntactic properties that allow this variation in the realization of subject DPs remain unclear, as the traditional observation that what makes a language *pro*-drop is rich inflection has proved to be problematic. In this respect, Müller (2006:93) claims that “even though the hypothesis that morphological richness is involved in the licensing of argumental *pro* seems to be a natural one, and is widely accepted, it has proven extremely difficult to pin down.”

Since the facts subsumed under the *pro*-drop parameter relate to the syntax of finite clauses, it comes as no surprise that the vast majority of approaches to these phenomena have focused on regular clauses in these languages. In this paper I claim that the syntax of adverbial non-finite clauses in Romance languages actually provides a better opportunity to understand the above facts. While finite clauses in Italian, Spanish, Galician, and European Portuguese all seem to be rather similar in terms of agreement and the properties illustrated in (1), adverbial non-finite clauses behave differently in each of these languages. In Italian adverbial non-finite clauses, overt subject DPs are generally disallowed and only PRO is possible (though see section 3 for more specific configurations in Italian in which an overt DP is actually allowed). In Spanish and Galician adverbial non-finite clauses, however, overt subject DPs are indeed allowed (see Rigau 1995 and Torrego 1998, among others) though generally restricted to the postverbal position inside the VP (see section 3 for discussion). Moreover, once Galician and European Portuguese inflected infinitives are considered, facts become even more complex; European Portuguese inflected infinitives are equivalent to finite clauses in that all the options illustrated in (1) above are allowed (see e.g., Raposo 1987 and Groothuis 2015, among others), while for most speakers of Galician preverbal overt subject DPs are disallowed, but *pro* is indeed possible (see e.g., Parafita-Couto 2002 and sections 3 and 4). This variation is illustrated in the table below, where postverbal DP refers to the base VP position and preverbal DP refers to the Spec-TP/AgrP position after movement):

Table 1. Subjects in adverbial non-finite clauses in... (Infl = with inflected infinitives)

	<i>Italian</i>	<i>Spanish/Galician</i>	<i>Galician (Infl)</i>	<i>Portuguese (Infl)</i>
Postverbal DP	*	√	√	√
<i>pro</i>	*	*	√	√
Preverbal DP	*	*	*	√

As can be seen in the table, the variation that we find in the realization of subjects raises three main puzzles, illustrated by the shaded areas: the availability of postverbal DPs, which we could dub the Italian vs. Spanish puzzle, the availability of

pro (Spanish vs. Galician), and the availability of preverbal DPs (Galician vs. Portuguese). Unlike finite clauses, then, adverbial non-finite clauses in these languages provide a unique opportunity to analyze each of these properties separately by examining the above three contrasts in detail.

In my analysis I follow the proposal put forward by Belletti (1990) among others (see also Bobaljik 1995) that T(ense) and Agr(eement) are separate syntactic heads in these languages, and provide further evidence for this approach, which I extend to non-finite clauses in Spanish, Galician, and Portuguese as well. I will also argue that examining the syntactic variation illustrated above indicates that (i) postverbal overt subject DPs are licensed by a full set of ϕ -features in Agr (overt or covert), (ii) *pro* is licensed by an Agr head that is overtly realized by either overt ϕ -features or verb movement, and (iii) preverbal overt subject DPs are licensed by verb movement to Agr. Since the main purpose of this paper is to understand the specific licensing conditions for the variation shown above, I will not discuss other issues like more specific syntactic and semantic properties of infinitives or the actual nature of the category known as *pro*.¹

The present paper is organized as follows. In section 2 I provide evidence to support the hypothesis that T and Agr are separate syntactic heads in the Romance *pro*-drop languages considered in this paper. Section 3 examines the Italian vs. Spanish puzzle, that is, which property is responsible for licensing a postverbal DP. Section 4 focuses on the Spanish vs. Galician puzzle and why *pro* is not possible in Spanish non-finite contexts. Section 5 is concerned with the Galician vs. Portuguese puzzle, that is, why only the latter allows a preverbal DP even though both languages display inflected infinitives. In section 6 I examine the role of the Agr head in licensing *pro*. Section 7 concludes.

2. Agr as a separate syntactic head

Despite the fact that, as pointed out in the introduction, it has not been easy to determine exactly how agreement is involved in licensing *pro* and postverbal subjects, it is generally agreed that the agreement properties of the languages shown in (2) above play an important role in determining their status as *pro*-drop languages. In this paper I pursue the hypothesis, put forward by Belletti (1990) and others, that agreement features are located in a separate Agr head in these languages and I provide further evidence for this analysis.²

Evidence for this approach comes from tense and agreement interactions. In some languages, tense and agreement morphology work independently, while in others they do not. English is a clear example of the latter, as illustrated below:

¹ There have been two main kinds of approaches to null subjects in the history of generative grammar: the *pro* approach, which claims that *pro* is specified as an empty category in the syntax (see e.g., Rizzi 1982 and Müller 2006), and the deletion approach, which claims that a regular subject becomes empty in the course of the derivation (see e.g., Perlmutter 1971, Biberauer et al. 2010, and Fernández-Salgueiro 2011). Although this debate lies outside the scope of the present paper, the analysis provided here seems to favor the latter type of approach (see section 4). I will continue to use the term *pro* in the paper for convenience and its use is intended to be theory-neutral.

