

Deriving Null, Strong and Emphatic Pronouns in Romance *Pro*-Drop Languages

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Abstract It is well-known that overt subject pronouns in Romance Null Subject Languages display properties with respect to information structure and interpretation that set them apart from overt weak pronouns in a non-Null Subject Language like English. On the one hand, overt subject pronouns in a language like Spanish have been argued to be reluctant to occur in a bound construal in finite embedded contexts, as is expressed by Montalbetti's (After binding. Doctoral dissertation, Massachusetts Institute of Technology, 1984) *Overt Pronoun Constraint*. On the other hand, several studies indicate that the ban against a bound construal of overt pronominal forms is not categorical in focal or contrastive positions. Furthermore, overt pronominal forms can apparently be bound in certain complement control infinitives if they bear emphasis. This indicates that the bound/free alternation of subject pronouns in Romance Null Subject Languages is influenced by notions relating to information structure. In this paper, Spanish subject pronouns will be analyzed as 'topic/focus morphemes' which spell-out post-syntactically in combination with agreement features. In particular, it will be argued that null, strong, and emphatic pronouns enter the syntactic component lexically underspecified and are derived by entering dependencies with AGR as well as features relating to the pragmatic interface points v and C. The fact that overt realization of subject pronouns depends on [topic]/[focus] features in a Romance *Pro*-Drop Language like Spanish has the consequence that their referential construal is influenced by these features as well.

1 Introduction

It has long been discussed that the *pro*-drop parameter does not only make available the option of leaving subjects phonetically unrealized in languages like Italian, Spanish, European Portuguese (EP), and Catalan, but that further correlating properties appear in the grammar of Romance Null Subject Languages

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P. Patel-Grosz et al. (eds.), *Pronouns in Embedded Contexts at the Syntax-Semantics Interface*, Studies in Linguistics and Philosophy 99,
DOI 10.1007/978-3-319-56706-8_6

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(see Chomsky 1981, 1982; Rizzi 1982; see Camacho 2013 for recent discussion). One property that has been argued to be influenced by the possibility of null realization of the subject position concerns the interpretative nature of overt subject pronouns. Thus, in his seminal work, Montalbetti (1984) argues that overt subject pronouns in the Null Subject Language (NSL) Spanish behave differently from null *pro* with respect to the possibility of a bound construal (see also Luján 1985):

- (1) a. Nadie cree que él es inteligente.
 nobody believe.3SG that he is intelligent
 ‘Nobody believes that he is intelligent.’
 b. Nadie cree que *pro* es inteligente. (Sp.; Montalbetti 1984: 83)

Montalbetti (1984) argues that both – null and overt pronouns – can be interpreted as free, i.e. they can be interpreted as referring to a discourse antecedent, but that only the null pronoun in (1b) is ambiguous in also allowing a bound interpretation:

- (2) (No x : x a person) x believes that x is intelligent
 (Montalbetti 1984: 83)

This is different from the non-NSL English, where both the bound and free interpretation is available for overt subject pronouns:

- (3) Nobody_{*i*} believes that he_{*i/j*} is intelligent.

Furthermore, in Spanish, overt pronouns can be bound if they are not in subject position, i.e. in contexts where no overt/covert alternation arises, as inside PPs (cf. Montalbetti 1984; Luján 1985; Rigau 1988; Alonso-Ovalle and D’Introno 2001; Spanish example (4) from Montalbetti 1984: 87):

- (4) Nadie_{*i*} quiere que María hable de él_{*i*}.
 nobody wants that Mary speak.SUBJ of him
 ‘Nobody wants Mary to talk about him’.
 (5) María habló de (él/**pro*).
 Mary spoke of him/* \emptyset
 ‘Mary spoke about him’.

This situation has been captured by Montalbetti’s *Overt Pronoun Constraint*:

- (6) *Overt Pronoun Constraint* (OPC; Montalbetti 1984: 94)
 Overt pronouns cannot link to formal variables iff the alternation overt/empty obtains.

Similar data have been reported for other NSLs (see Solà 1992; Barbosa 1995, among others). The possibility of a subject pronoun to be bound is thus conditioned by the *pro*-drop property, which creates an overt/empty alternation in finite domains, making the phonetically most reduced element – *pro* – the only option for binding.

The impossibility of binding overt subject pronouns in Romance NSLs has further been regarded as part of more general (economy) principles which favor phonetically and/or structurally reduced forms over more complex ones, as e.g. Chomsky's (1981) *Avoid Pronoun*, Bonet's (1991) *Avoid Pronoun Strength*, or Cardinaletti and Starke's (1999) *Economy of Representation*. Given that *pro* is the phonetically most reduced form, it should be the unmarked option for binding if it competes with an overt pronoun.¹

However, bound overt pronouns in potential overt/covert alternations are only predicted to be strictly impossible if Montalbetti's (1984) OPC is defined as a grammatical principle (cf. also Alonso-Ovalle et al. 2002 for discussion), but not necessarily if it is the result of an interface strategy of economy. In fact, several empirical studies show that there is considerable variation with respect to the acceptability of bound overt pronominal forms in Romance NSLs like Italian (cf. Carminati 2002) or Spanish (cf. Alonso-Ovalle et al. 2002), rather than strict impossibility. In particular, the results of these studies indicate that there is a preference for a bound construal with null pronouns (as predicted by the OPC), but that it is not impossible with overt pronouns for all speakers. Thus, rather than considering the (anaphoric) properties of subject pronouns in embedded contexts of Romance NSLs to be the result of a [\pm] grammatical principle, Carminati (2002) argues that they follow from a general *preference* of null pronouns to link to antecedents which are higher in the syntactic structure (in Spec,IP) while overt pronouns prefer antecedents in a lower position (cf. Carminati's 2002 *Position of Antecedent Hypothesis*; cf. also Alonso-Ovalle et al. 2002 for Spanish).

If the OPC derives from a more general economy principle, another prediction is that less economical strategies might be available and chosen if further interface factors intervene. For example, it has been observed that the ban against a bound construal of strong subject pronouns in finite embedded clauses is not categorical in Spanish if we consider information structural notions like contrast or emphasis. Thus, a contrastive interpretation or focalization of the subject is one context in which a referential dependency between an overt pronominal form and a matrix QP antecedent becomes available (cf. Luján 1986, 1999; Alonso-Ovalle and D'Introno 2001; Bosque and Gutiérrez-Rexach 2009; Eguren 2014):

¹Another account of the preference of null pronouns can be found in hierarchies such as Gundel et al.'s (1993) *Givenness Hierarchy*. These approaches share that a (phonetically and/or structurally) more reduced form is the preferred option for encoding binding and co-reference, while disjoint reference is triggered by a more complex form, as is also expressed in Levinson (1987):

(i) Lexical NP > pronoun > \emptyset (Levinson 1987: 384)

- (7) a. [Todo estudiante]_i [piensa que él_j es inteligente].
 every student_i thinks that he_j is intelligent
 ‘Every student_i thinks that he_j is intelligent.’
- b. [Todo estudiante]_i [piensa que él_i (y no otros_j) es
 every student_i thinks that he_i (and not others_j) is
 inteligente].
 intelligent
 ‘Every student_i thinks that he_i (and not others_j) is intelligent.’
 (Sp.; Bosque and Gutiérrez-Rexach 2009: 555 [my glossing])

At first sight, one could say that the contrastive pronoun *él* in (7b) behaves like a strong pronoun with respect to its phonological content, but like null *pro* with respect to its binding properties, with the difference that a contrastive interpretation is not involved in the latter case.

If overt subject pronouns in Romance NSLs could only be construed as (co-)referential in embedded clauses, a further puzzle would arise in control complements. Here, PRO can be overtly realized if associated with an emphatic or contrastive interpretation (cf. Burzio 1986; Cardinaletti 1999; Belletti 2005; Livitz 2011 for Italian; Hernanz 1982; Piera 1987; Alonso-Ovalle and D’Introno 2001; Herbeck 2015b for Spanish; Solà 1992 for Catalan; Barbosa 1995, 2009a for EP; cf. Szabolcsi 2009 for cross-linguistic discussion and Sundaresan 2010 for Tamil):

- (8) Le prometió encargarse él mismo del asunto.
 CL(him) promised.3SG take-care-of.INF-SE he self of-the matter
 ‘He_i promised him_j to take care of the matter himself_i.’
 (Sp.; Hernanz 1982: 344 [my glossing])

The following example demonstrates that these ‘emphatic pronouns’ (cf. Burzio 1986; Piera 1987) can apparently be bound by a matrix QP in control contexts for some Spanish speakers (cf. Szabolcsi 2009 for Italian, Barbosa 2009a for EP):

- (9) Ningún vecino_i promete hacer él_i (mismo) la cena.²
 no neighbor promises do.INF he self the dinner
 ‘No neighbor_i promises to prepare the dinner himself_i.’

What is interesting is that, quite similarly to what we have seen in (7b), the emphatic pronoun in (9) seems to behave like an *empty category* (i.e. PRO) for LF construal but like a full strong pronoun with respect to PF realization. Thus, some authors

²There is some speaker variation with respect to the configurations that allow bound emphatic pronouns with Neg-QP antecedents inside infinitives. For example, out of six informants I consulted, one did not accept it. Furthermore, two speakers preferred the element *él mismo* with the intensifier *mismo* while others accepted it without the intensifier.

have claimed that we are dealing with an ‘overt PRO’ element (see e.g. Mensching 2000: 62; Livitz 2011, 2014; Herbeck 2015a, b). In the same vein, it could be argued that we are dealing with an ‘overt *pro*’ in a finite clause like (7b).

If we consider these pronominal forms in the context of the OPC, one potential problem that arises is that, if there is in fact an overt/covert alternation in Spanish nonfinite control domains, a strict interpretation of this principle would predict only co-referent, but not bound overt pronouns to be possible. If the reasoning up to now is on the right track, overt pronominal forms in contexts with potential overt/covert alternations in embedded finite as well as some nonfinite control clauses seem to share that a bound interpretation is not categorically ruled out, but it is crucially conditioned by the notions of emphasis and/or contrast.

The subject position in Spanish (and other Romance NSLs) thus poses interesting questions, both for the theory of *empty categories* as well as for the concept of ‘pronoun’ more generally: on the one hand, if notions like contrast or emphasis influence the possibility of a bound construal of overt subject pronouns, it is not only the phonological shape, but also the referential status of pronominal forms that is conditioned by notions relating to information structure. Thus, these notions rather than the internal structure of the relevant pronominal form seem to have a direct impact on how the bound/free alternation of Spanish subject pronouns is derived. On the other hand, overt realization of pronominal subjects has traditionally been linked to notions like emphasis and contrast as well. Importantly, this holds for finite as well as nonfinite structures, which indicates that the principles governing the overt/covert alternation in the two configurations are not fully dissociated from one another.

In this paper, I build on Alonso-Ovalle and D’Introno’s (2001) application of the concept of zero/minimal pronouns (Kratzer 1998, 2009) to Spanish in order to account for subject pronouns in finite and nonfinite embedded contexts of a Romance NSL. However, I extend this approach arguing that null, emphatic, as well as strong subject pronouns *generally* derive from a lexically underspecified, PRO-like element (Landau’s 2015 $D_{[\phi:_]}$). Different occurrences of this element arise through ‘control’ strategies mediated by the AGR and C-heads and the assignment of topic/focus features in the high and low left periphery (Rizzi 1997; Belletti 2004). Thus, overt and null as well as bound and free subject pronouns are ‘built’ by context-linkers in the C-domain (in the sense of Uriagereka 1995; Bianchi 2003; Sigurðsson 2011, 2014; Landau 2015, among others) as well as interpretable AGR (Rizzi 1982; Barbosa 2009a, b).³ I further argue that null and overt ‘bound’ subject pronouns should not be fully collapsed. However, the differences between the two forms do not arise from their lexical specification, but from topic/focus assignment, which imposes restrictions on how the subject can be ‘built’ by C.

³See also Borer (1989), Kratzer (2009), and Sigurðsson (2014), among others, for discussion of how different pronominal forms may arise through association with C and/or AGR.