² This analysis is also found in early work in the minimalist program for languages like English but was abandoned later on (see Chomsky 1995 for discussion).

(2) I work, he works; I worked, he worked (cf. *he workeds)

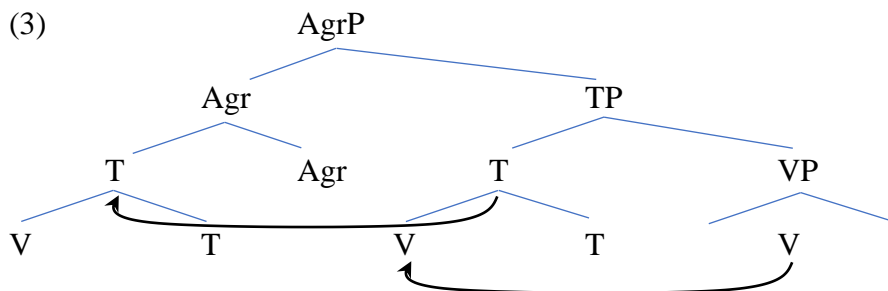
As can be seen, once the past tense morpheme is added to the verb, the agreement morphology found in the present tense changes, as the *-s* suffix is no longer realized. This interaction between tense variation and agreement realization is not found in languages like Spanish, Galician, or Italian. In Bobaljik's (1995: 263) terms, "tense morphology does not block the appearance of agreement morphology." To illustrate, consider the properties of verb agreement suffixes in these languages. In Spanish and Galician, for example, the plural agreement suffixes *-mos* (first person), *-is* (second person in Spanish), *-des* (second person in Galician), and *-n* (third person) always display the exact same form for all verbs (including all the irregular verbs) in all tense, aspect, and mood combinations. This contrasts sharply with the ways that verb roots, tense, and aspect may interact, which do exemplify the expected morphological irregularities typical of inflectional morphology. In fact, it could even be claimed that the plural agreement suffixes just discussed resemble properties of agglutinative morphology.

More specific evidence that supports the hypothesis that T and Agr are separate syntactic heads in these languages comes from the fact that Galician and Portuguese display inflected infinitives. In this respect, notice that the shape of these inflected infinitives is not really morphologically distinct from the regular ones; rather, the agreement suffixes are just appended to the regular infinitive (see section 3 below for examples in Galician).

Finally, more specific evidence comes from the behavior of the existential verb *haber* 'to have' in finite clauses in Spanish and Galician, which can be inflected for tense, aspect, and mood, but not for agreement. Interestingly, the inflected forms for *haber* are similar to the forms for other verbs minus the agreement suffixes. In Spanish, for example, the imperfect past indicative form of *haber* is *había* (for all person and number combinations, since there is no agreement), and the imperfect past indicative forms of *saber* 'to know' are *sabía*, *sabías*, *sabía*, *sabíamos*, *sabíais*, and *sabían*.

In sum, there is evidence that in these languages tense and agreement correspond to separate morphemes since there is no interaction between the two, there are languages in which agreement suffixes can just be added to infinitives, and there are examples of verbs that show tense marking and disallow agreement marking.

Assuming a separate Agr head in these languages raises the question of whether verbs, which are assumed to move to the T head in all these languages also move to Agr. This seems to be a reasonable assumption, since agreement is part of the morphological make-up of the verb, just as T is. This is illustrated below (irrelevant details omitted):



The question that arises now is whether Agr is a separate head also in non-finite clauses in these languages. This question may seem strange from the traditional

grammar point of view, under which infinitives lack agreement altogether, but it is relevant in the context of the minimalist program, as non-finite clauses are usually analyzed as involving defective agreement, rather than no agreement whatsoever (see e.g., Chomsky 2001 and many others). If this approach is correct, there is in principle no reason to believe that only ϕ -complete agreement corresponds to a separate Agr head in these languages; defective agreement should as well.

In fact, I believe that there is evidence suggesting that this is indeed the case. First, consider the Spanish examples below containing the non-agreeing quantifier *todo* (equivalent to the floating quantifier ‘all’ in English):

(4) Spanish

- a. Son todo hombres en ese despacho
 are.3PL all men in that office
 ‘It’s all men in that office’
- b. *Hay todo hombres en ese despacho
 have all men in that office
 (similar meaning intended; the sentence is grammatical if *todo* is removed, with the meaning ‘there are men in that office’)

As can be seen, *todo* is allowed with the verb *be*, but not with the existential verb *haber*. Recall that the verb *haber* is inflected for tense, aspect, and mood but lacks agreement in finite clauses, as discussed above, while the verb *be* in (4a) does display agreement. Regardless of the function of *todo* in the sentence, it seems that it somehow requires the presence of the Agr head, as this seems to be the main structural difference between (4a) and (4b).