This paper is structured as follows: first, I discuss the main theoretical background with respect to strong and emphatic pronouns in Romance NSLs. In particular, I outline Alonso-Ovalle and D’Introno’s (2001) approach to bound overt subject pronouns in terms of Kratzer’s (1998) *Zero Pronoun Hypothesis*. Thereafter, I point to some problems for a reduction of overt bound pronouns to focused minimal pronouns. The main objection comes from the observation that emphatic pronouns and PRO/*pro* behave differently depending on the type of matrix antecedent and depending on the type of matrix control verb. Then, I briefly discuss the relation between overt subject pronouns and the notions of topic and focus. This shall lay out the background for the analysis outlined in Sect. 3: while nominative Case might be a factor for overt realization of subject pronouns in finite clauses of English (as is expressed by the traditional Case Filter), the *pro*-drop property and, in particular, pronominal agreement features on the verb (see e.g. Rizzi 1982; Barbosa 1995; Alexiadou and Anagnostopoulou 1998; Kato 1999), will be argued to have the consequence that nominative Case is not obligatorily assigned to the subject position in a language like Spanish. This way, features relating to information structure replace the function of Case in the organization and functioning of post-syntactic morphological insertion rules (adopting *late insertion* as in Distributed Morphology (DM); Halle and Marantz 1993 and related work). While a (universal) default null insertion rule into pronominal subjects is blocked by a combination of agreement features and nominative Case in English, the default rule must be blocked by an alternative trigger in Spanish, namely information structural notions like topic and focus. Strong and emphatic subject pronouns are thus analyzed as ‘topic/focus morphemes’ which are spelled-out in combination with agreement features. Given that morphological insertion rules into pronominal subjects depend on the notions of topic and focus, the possibility of a bound construal of these elements becomes susceptible to these notions as well. This will be argued to be in line with the assumption that the OPC might be regarded, not as a $[\pm]$ grammatical principle (see Carminati 2002; Alonso-Ovalle et al. 2002), but as governed by notions relating to information structure.⁴ The bound construal is more easily available with null than with overt subject pronouns because focus assignment to a pronominal form enforces a discourse identification strategy and blocks (more economical) syntactic identification.

⁴Duguine (2008: 328) also hints at the possibility that differences between null and overt subject pronouns with respect to the (un-)availability of a bound construal in Spanish might derive from information structural constraints. While the proposal of this paper is similar in spirit in considering information structure a crucial factor for explaining ‘bound’ strong pronouns, it does not assume that null pronouns are the result of ellipsis of specified nominal elements (for discussion of deletion approaches to null subjects, see e.g. Holmberg 2005, 2010; Sheehan 2007; Roberts 2010; Fernández Salgueiro 2011, among many others). Furthermore, it will be argued that a theory of subject pronominal forms has to take into account Case as well as Focus in that the latter is only relevant in contexts where the former can be ‘absorbed’.

2 Strong Subject Pronouns in a Romance NSL

In this section, I outline some main properties of null and overt subject pronouns in a Romance NSL, focusing on Spanish with some remarks on Catalan and EP.

2.1 Bound Strong Pronouns in Romance NSLs

As we have seen, reluctance towards a bound construal of strong pronouns is apparently not categorical in some Romance NSLs. Empirical studies show that, even though a bound construal is preferred with null pronouns, it is not impossible with overt pronouns for all speakers of Spanish (cf. Alonso-Ovalle et al. 2002) or Italian (cf. Carminati 2002). For example, Alonso-Ovalle et al. (2002: 158f) investigated the anaphoric properties of overt and null pronouns in embedded contexts in Spanish. In this study, sentences comparable to (10), with a QP antecedent in the matrix clause and a null subject in the embedded clause, received a bound variable interpretation in 86.1% of the cases. Even though the result was significantly lower with an overt subject pronoun in Alonso-Ovalle et al.'s study – 63.3% – this demonstrates that a bound construal was not impossible for all speakers (cf. Alonso-Ovalle et al. 2002: 158f for full discussion):

- (10) Ningún estudiante cree que (*pro*/él) pasó el examen.
no student believes that he passed the exam

In fact, for some native speakers of Spanish, there seem to be patterns of preference rather than a clear-cut dichotomy: with a null subject, there is a preference for binding by a matrix neg-quantifier if no further context is provided, but a disjoint interpretation is possible if a topic antecedent is explicitly introduced:

- (11) En cuanto a Juan_i, nadie piensa que *pro*_i pasó el examen.
'As for John_i, nobody thinks that (he_i) passed the exam.'

Furthermore, as was noted in the context of (7), even though a strong pronoun triggers preference for a disjoint interpretation, contrastive or focal use of strong pronouns apparently makes a bound construal possible. The following example demonstrates a similar situation:

- (12) Ningún estudiante_i piensa que (sólo) ÉL_{i/j} pasó el examen.
no student believe.3SG that (only) he passed.3SG the exam
'No student_i believes that only he_i passed the exam.'

(Sp.; Alonso-Ovalle and D'Introno 2001: 402)

In Catalan, it has been observed that bound overt pronouns are more readily available when they are in postverbal position (cf. Solà 1992, citing Rosselló 1986; cf. Barbosa 1995 for EP and Frascarelli 2007: 716 for Italian):

- (13) Tots els jugadors_i es pensen que ells_i aprovaran.
 all the players SE think.3PL that they pass.3PL.FUT
- (14) Tots els jugadors_i estan convençuts que guanyaran ells_i.
 all the players are persuaded.3PL that win.3PL.FUT they
 ‘For any player x, x is persuaded that x will win’.

(Cat.; Solà 1992: 289f)

Solà (1992) argues that the postverbal position of the overt subject pronoun favors a bound interpretation. Note that the observations about Spanish (12) and Catalan (13)–(14) could derive from a common source: Bonet (1989: 5) points out that postverbal (non-dislocated) subjects receive contrastive focus and not presentational focus (in the sense of Rochemont 1986)⁵ in Catalan.⁶ Thus, the possibility of bound interpretations of overt pronominal forms might be related to the creation of a contrastive set.

2.2 Bound Subject Pronouns as Minimal Pronouns

Alonso-Ovalle and D’Introno (2001) derive the possibility of binding focused subject pronouns in Spanish from an application of Kratzer’s (1998) *Zero Pronoun Hypothesis*. Kratzer’s (1998/2009) concept of ‘zero/minimal pronoun’ constitutes a minimally specified nominal element, which lacks ϕ -features ([person], [number], [gender]) for interpretation (even though they are ‘visible’ at phonetic form):

- (15) Only I got a question that I understood. (Kratzer 1998: 92)⁷

Kratzer (1998: 92) shows that this sentence can have two interpretations: in the first interpretation (the strict reading), there was no other person that got a question that the speaker understood. Here, *I* is a full pronoun that deictically refers to the speaker and is equipped with ϕ -features (first person singular) that are interpreted at LF. In the second (sloppy) reading, the interpretation is that there was no other person *x* that got a question that *x* understood (cf. Kratzer 1998: 92 for further discussion). Here, *I* is interpreted as a bound variable. Kratzer (1998) assumes that in their bound readings, pronouns are able to be generated in the syntax as reduced

⁵See also Kiss (1998) for a discussion of the difference between identificational focus and information focus.

⁶With unaccusative verbs, on the contrary, inverted subjects can bear presentational focus in Catalan (cf. Bonet 1989: 5).

⁷The example is attributed to Irene Heim (class lectures) by Kratzer (1998).

(lexically underspecified) pronominal forms, which lack ϕ -features when they are introduced into the syntax and acquire their features via transmission from a binder at PF.

In this vein, Alonso-Ovalle and D’Introno (2001) argue that overt pronouns can be zero/minimal pronouns (and hence bound) in Spanish if Focus blocks null realization. In an economy approach in the vein of Cardinaletti and Starke (1999), minimization of (structural, phonetic, etc.) content holds “up to crash”. Given that ‘minimal pronouns’ are the structurally most reduced form, they can occur in Spanish as an overt pronoun if a phonetically more reduced, i.e. null, form is blocked. This situation arises inside PPs (see (4)), where oblique Case blocks null realization. It also arises in sentences like (7b) and (12), where focus or contrast on the subject has the consequence that null *pro* is blocked and, thus, an overt pronoun is a licit minimal pronoun because there is no phonetically more reduced form available. According to this approach, focused subject pronouns in fact fall under an extension of Montalbetti’s (1984) OPC (see also Luján 1986) because focused contexts are environments in which null realization is blocked and, thus, no overt/covert alternation obtains.

We have seen in (8) that PRO can be overtly realized in Romance NSLs if associated with a focus-related marking (cf. Hernanz 1982; Belletti 2005; Barbosa 2009a; Szabolcsi 2009; Livitz 2011, 2014; Herbeck 2015a, b; Landau 2015):

- (16) Juan_i quería [hacer él (mismo)_i la cena].
 Juan wanted.3SG make.INF he self the dinner

One analysis considers ‘emphatic pronouns’ anaphors with respect to binding theory (see Burzio 1986; Piera 1987). Some evidence for this line of reasoning could be found in the fact that these morphological pronouns can optionally be associated with the anaphoric element *mismo* ‘self’. However, as is well-known (see e.g. Solà 1992), emphatic pronouns are not necessarily [+anaphoric, –pronominal] elements in the sense of Government & Binding theory. Thus, they can appear in contexts where they are not locally bound:

- (17) Ell mateix no ho farà.
 he self not it do.3SG.FUT
 ‘He himself will not do it.’ (→ his lawyer will) (Cat.; Solà 1992: 61)

The element *mismo/mateix* can add emphasis to a pronominal form without converting it into a locally bound anaphor.

The status of ‘self’ as a focus particle is further demonstrated by its impossibility to associate with null elements (cf. Sánchez 1994):

- (18) a. Ellos mismos pintaron la casa.
 they themselves painted the house
 b. *(*pro*) mismos pintaron la casa.
 (*pro*) themselves painted the house (Sp. Sánchez 1994: 481)

Alonso-Ovalle and D’Introno (2001) argue that emphatic pronouns in obligatory control (OC) infinitives can be derived similarly to focused bound subject pronouns in finite clauses. Thus, overt realization of PRO crucially relies on the assignment of Focus which in turn blocks null realization (see also Livitz 2011; Herbeck 2015a, b).⁸ Given that no overt/covert alternation obtains in focused contexts, binding of a pronoun should be possible also in control infinitives.

In fact, Kratzer (1998, 2009) and Landau (2015) propose that the null subject of OC infinitives – PRO – is just another variant of a minimal pronoun. In Landau (2015), it is a D-element with unvalued ϕ -features⁹ – $D_{[\phi: _]}$ – where ϕ -features are transmitted to the PRO-subject in the PF-component. This way, there is nothing ‘inherent’ in PRO that enforces null realization, but it can be phonetically realized just like minimal pronouns in other contexts (as in e.g. (15)). According to Alonso-Ovalle and D’Introno (2001), Focus on the minimal pronoun has the effect that no overt/covert alternation arises and, thus, the phonetically most reduced form for encoding PRO is in fact an overt controlled pronoun.

This approach presents an attractive option of unifying bound overt subject pronouns in finite and nonfinite domains in Spanish to the independently needed concept of minimal pronoun. In the next section, I discuss some theoretical and empirical challenges to such a reduction.

2.3 *How ‘Minimal’ are Bound and Controlled Overt Pronouns?*

Analyzing overt bound pronouns as minimal pronouns makes the strong prediction that they should *generally* be licit in finite and nonfinite embedded clauses in a

⁸In Livitz (2011), deletion of the subject of control infinitives can be blocked if Focus makes the features of the Goal PRO distinct from the features contained in the Probe. In Herbeck (2015b), Focus delays post-syntactic phonological insertion into the minimal pronoun until ϕ -valuation takes place at the matrix vP -level. See also Sundaresan (2010) for discussion of Focus and overt PRO in Tamil. See also Landau (2015) for further discussion.

⁹According to the DP hypothesis (see e.g. Abney 1987), nominal phrases like *the man* are headed by a functional D(eterminer), which projects a DP on top of the lexical NP:

- (i) $[_{DP} [_D \text{ the } [_{NP} \text{ man}]]]$

If pronouns are a subtype of determiner (see e.g. Postal 1969, Abney 1987 for discussion), there are two ways to implement this: either pronouns are D-elements which take an empty/deleted NP complement (see Postal 1969) or pronouns can be D-elements without an NP complement (cf. Abney 1987: 281ff; see also Luján 2010 for Spanish):

- (ii) a. $[_{DP} [_D \text{ We } [_{NP} \emptyset]]]$ b. $[_{DP} [_D \text{ We}]]]$

A minimal pronoun would have to be further reduced, lacking an NP complement *and* ϕ -values:

- (iii) $[_{DP} [_D \phi: _]]]$

language like Spanish if they are focused. However, there is evidence that emphatic pronouns underlie several restrictions. First, Barbosa (2009a) shows that emphatic pronouns, even though they can relate to a referential DP antecedent, cannot be bound by a non-referential QP in raising structures in European Portuguese:

- (19) A empregada não apareceu, mas eu fui lá e
 the maid not showed-up but I went there and
 *nenhum hóspede acabou por fazer ele o pequeno-almoço.
 no guest ended up do.INF he the breakfast
 ‘The maid didn’t show up but I went there and no guest turned out to
 prepare breakfast himself.’ (EP; Barbosa 2009a: 112)

- (20) O João acabou por resolver ele o problema.
 the João ended up solve-INF he the problem
 ‘John ended up solving the problem himself.’ (EP; Barbosa 2009a: 106)

As Barbosa (2009a) shows, some control infinitives allow binding of an emphatic pronoun by a matrix Neg-QP antecedent:

- (21) Estou certa de que nenhum hóspede optará por
 am certain of that no guest will-choose by
 fazer ele o pequeno-almoço todos os dias.
 make.INF he the breakfast every the days
 ‘I am certain that no guest will choose to prepare his breakfast himself
 every day’. (EP; Barbosa 2009a: 113)

The ungrammaticality of (19) could be explained by the lack of an external θ -role of raising verbs, so that the matrix antecedent of the minimal pronoun would have to be merged in a non-argument position and would have to be a base-generated topic, which a non-referential QP does not qualify for (cf. Barbosa 2009a).

However, having a look at Spanish, even some matrix control verbs seem to be reluctant to allow an overt bound PRO element:

- (22) a. ?*[Ningún marido se olvidó de [hacer **él (mismo)** la cena]].
 no husband SE forgot of do.INF he self the dinner
 b. [Ningún marido prometió [hacer **él (mismo)** la cena]].¹⁰
 no husband promised do.INF he self the dinner

¹⁰Some speakers require the intensifier *mismo* in order to get a bound emphatic pronoun.

This is problematic if we assume that PRO can be overtly realized by means of focus-marking without further conditions.

Also in European Portuguese (EP), different types of matrix control verbs seem to show degrees of possibility of binding an emphatic pronoun by a Neg-QP antecedent. Thus, while a bound construal does not seem to be fully out with the verb *conseguir* ‘manage’, it is more degraded in comparison to an emphatic pronoun in the complement of the verb *decidir* ‘decide’:¹¹

- (23) a. ??? Nenhum hóspede conseguiu fazer ele o jantar.
 no guest managed.3SG make.INF he the dinner
 b. ? Nenhum hóspede decidiu fazer ele o jantar.
 no guest decided.3SG make.INF he the dinner

In contrast, a controlled pronoun becomes fully acceptable if its antecedent is a referential DP (cf. Barbosa 2009a):

- (24) **O** João conseguiu/decidiu fazer **ele** o jantar.
 the John managed/decided make.INF he the dinner

These differences are problematic if overt bound pronouns are assumed to be possible whenever focused without any further condition.

A further problem that an analysis of emphatic pronouns in terms of an overtly realized minimal pronoun faces concerns the possibility of binding and control with antecedents containing a numeral, which are not “inherent quantifiers” (in the sense of Haïk 1984).¹² Consider the following examples with a finite embedded clause containing a null or an overt subject pronoun:

- (25) a. Tres físicos han confirmado que *pro* participarán
 three physicians have confirmed that Ø will-participate
 en el coloquio.
 in the colloquium

¹¹Thanks to Pilar Barbosa (p.c.) for the examples in (23). All potential errors are my own.

¹²According to Haïk (1984), an inherent quantifier is defined as follows:

- (i) An *inherent quantifier* is an NP that is not satisfiable by one or more objects of the domain of discourse. (Haïk 1984: 189)

Quantifiers like *everyone*, *no*, or *none* are inherent quantifiers and cannot sanction coreference with a pronoun. Numerals like *two*, *three*, etc. are not inherent quantifiers and allow coreference:

- (ii) Two men_i wrote to a woman yesterday. They_i did not say much. (Haïk 1984: 191)

- b. Tres físicos han confirmado que ellos participarán
 three physicians have confirmed that they will-participate
 en el coloquio.
 in the colloquium (Sp.; Rigau 1986: 151)

Rigau (1986) states that the sentence (25a) with a null subject can have three interpretations: the null subject can be interpreted as free (i.e. referring to a discourse antecedent), coreferential (i.e. the group reading, according to which each of the three physicians confirms that they will participate in the colloquium), or bound (i.e. the reading in which each of the three physicians confirms that he/she will participate in the colloquium). According to Rigau (1986), the overt pronoun of (25b) only allows the free and coreferential interpretation in (26b), but not the bound reading in (26a), in line with Montalbetti's (1984) OPC:

- (26) a. ((three x : x a physician) (x has confirmed that x will participate in the colloquium))
 b. ((three x : x a physician) (x has confirmed that they will participate in the colloquium))

An interesting situation arises if we have a look at nonfinite control structures, in which an empty *PRO* subject is linked to an antecedent containing a numeral:

- (27) Cuatro vecinos prometen *PRO* hacer la cena.
 four neighbors promise.3PL do.INF the dinner

Such a sentence is predicted to have two interpretations – either each of the four neighbors promises that they will prepare the dinner as a group or each of the four neighbors promises that he/she will prepare the dinner (which are informally depicted here as (28a) and (28b), respectively):

- (28) a. (four x : x a neighbor) x promises to *PRO* prepare the dinner
 b. (four x : x a neighbor) x promises to x prepare the dinner

In fact, two interpretations seem to be available with a *PRO* subject. This becomes clearer if the sentence is slightly changed, creating an explicit context in which the group reading (see (29)) or a 'bound' reading, in which each neighbor promises to prepare a separate dinner on his own (see (30)), is favored:¹³

¹³I thank Luis López (p.c.) for helping me with the examples (29), (30), (32), and (33). All potential errors are my own.

- (29) No te preocupes por la cena esta noche, porque ahí
 not CL worry.2SG for the dinner this night because there
 en la cocina hay cuatro vecinos que prometen hacer la cena.
 in the kitchen are four neighbors that promise.PL do.INF the dinner
 ‘Don’t worry about the dinner tonight, because there are four neighbors
 in the kitchen that promise to prepare the dinner.’
- (30) Cuatro vecinos prometen hacer una cena esta semana:
 four neighbors promise.3PL do.INF a dinner this week
 Juan el lunes, Pedro el martes...
 John the Monday, Peter the Tuesday
 ‘Four neighbors promise to prepare a dinner this week: John on Monday,
 Bill on Tuesday, ...’

Thus, it seems to be the case that PRO can be interpreted as coreferent with the matrix antecedent (group reading) or it can be interpreted as a bound variable in Spanish.