Interestingly, the above contrast disappears in adverbial non-finite clauses. As shown below, *todo* is allowed with both infinitives, which suggests that the Agr head (albeit defective) is present in both of them:

- (5) Al ser/haber todo hombres en ese despacho,
 to=the be.INF/have.INF all men in that office
 María no está cómoda
 Mary not is comfortable
 ‘Since it’s all men in that office, Mary doesn’t feel comfortable’

Notice that this means that the contrast between (4a) and (4b) cannot be due to the presence or absence of overt agreement, since overt agreement is absent in both examples in (5) and *todo* is still allowed. The difference, then, seems to be structural (whether the Agr head is present or not).

After providing arguments for the separate Agr hypothesis, let us examine the puzzles presented in the introduction.

3. The Italian vs. Spanish puzzle

In this section, I examine the properties of adverbial non-finite clauses from a comparative point of view. As I show below, Spanish and Galician non-finite clauses differ from Italian and Portuguese (and Catalan) non-finite clauses.

3.1. Comparative remarks

Let us consider first the Spanish example in (6):

- (6) Spanish
 Antes de cantar Juan, ...
 before of sing.INF John
 ‘Before John sings/sang...’

The sentence above illustrates the use of a regular postverbal DP inside an adverbial non-finite clause, which is rather common in Spanish and Galician with various subordinating adverbs and prepositions, but much more restricted in languages like Italian and Catalan.³ Catalan, for instance, also allows overt DPs in non-finite clauses (example (6) would actually be grammatical in Catalan) but crucially these are restricted to the final position in the clause, a restriction that is not found in Spanish or Galician (see e.g., Ordóñez 2007).

As one of the reviewers rightly points out, Italian allows a pronoun in a sentence equivalent to (6) with a subordinator like *prima di* ‘before’ and *per* ‘for’ as long as it is focused, as shown in (7):

- (7) Italian⁴
- | | | | | | | |
|----|--|-------------|-------------|-------------|-------------|----|
| a. | Prima di | leggerlo | TU, | lo leggerò | io | |
| | before to | read.INF.it | you, | it read.fut | I | |
| | ‘Before you read it, I should read it’ | | | | | |
| b. | */??Prima | di | legger-lo | GIANNI, | lo leggerò | io |
| | before | to | read.INF-it | John, | it read.FUT | I |

Interestingly, Parafita Couto (2002) also observes that a focused pronoun can occasionally be found in Galician inflected infinitives in the preverbal position, which in principle cannot host overt DPs (see the following section). It should also be mentioned that the focused pronoun in Italian occupies the final position in the clause, the same position in which overt DPs are licensed in Catalan. Moreover, the reviewer mentions that phrasal DPs in the same configuration result in a degraded sentence, though there may be variation among speakers of Italian. Interestingly, many speakers of Spanish also allow pronouns in configurations in which phrasal DPs are not possible (see footnote 6 below).

As can be seen, Italian adverbial non-finite clauses do allow overt DPs in very specific configurations, and whether they are licensed or not depends on the type of subordinator and the phrasal status of the subject, as the reviewer mentions. These considerations do not apply to Spanish and Galician adverbial non-finite clauses, in which both pronouns and phrasal DPs are possible, regardless of the element that introduces the clause and regardless of focus considerations. As important as these Italian facts are (together with the more specific facts about Spanish, Catalan, and Galician just mentioned) for our understanding of the properties of infinitives and how subjects are licensed, there are reasons to believe that they are not directly related to the main purpose of the present study, which is the basic variation illustrated in (1)

³ An overt DP is also possible in Portuguese but only in inflected infinitives. Non-inflected ones do not allow overt DPs (see section 5 for discussion).

⁴ I thank the reviewer for providing the Italian examples in this section.

above, originally discussed with respect to the *pro*-drop parameter, and how it is related to the properties of tense and agreement (hence the title of the paper). In this respect, notice that this variation is not related to issues having to do with the phrasal status of the overt subject DPs, for example.

The reviewer also indicates that overt DPs are allowed in Italian in the so-called Aux-to-Comp configuration (see Rizzi 1981, 1982) with subordinators like *dopo* ‘after’ and *con* ‘with’. Consider the examples in (8):

- (8) Italian
- a. Dopo aver Gianni finito di leggere i compiti, ...
 after have.INF John finished to read the homeworks
 ‘After John has finished reading his homework...’
- b. Con l’aver Gianni finito di leggere i compiti, ...
 with the-have.INF John finished to read the homeworks
 ‘With John having finished reading his homework...’

This Aux-to-Comp configuration may actually be more relevant to our purposes, since it licenses overt DPs regardless of phrasal status and does not involve focus (although it is only possible with certain subordinators). The reviewer suggests that the presence of the auxiliary in the complementizer position is related to Landau’s (2006) claim that overt subjects are allowed when the non-finite clause is marked for tense and agreement. I would like to suggest a tentative approach to this phenomenon that would account for why the overt DP is licensed. It has actually been proposed, within the framework of feature inheritance (Chomsky 2008), that inheritance only involves the number feature, person features being inherent to T, and that inheritance only applies (yielding a ϕ -complete head in T) if nominative Case cannot be assigned otherwise (see Chou & Fernández-Salgueiro 2020). Suppose that in these non-finite clauses in Italian T-to-C movement applies prior (and instead of) number inheritance, so that both person and number features end up together in C, yielding a ϕ -complete head that presumably would count as ‘marked for agreement’ in Landau’s terms. For reasons of space, I leave the details of this analysis for further research.

In sum, besides the subject variation illustrated in table 1 in the introduction, other more specific configurations also allow overt DPs in non-finite clauses in these languages. In Italian, overt DPs are allowed with certain subordinators when the auxiliary verb moves to the complementizer position, and pronouns are also allowed when focused, a property that is also found in some examples in Galician. In Catalan, overt DPs are allowed but they are restricted to the clause-final position, thus differing from the postverbal DPs that occupy their base VP-internal position (see table 1). Finally, some Spanish speakers allow for a pronoun (not a phrasal DP) to precede the infinitive (see the following section).

3.2. Overt DPs in Spanish

In order to account for the properties of examples like (6), previous approaches (most of them focusing on Spanish) have assumed a full set of ϕ -features on infinitival T that is responsible for licensing structural nominative Case on the DP, thus allowing for its overt realization (see e.g., Rigau 1995, Torrego 1998, and Ortega-Santos 2002, all slightly different versions of this analysis).

This analysis, the gist of which I take to be on the right track, raises three main questions. The first question concerns the fact that PRO is also possible in sentences

like (6). If infinitival T indeed contains a full set of ϕ -features, the fact that PRO is possible is unexpected, since PRO is in principle incompatible with full agreement, at least under the standard approach. As pointed out by one of the reviewers, Landau (2006) argues that overt subjects are licensed when the clause displays both tense and agreement, and that if either feature is missing, the subject must be PRO. Since the adverbial clauses discussed here are marked for tense (otherwise overt DPs would not be possible under his approach), the presence of agreement would ban PRO as well. As can be seen both approaches make similar predictions for the cases at hand. Deciding between the two approaches lies beyond the scope of the present paper. As will be shown below, the analyses that I propose are compatible with both the standard approach and Landau's approach.

The second question concerns the fact that a sentence like (6) is compatible with an overt nominative DP but not with *pro*, despite the fact that full agreement is present and Spanish is a *pro*-drop language.⁵ The third question relates to word order and the fact that the DP is restricted to the postverbal position, despite the flexibility that is generally observed for subject DPs in these languages.⁶ To the best of my knowledge, the last two questions have not been addressed in detail in the literature.⁷ As can be seen, the questions just raised are intimately related to the puzzles presented in the introduction.

Let us first discuss independent evidence for the proposal that non-finite clauses in Spanish display ϕ -complete features. Consider first the Spanish finite sentences below:

- (9) Spanish
- | | | | | | |
|----|---------------------------------|------------|---------|------|--------------|
| a. | Los | profesores | estamos | muy | descontentos |
| | the | teachers | are.1PL | very | unhappy |
| | 'We teachers are very unhappy' | | | | |
| b. | Los | profesores | estáis | muy | descontentos |
| | the | teachers | are.2PL | very | unhappy |
| | 'You teachers are very unhappy' | | | | |

As can be seen, a subject DP like *los profesores* 'the teachers' can be interpreted as including the speaker (7a) or the hearer (7b) when the verb is inflected for first person or second person plural agreement respectively. Evidence that agreement is needed to achieve this reading is that a complement DP, which does not

⁵ If the overt DP is removed from (6), for example, it would be interpreted as involving PRO, but not *pro* (this is true of Spanish and Galician). This is evidenced by the fact that this empty subject would be bound by the matrix subject, as shown in (i):

- (i) Después de cantar, Juan se marchó
 After of sing.INF John left
 'After singing, John left'
 (cf. *'After I/you/we/they sang, John left')

⁶ It should be noted that many Spanish speakers allow preverbal pronouns in these contexts. The fact that this is restricted to pronouns, that is, syntactic heads, suggests that these are instances of head movement/adjunction to T. See Fernández-Salgueiro (2020) for discussion and a similar analysis of preverbal pronouns in *wh*-questions in Caribbean Spanish, which disallow preverbal phrasal DPs.