Let us now consider an emphatic pronoun in such a control configuration:

- (31) Cuatro vecinos prometen hacer **ellos (mismos)** la cena.
 four neighbors promise.3PL do.INF they (self) the dinner
 ‘Four neighbors promise to prepare themselves a dinner.’

An analysis of ‘overt PRO’ or of a focused ‘zero/minimal pronoun’ in the vein of Alonso-Ovalle and D’Introno (2001) would predict that both interpretations in (28) are equally available with overt and null subjects. However, while the group reading is readily available with an emphatic pronoun, the reading in which each of the four neighbors promises to prepare a dinner on his own seems to be degraded.¹⁴

- (32) # Cuatro vecinos prometen hacer ellos mismos una cena
 four neighbors promise do.INF they selves a dinner
 esta semana: Juan el lunes, Pablo el martes...
 this week John the Monday, Paul the Tuesday
 ‘Four neighbors promise to prepare a dinner themselves this week: John
 on Monday, Paul on Tuesday,...’

¹⁴Again, we seem to have patterns of preference rather than a clear-cut dichotomy – out of 6 speakers, 4 preferred the group reading with an emphatic pronoun (in this case it would have a certain disambiguating function), but for 2 speakers there was no clear difference between the null and overt versions. See Sect. 4 for a possible explanation.

The preference for a group reading with ‘overt PRO’ might be correlated by the fact that there is another strategy to encode the bound interpretation overtly:

- (33) Cuatro vecinos prometen hacer **cada uno** una cena.
 four neighbors promise.3PL do.INF each one a dinner

In a non-NSL like German, both interpretations are equally available with the intensifier *selbst* ‘self’ according to my intuitions:

- (34) Vier Nachbarn versprechen,
 four neighbors promise.3PL
 [diese Woche **selbst** das Abendessen zu machen].
 this week self the dinner to make.INF
 A: ... Hans am Montag, Mark am Dienstag, ...
 John on Monday, Marc on Tuesday, ...
 B: ... Sie werden es nicht bestellen.
 they will it not order
 ‘They (the group of four neighbors) won’t order it.’

In contrast to Romance NSLs, where emphatic pronouns can be generated in argument position (see Barbosa 1995, 2009a; Cardinaletti 1999; Szabolcsi 2009), a non-NSL like German does not sanction overt realization of PRO but uses the strategy of VP modification:¹⁵

- (35) Vier Nachbarn versprechen [selbst [PRO das Abendessen zu machen]].
 four neighbors promise self the dinner to make

The bound variable interpretation is available in (34)/(35), because the intensifier does not interfere in the binding relation of PRO and the antecedent. In contrast, the emphatic pronoun in Spanish is located in argument position and overt realization of PRO seems to have consequences for the interpretative relation with its antecedent, favoring the group reading. At first sight, this is problematic if the overt pronoun in Spanish control infinitives is assumed to be an overt minimal pronoun, because null and overt PRO do not seem to have exactly the same interpretative properties when they refer to numeral antecedents.

To summarize so far, considering overt bound subject pronouns in Spanish finite and nonfinite domains as focused minimal pronouns can explain the existence of configurations like (7b), (8), (9), and (12) for some speakers: focus blocks null realization and, therefore, the most ‘minimal’ element is an overt pronoun. However,

¹⁵For a more detailed analysis of the German intensifier *selbst*, see e.g. Hole (2002).

there remain some unresolved problems when we consider the possibility of bound ‘overt PRO’ with different types of control verbs (see (22) and (23)) and with different types of matrix antecedents (Neg-QPs vs. numeral antecedents).

On the conceptual side, there is another question that an approach in terms of focused minimal pronouns raises: Alonso-Ovalle and D’Introno (2001) argue that overt pronouns can be bound whenever in focal position, which forces the subject pronoun to be overt. This way, overt bound subject pronouns fall within an extended OPC, given that focused positions are contexts without an overt/covert alternation. However, it has been observed that genuine *optional* realization of subject pronouns only holds for sentences in isolation, but not necessarily on a discourse level (see e.g. Quesada and Blackwell 2009: 118ff and references for discussion). If this is true, the question would arise to what extent (or at which level) non-focal pronouns can be argued to be subject to an overt/covert alternation while focal pronouns are not.¹⁶

2.4 Subject Pronouns and Focus?

It has often been pointed out in the literature that null pronouns in Romance NSLs are topic-linked (see e.g. Frascarelli 2007; Cole 2010; see also Holmberg et al. 2009 for discussion). Cole (2009) shows that in instances where agreement morphology is ambiguous between 1st and 3rd person, a 3rd person null subject is licit if its content can be recovered from a salient antecedent in context:

- (36) Juan llegaba. ∅ Tenía las llaves.
 Juan arrive-1/3SG.IMP have-1/3SG.IMP the keys
 ‘Juan was arriving. He had the keys.’ (Sp.; Cole 2009: 563)

In Frascarelli’s (2007) theory, Italian null pronouns are interpreted with respect to the local Aboutness-Shift Topic, which has the function of introducing a new topic or causing a topic shift (cf. Frascarelli 2007: 693). The Aboutness Topic can in turn be null if continuous. A null subject configuration is thus the result of an *Agree* relation between the (null) Aboutness Topic in the left periphery and *pro* in

¹⁶Furthermore, if we extend the following hypothesis from Biezma (2014) to pronominal forms, the prediction would be that not only stressed, but also unstressed, strong pronouns in subject position bear a subtype of focus:

- (i) *Pro-drop hypothesis*: (Biezma 2014: 92)
 Overt full DPs in subject position are focused.

If overt realization of subjects is generally related to (a subtype of) focus, the question again arises where we draw the line between contexts with a potential overt/covert alternation (making a bound construal impossible) and contexts where focus blocks null realization (rendering a bound construal possible).

argumental position (see Frascarelli 2007: 718f). This reasoning can be depicted in a simplified form as follows:

- (37) [_{TopP} (DP) Top [_{TP} T-tenía_i [_{VP} *pro* t_i ... las llaves]]]

Importantly, in Frascarelli's theory, the ϕ -features of *pro* are not 'identified' (in Rizzi's 1986a terms) by means of entering a dependency with T/AGR, but through a direct *Agree* relation with the (null) Topic in the left periphery. If this is true, the ambiguity of agreement on the verb in a configuration like (36) is not problematic because *pro* can be sanctioned through a direct relation with the (null) Topic in the C-domain.