⁷ It should also be noted that a nominative DP is usually only allowed in adverbial and subject non-finite clauses. See Ortega-Santos (2002) for discussion.

trigger agreement on the verb, cannot be interpreted in this way, as shown in (10) with a transitive clause (10a) and with an impersonal clause (10b):

- (10) a. No entienden a los profesores
 not understand.3PL to the teachers
 ‘They don’t understand teachers’
 b. No se entiende a los profesores
 not SE understand.3SG to the teachers
 ‘Teachers aren’t understood’ or ‘nobody understands teachers’

Interestingly, if the complement is topicalized, clitic doubling is required, and the interpretation whereby the speaker or the hearer is included is possible if the first person or second person plural clitic (which could be considered a form of agreement) is used:

- (11) a. A los profesores no nos/os entienden
 to the teachers not us/you.PL understand.3PL
 ‘They don’t understand us/you teachers’
 b. A los profesores no se nos/os entiende
 to the teachers not SE us/you.PL understand.3SG
 ‘We/you teachers aren’t understood’ or ‘nobody understands us/you teachers’

Crucially, in adverbial non-finite clauses, a subject DP can indeed be understood as including the speaker or the hearer (albeit being ambiguous with a third person plural interpretation). In the sentence below, *los profesores* can be interpreted as ‘us teachers’ in the context of a meeting, for example:

- (12) Al estar los profesores tan descontentos,
 to-the be.INF the teachers so unhappy
 el director tiene que aceptar estas demandas
 the director has that accept.INF these demands
 ‘Since teachers are so unhappy, the director must accept these demands’ or
 ‘since we teachers are so unhappy, the director must accept these demands’

This strongly suggests that full agreement is present in the verb form and can be inflected for first person or second person plural. These full agreement features are in turn responsible for licensing nominative case on the DP, as briefly discussed above.

As explained at the beginning of this section, although we can now explain why overt nominative DPs are possible, the question that arises is why PRO is possible in Spanish and Galician in the presence of ϕ -complete agreement. Examining the properties of the two types of Galician infinitives (inflected and non-inflected) can shed some light on this issue. Consider first the Galician inflected infinitive paradigm in (13), which is similar to the Portuguese paradigm:

- (13) *Galician inflected infinitives (e.g., chegar ‘to arrive’)*
 Sg: Chegar- \emptyset , chegar-**es**, chegar- \emptyset
 Pl: Chegar-**mos**, chegar-**des**, chegar-**en**

As can be seen, first person and third person singular forms are not overtly marked. This means that an infinitival verb form with no overt agreement is ambiguous between a regular non-inflected infinitive (which I am assuming contains only defective agreement) and an inflected infinitive with no overt agreement. Presumably, however, the defective agreement in the non-inflected infinitive is unable to license a nominative DP and thus only PRO is allowed, as in English and most Italian non-finite clauses (see (14a) below), while the inflected infinitive with no overt agreement is indeed able to license a nominative DP thanks to its ϕ -complete agreement (see (14b) and (14c) ((14d) is an example of overtly marked agreement with an overt DP).

(14) Galician

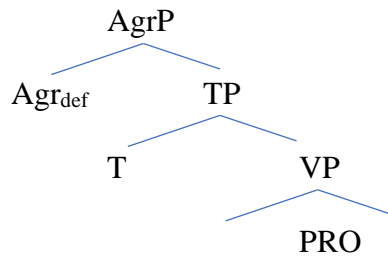
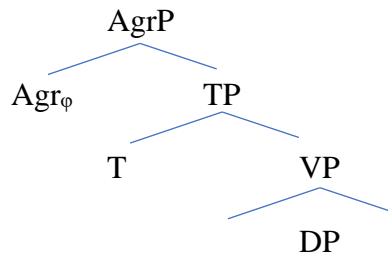
- | | | | | | | | |
|----|-----------------------------------|----|-------------------------|-----|-----------|------|---------|
| a. | Despois | de | chegar, ... | | | | |
| | after | of | arrive.INF | | | | |
| | 'After arriving...' | | | | | | |
| b. | Despois | de | chegar | | eu, ... | | |
| | after | of | arrive.INF- \emptyset | | I | | |
| | 'After I arrived...' ⁸ | | | | | | |
| c. | Despois | de | chegar | | Xoan, ... | | |
| | after | of | arrive.INF- \emptyset | | John | | |
| | 'After John arrived...' | | | | | | |
| d. | Despois | de | chegar-mos | ti | e | mais | eu, ... |
| | After | of | arrive.INF-3PL | you | and | more | I |
| | 'After you and I arrived...' | | | | | | |

This analysis is also compatible with Landau's (2006) approach. The fact that an overt DP is possible must mean that the syntactic configuration displays both tense and agreement. Since these clauses behave the same in terms of tense, the difference must be the lack of agreement (ϕ -complete agreement in standard terms or [+Agr] in Landau's terms).

Here I would like to make the proposal that (14) demonstrates what happens in Spanish non-finite clauses more generally. From the discussion above we concluded independently that Spanish infinitives may contain full agreement (recall (12)), albeit always null, while the examples in (14) illustrate that an infinitive with no overt agreement is compatible with two different syntactic contexts, one in which PRO is allowed and another one which allows a nominative DP. The main difference then between Galician and Spanish seems to be that in Galician only a couple of ϕ -complete agreement morphemes are null, while in Spanish all of them are. This analysis is illustrated in the trees below (head movement operations are not included for simplicity; see section 5 for discussion):

⁸ Examples (14b) and (14c) could also be translated as "after my/John's arrival." Throughout the paper, I have opted for translations involving finite clauses to emphasize the clausal nature of these examples. Examples like (i) are also possible in Spanish:

- | | | | | | | |
|-----|---------------------------|----|-----|---------|----|------|
| (i) | Después | de | la | llegada | de | Juan |
| | after | of | the | arrival | of | John |
| | 'After John's arrival...' | | | | | |

(15) *Non-finite clauses with PRO (It, Sp, Gal, Port)*(16) *Non-finite clauses with a postverbal DP (Sp, Gal, Port)*

*Null Agr in Spanish; overt Agr in Portuguese;
both possible in Galician (see section 5).*

There is also historical evidence that supports this analysis. Egido-Fernández (1992) reports that inflected infinitives can be found in 13th century documents written in Spanish in the area of León, which is actually adjacent to the then Kingdom of Galicia. Moreover, Maurer (1968) claims that infinitives with overt subjects in older stages of Spanish were more common in the western portion of the Iberian Peninsula, that is, the area adjacent to Galician and Portuguese speaking territories. In his analysis, Ortega Santos (2002) actually claims that Spanish infinitives constitute a null agreement version of Portuguese inflected infinitives.

The present approach thus provides an answer to the first problem posed by the analysis mentioned at the beginning of this section; despite appearances, PRO and a nominative DP are not licensed in the same syntactic context. The discussions in the next two sections will help provide answers to the other two questions stated above regarding Spanish infinitives, that is, why *pro* is not allowed (section 4) and why a nominative DP needs to be postverbal (section 5).

4. The Spanish vs. Galician puzzle

An important observation that derives from the study of adverbial non-finite clauses is that the syntactic conditions that license a nominative DP and the ones that license *pro* are not the same, otherwise *pro* would be allowed in Spanish infinitives, contrary to fact. As can be gathered from the table in the introduction, Galician and Portuguese inflected infinitives indicate that overt agreement is necessary in order to allow *pro*. This is not only because the ϕ -complete (yet null) agreement present in Spanish infinitives is unable to license *pro*, but also because even in these languages with inflected infinitives overt agreement seems to be necessary. Consider the Galician examples in (17) below, which illustrate that *pro* is not allowed when the agreement morpheme happens to be null (first person and third person singular, as noted in the previous section):

- (17) Galician
- | | | | | | |
|----|---|--------------|----------|----------|--------|
| a. | Antes de | cantar-es, | quero | beber un | pouco |
| | before of | sing.INF-2SG | want.1SG | drink a | bit |
| | ‘Before you sing, I want to drink a bit’ | | | | |
| b. | Antes de | cantar, | quero | beber un | pouco |
| | before of | sing.INF-∅ | want.1SG | drink a | bit |
| | ‘Before singing, I want to drink a bit’ | | | | |
| | (cf. *‘Before he/she sings, I want to drink a bit’) | | | | |
| c. | Antes de | cantar, | queres | beber un | pouco? |
| | before of | sing.INF-∅ | want.2SG | drink a | bit |
| | ‘Before singing, do you want to drink a bit?’ | | | | |
| | (cf. *‘Before I sing, do you want to drink a bit?’) | | | | |

These observations actually relate to the way *pro* (and the entire concept of the *pro*-drop parameter) has been (re-)analyzed in more recent approaches within the minimalist program in two respects. On the one hand, if indeed overt agreement (rather than rich agreement as it was initially proposed by Rizzi 1982 among others) is involved in licensing *pro*, it seems that we are dealing, at least in part, with a PF matter. In this respect, more recent approaches have abandoned the idea that *pro* is a separate category and instead analyze instances of *pro* as regular DPs whose phonological features are deleted or ignored in the PF component. As mentioned in the introduction, however, discussing this issue would lead us too far afield; the reader is referred to Cole (2000), Holmberg (2005), Biberauer *et al.* (2010), and Fernández-Salgueiro (2011), for different versions of this approach.

Another way in which the present paper relates to more recent approaches is that it has been shown that a general *pro*-drop parameter whereby some languages allow subjects in finite clauses to be null and others do not cannot be right. As the discussion so far has illustrated, even in the canonical *pro*-drop languages some syntactic contexts allow *pro* while others do not. More generally, *pro*-drop languages are by no means a uniform group and differ in terms of what kinds of null subjects are allowed. As discussed at length in Holmberg (2005), Biberauer *et al.* (2010), and D’Alessandro (2015), among others, there are four different kinds of null subject languages:

- (18) *A typology of pro-drop/null subject languages*
- Consistent null subject languages, which allow null subjects in all person and number combinations (Italian, Spanish, Greek, Serbo-Croatian).
 - Discourse null subject languages, which allow discourse-oriented null arguments in the absence of person and number features (Chinese, Japanese).
 - Partial null subject languages, which allow null subjects only with certain person and number combinations (Finnish).
 - Expletive null subject languages, which allow expletive subjects to be null (German, Dutch).