With respect to overt strong subject pronouns, an important insight of Frascarelli's study of Italian is that they are not necessarily used as a means of disambiguation on a featural, but on a discourse level (cf. Frascarelli 2007: 704). Thus, the author shows that they can be inserted to indicate a topic shift, i.e. if topic chaining is not continuous. That strong pronouns can fulfill a similar function also in Spanish could be evidenced by the following example from a written source (RAE (CREA)):¹⁷

- (38) “*Pobres exiliados*”, dijo la madre. “No sé si continúan pensando en el regreso o van perdiendo las esperanzas.” “Mi madre dice que ella no piensa volver mientras viva Franco”, intervino yo. (CREA corpus (RAE), 25.02.2015; (Josefina R. Aldecoa. 1994. *Mujeres de negro*. Barcelona: Anagrama))
- ““**Poor exiled_i**”, the mother said. “I don’t know whether they (=pro_i) continue to think of returning or they (=pro_i) are losing their hope.” “**My mother_j** says that **she_j** doesn’t think of returning while Franco is alive”, I intervened.” [my translation]

As indicated in the translation, *pobres exiliados* ‘poor exiled’ is introduced as a Topic and is resumed by a null pronoun in the following sentence, starting a topic chain. Thereafter, *mi madre* ‘my mother’ is introduced into the discourse and is resumed by the strong pronoun *ella* ‘she’ and not by *pro*. Here, the overt pronoun is not inserted for reasons of disambiguation – it co-refers with the most local antecedent ‘my mother’. Furthermore, it does not necessarily express narrow contrast, given that it is left open whether the others think of returning or not. However, the strong pronoun indicates a topic shift to the newly introduced referent

¹⁷Given the limited scope of this paper, a written example is considered. Frascarelli's (2007) study of Italian subject pronouns relies on spoken corpora and considers prosodic factors, which are crucial for the classification of different types of topics (see Frascarelli and Hinterhölzl 2007). The more modest aim here is to show that strong pronouns are not necessarily inserted for resolving referential ambiguities nor for expressing narrow contrast, but they can arise as the consequence of [–continuous] topic chaining also in Spanish.

mi madre ‘my mother’. Thus, it could be argued that the strong pronoun is inserted because topic chaining is not continuous (see Frascarelli 2007 for discussion of Italian examples).

Note that this situation partly reflects Givón’s (1983: 17) *scale of continuity* and the underlying *iconicity principle*, according to which the most continuous/predictable information needs the least coding material:

- (39) The more disruptive, surprising, discontinuous or hard to process a topic is, the more *coding material* must be assigned to it. (Givón 1983: 18)

This principle and Givón’s (1983) *scale of continuity* predict that zero anaphora (if available in the subject position of a given language) should be the unmarked option for encoding continuous topics while overt pronominal forms and full lexical DPs are used for less continuous ones. This could be what we observe in the overt/covert alternation in contexts like (38), where a disruptive or non-continuous topic causes insertion of an overt pronominal form which resumes the newly introduced (topic) referent. In Sect. 3, I will use the feature σ with the values [\pm continuous] to indicate a (non-)continuous, topic-marked D-subject. If a pronoun receives the value [-continuous] in the left periphery, default null insertion will be blocked in morphology because of an incompatibility with discontinuity.

Strong pronouns have further been argued to bear Focus. Consider the following example from Bruccart (1987):

- (40) A: Quién escribe sonetos? (‘Who writes sonnets?’)
 B: {Yo/**pro*} escribo sonetos.
 I write.1SG sonnets (Sp.; Bruccart 1987: 214 [my glosses])

Here the overt pronoun resolves a variable left open by previous discourse and a null pronoun is illicit in this context. In fact, focus is often defined as the non-presupposed part of a sentence (see e.g. Jackendoff 1972). Following this line of reasoning, the pronoun in (40) provides ‘new information’ which imposes a phonological requirement, as expressed by the following principle:

- (41) Cualquier pronominal que aporte información nueva en el discurso debe tener realización fonética.¹⁸ (Bruccart 1987: 219)

However, a definition in terms of ‘new information’ is not fully unproblematic in the case of strong pronouns: in their 1st and 2nd person use, knowledge of at least the speech participants is implied. As for example Erteschik-Shir (1997: 18f, 2007: 45f) discusses, in the file card metaphor (cf. Heim 1983), the cards for the speaker and hearer are always available as topics, i.e. on top of the file. Also in the case of 3rd person pronouns, these must refer to an entity that has been previously introduced

¹⁸‘Any pronominal that contributes new information to the discourse must have a phonetic realization’. [my translation]

either in the linguistic or the physical context (i.e. they must count at least as *familiar* in Gundel et al.'s 1993 classification). In fact, Erteschik-Shir (2007: 45) argues that the availability of a card in the file is a precondition for a pronoun to be interpretable and to sanction co-reference. It thus follows that strong pronouns always imply at least some degree of 'known information'.

Consider in this context the following discourse with an unstressed strong pronoun in Catalan from Rigau (1989):

- (42) A: Qui vol venir, tu o en Joan?
 'Who wants to come, you or John?'
 B: Jo vull venir... en Joan, no ho sé.
 I want.1SG come.INF the John not it know.1SG
 'I want to come...I don't know about John.'
 (Cat.; Rigau 1989: 193)

The context in (42A) is an alternative question¹⁹ – it introduces the alternatives {Addressee wants to come, John wants to come} and the strong pronoun has the function of picking one alternative out of this set. Mayol (2010) in fact argues that types of strong pronouns in Catalan are contrastive topics (for further discussion of the notion of contrastive topic, see Buring 2003).

Rigau (1989: 193) further notes that a stressed strong pronoun becomes unacceptable in the context (42A):

- (43) C: # JO vull venir... en Joan, no ho sé.
 I want.1SG come.INF the John not it know.1SG

However, as an anonymous reviewer points out, a stressed pronoun becomes licit if the phrase 'I don't know about John' is omitted:

- (44) A: Qui vol venir?
 'Who wants to come?'
 B: JO/jo vull venir.
 'I/I want to come.'

Thus, stressed and unstressed strong pronouns can resolve a variable left open by previous discourse and both can be interpreted with respect to an alternative set, but the two types of pronouns differ in the way alternatives are evoked and/or excluded – in (42B), the unstressed strong pronoun picks one alternative out of the alternative set and leaves other alternatives unresolved, while the stressed pronoun in (43) negates an alternative, so that the phrase 'I don't know about John' leads to a contradiction (cf. also Mayol 2010: 2506 for further discussion).²⁰

¹⁹I thank an anonymous reviewer for pointing this out to me.