Going back to the role of overt agreement, there are two main problems with the simple claim that licensing *pro* requires overt agreement features. The first problem is that in finite clauses, the languages that we are considering in this paper all allow *pro* even with the verb forms for which there happens to be no overt agreement. In Spanish and Galician, for example, this is the case for first person and third person

singular forms in the imperfect past tense. In these cases, *pro* is possible despite the ensuing ambiguity, as shown in the Spanish example below:

- (19) El médico me dijo que estaba enfermo⁹
 the doctor me told that was sick
 ‘The doctor told me that I was sick’ or ‘the doctor told me that he was sick’

The second problem with linking *pro* merely to the presence of overt agreement is that in a language like English, a verb form with overt agreement features is not able to license *pro*, as is well known. This is illustrated in (20):

- (20) *John says that feels sick

We thus have evidence that overt agreement is necessary to license *pro* (recall the properties of Galician inflected infinitives shown in (17) above, for example) and we also have evidence that in finite clauses in the consistent *pro*-drop languages *pro* is possible even in the absence of overt agreement (cf. (19)). In section 6 below I will argue that this contradiction can be resolved if we claim that it is not the actual ϕ -features that need to be realized overtly, but the Agr head.

5. The Galician vs. Portuguese puzzle

The last puzzle illustrated in the table in (2) in the introduction relates to the different behavior of inflected infinitives in Galician and in Portuguese. Whereas adverbial non-finite clauses in Portuguese are similar to finite clauses in that they allow both preverbal and postverbal DPs and *pro*, in the Galician ones preverbal DPs are generally disallowed (see e.g., Parafita-Couto 2002).

It should first be noted that inflected infinitives are more restricted in Galician than in Portuguese, although there is considerable amount of speaker variation, with birthplace (urban vs. rural), first language (Spanish vs. Galician), and (rather surprisingly) gender all being significant factors (see Sheehan *et al.* 2019 for detailed discussion). Still, inflected infinitives are widely accepted (and considered standard) in Galician adverbial non-finite clauses, which is the empirical focus of the present paper.

There is, however, a subtle but crucial difference between the two languages that is more relevant to our purposes: inflected infinitives are optional in Galician, in the sense that when a nominative DP is present, the non-inflected infinitive is also possible, unlike Portuguese, which requires the inflected infinitive in such contexts.¹⁰ This optionality is shown in the examples below (the equivalent of (21b) is ungrammatical in Portuguese):

⁹ The forms for the imperfect past (indicative) of *estar* in Spanish are: *estaba*, *estabas*, *estaba*, *estábamos*, *estabais*, *estaban*. As can be seen, first person and third person singular are not overtly marked.

¹⁰ This optionality in Galician raises the question of how the nominative DP is allowed. The most likely answer seems to be that an example like (19b) below is due to the influence of Spanish, especially considering that Galicia has been a bilingual region for several centuries and the fact that the majority of speakers of Galician are native speakers of Spanish as well.

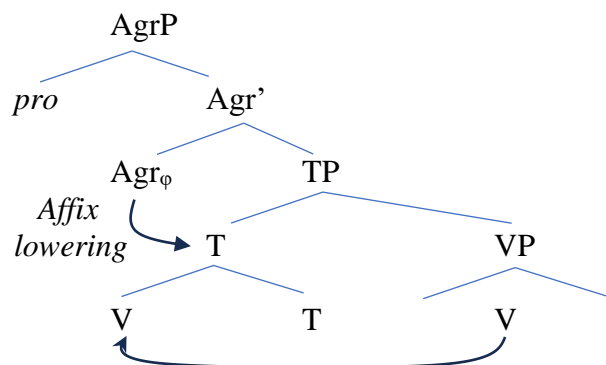
(21) *Galician*

- a. Despois de chegar-en os nenos, ...
 after of arrive.INF-3PL the kids
- b. Despois de chegar os nenos...
 After of arrive.INF the kids
 ‘After the kids arrived, ...’

This suggests that in this syntactic context the infinitive needs the agreement in the Portuguese examples, but in Galician it does not. If we make the reasonable assumption that the morphemes attached to the verb are related to the head movement operations that the verb undergoes, it would seem that verb movement to Agr is somehow forced by the principle of Last Resort (Chomsky 1995) in Portuguese, while for Galician the verb would be required to move only as high as T. In this respect, Portuguese inflected infinitives and verbs in finite clauses would exhibit a similar syntactic behavior in terms of verb movement (see section 2 above), and thus the fact that the two syntactic contexts can display the same kinds of subjects would not be unexpected.

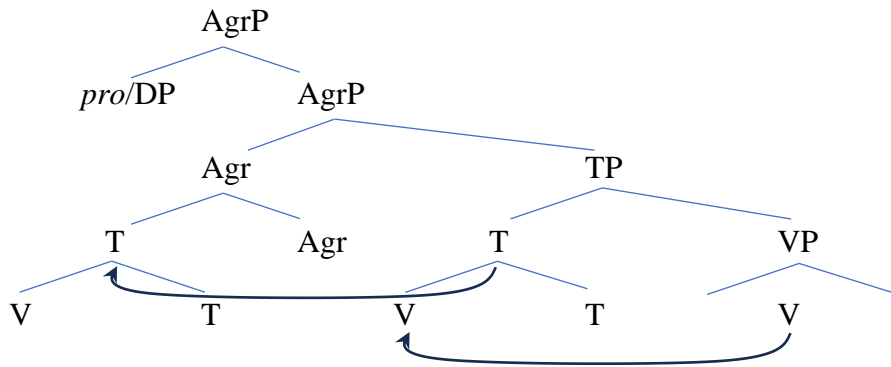
The fact that in Galician inflected infinitives the overt agreement morpheme also surfaces as a suffix on the infinitive still needs to be explained, however. The proposal that I would like to make is that in Galician the Agr head lowers to T in the PF component. This analysis fits in well with the idea that there is in principle no syntactic problem with leaving the infinitive in T in the syntax, as the inflected infinitive is optional (cf. (21)); the only issue would be that the Agr affix would be unsupported at PF. It also seems reasonable to apply this PF lowering analysis to the Spanish cases.

If this is correct, we can claim that while *pro* can be licensed in Spec-Agr by overt Agr alone, licensing a preverbal DP requires that the T head move to Agr.¹¹ (22) and (23) below illustrate this analysis:¹²

(22) *Adverbial non-finite clauses with pro (Galician)*

¹¹ One possibility is that the presence of T in the Agr projection is needed to value nominative case on the preverbal DP, under the assumption that T is the canonical nominative case assigner (see e.g., Bošković 2012 and references therein).

¹² The trees in (22) and (23) do not show the base positions of *pro* and the DP for simplicity. Discussing whether *pro* is possible only in the higher specifier position (as it is usually assumed), or also in its base position, lies under the scope of the present study. The reader is referred to Holmberg (2005) and Fernández-Salgueiro (2011) and references therein for discussion.

(23) *Adverbial non-finite clauses with pro and preverbal DPs (Portuguese)*

6. The English vs. Italian puzzle

At the end of section 4 we were left with a contradiction. On the one hand, we have seen evidence from Galician inflected infinitives that overt agreement is necessary to license *pro*. This is illustrated in (24), repeated from (17c) above:

- (24) Galician
 Antes de cantar, queres beber un pouco?
 before of sing.INF-Ø want.2SG drink a bit
 ‘Before singing, do you want to drink a bit?’
 (cf. *‘Before I sing, do you want to drink a bit?’)

On the other hand, finite clauses in the consistent *pro*-drop languages reveal that *pro* is possible even in the absence of overt agreement, as shown in (25) (repeated from (19) above):

- (25) Spanish
 El médico me dijo que estaba enfermo
 the doctor me told that was sick
 ‘The doctor told me that I was sick’ or ‘the doctor told me that he was sick’

To make matters more complicated, there are examples of overt agreement in non-*pro*-drop languages like English which obviously do not license *pro*. This is shown in (26), repeated from (20) above:

- (26) *John says that feels sick

The question that arises then is what exact property makes a language like English different from a language like Italian and is responsible for licensing *pro*, since overt agreement alone does not seem to be the right answer. However, if we take into consideration all the contexts that have been analyzed in this paper in which *pro* is allowed, we see that they all share a property that non-*pro*-drop contexts do not have. This property is the overt realization of the Agr head, which can be achieved by overt ϕ -features (for instance, in Galician inflected infinitives) or by verb movement (to T and then) to Agr in the absence of overt ϕ -features, as in the example in (19) above. Obviously, if both conditions are satisfied, as is the case in the majority of examples

that are usually considered, *pro* is allowed as well, as in most finite clauses in all these languages (and also in Portuguese inflected infinitives). Notice that this approach also correctly predicts that *pro* is not allowed in examples of overt verb agreement in languages in which there is no separate Agr head, like English or French.

7. Conclusions

In this paper I have provided further evidence that T and Agr are separate syntactic heads in these languages and also applied this analysis to non-finite clauses in Spanish, Galician, and Portuguese. I have also argued, after examining the syntax of adverbial non-finite clauses in these languages, that postverbal nominative DPs are licensed by a full set of ϕ -features in Agr (overt or covert), while preverbal overt subject DPs are licensed by verb movement to T and then to Agr. More in-depth analysis of non-finite clauses in these Romance languages also reveals more specific configurations that license overt DPs, like focused pronouns in Italian and Galician and the Aux-to-Comp configuration in Italian. Finally, I have argued that *pro* is licensed by an Agr head that is realized overtly by either overt ϕ -features or verb movement (or both).

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