²⁰In Mayol (2010), strong pronouns with "weak contrast" convey an "uncertainty contrast".

It has often been noticed in the literature that focus has the function of indicating alternatives (see e.g. Rooth 1985, 1992; Krifka 2007):²¹

- (45) Focus indicates the presence of alternatives that are relevant for the interpretation of linguistic expressions. (Krifka 2007: 18)

According to Rooth (1992: 76), linguistic expressions have an ordinary semantic value and a focus semantic value, the latter consisting of a (contextually restricted) set of alternatives from which the former is taken:

- (46) a. Juan_{FOCUS} escribe sonetos. ('JOHN writes sonnets.')
- b. {John writes sonnets, Paul writes sonnets, Mary writes sonnets,...}

Following this reasoning, the focus semantic value of the sentence in (46a) corresponds to a set of alternative propositions *x writes sonnets* (as in (46b)) where the value of *x* can either be contextually or overtly restricted.

The difference between (40)/(44) and (42) is thus whether the restriction on the *wh*-expression is overt or not.²² In (42), the alternative set is explicitly introduced and restricted. A stressed pronoun as in (43) further has the function of excluding a contextually or overtly established alternative. In Sect. 3, I will use the feature π with the values [$\pm c$ (ontrast)]²³ to indicate that the element which associates with this feature is interpreted with respect to a contextually established alternative set. Association with this feature enforces overt *morphological* realization. This feature can optionally bear the value [+c], leading to stress assignment in PF, depending on whether alternatives are eliminated.

In the case of emphatic pronouns in control infinitives, the notion of alternatives seems to be crucial for their licensing (see also Hole 2002 for a discussion of alternatives in the context of the German intensifier *selbst*):

- (47) Juan promete hacer **él mismo** la cena.
John promises do.INF he self the dinner
- (48) a. John promises that he will do the dinner.
b. John promises that his mother will do the dinner.
c. John promises that he and his wife will do the dinner.
d. John promises that he will order the dinner.

²¹The representations of alternatives I use in this paper are *informal* and should convey the intuition that the indication of an alternative set is crucial to trigger morpho-phonological realization of D-subjects in Spanish (without necessarily yielding contrastive stress). For formal accounts and more detailed discussion of alternatives in relation to the notions of focus and contrastive topic, see Rooth (1985, 1992), Büring (2003), and references; see Mayol (2010) for discussion in the context of Catalan strong pronouns and Kaiser (2010) for long pronouns in Estonian.

²²Thanks to an anonymous reviewer for pointing this out.

²³See also López (2009) for a derivational system of information structure which uses two binary features ([$\pm a$ (anaphoric)] and [$\pm c$ (ontrast)]) in his system) to explain configurations like Clitic Left Dislocation, Clitic Right Dislocation, Hanging Topic Left Dislocation, object scrambling, among others, in Spanish and Catalan.

Use of the emphatic pronoun in the control infinitive in (47) implies that there is a contextually determined set of alternatives (as informally exemplified in (48)) which are excluded by means of overtly realizing the PRO subject.

It has further been pointed out that morphologically pronominal subjects can be bound/controlled if associated with a focus-sensitive operator (like *sólo* ‘only’), as the following Spanish example from Szabolcsi (2009: 32) demonstrates:

- (49) No quiere ir **sólo él** a la escuela.
 not wants go.INF only he to the school
 ‘He_i doesn’t want it to be the case that only he_i goes to school.’

Focus-sensitive operators like ‘only’, ‘even’, ‘also’, etc. have been observed to imply an alternative set (see e.g. Rooth 1992; Krifka 2007). The particle *sólo* ‘only’ in (49) has the function of excluding a set of alternative referents that is contextually evoked with respect to the referent denoted by the pronoun. Thus, even though overt pronouns *can* be controlled or topic-linked in Spanish, they can only do so if their use implies an alternative set.

If the preceding discussion is on the right track, overt subject pronouns in Spanish (and Catalan) are either [-continuous] topic pronouns or they are a combination of the notions of topic and focus and are interpreted with respect to a contextually determined set of alternatives.²⁴ The latter type can further be exhaustive if associated with contrastive stress.

3 Spanish Subject Pronouns Are Built by C, AGR, and *v*

In the first subsection, I offer a technical implementation of the reliance of overt subject pronouns in a Romance NSL like Spanish on notions relating to information structure. I argue that these notions directly instruct post-syntactic morphological insertion rules. Thereafter, I have a look at the syntactic derivation of bound and free subject pronouns, arguing that both derive from a lexically underspecified element, which is ‘built’ by the functional categories T/AGR and C.

3.1 Spanish Subject Pronouns as Topic/Focus Morphemes

We have seen that the phonological shape of subject pronouns in Romance NSLs crucially depends on the assignment of topic/focus-related features. Furthermore, the bound construal is susceptible to the subtype of Focus that is assigned (strong

²⁴As e.g. Krifka (2007: 44) points out, contrastive topics are arguably the result of combining topic and focus.

contrast or emphasis), differently from a language like English. While there is a long tradition in the literature on the dependency of overt subject pronouns on notions such as contrast and emphasis (see e.g. Larson and Luján 1989; Luján 1999; cf. Mayol 2010 for further discussion), I would like to argue that the encoding of the *morphological* realization of D-subjects is more tightly related to these notions than is assumed in some of the literature on *pro*-drop.

It has been assumed that AGR in Romance NSLs, having a ‘rich’ specification for subject-verb agreement, is pronominal/interpretable (see e.g. Rizzi 1982). Importantly, several studies assume that pronominal AGR does not only have the function of ‘identifying’ or ‘licensing’ (in the sense of Rizzi 1986a) an inherently empty *pro*-element, but also of absorbing morpho-syntactic requirements of the T/AGR-head, such as nominative Case (see Rizzi 1982) and the EPP (see Barbosa 1995, 2009b; Alexiadou and Anagnostopoulou 1998). This way, (i) a low left periphery is made available and (ii), as I argue, it is not a morpho-syntactic feature like Case, but a discourse-sensitive one that governs the nature of morphological insertion rules into subject pronouns.

Let us turn to point (ii): In Distributed Morphology (see Halle and Marantz 1993 and related work), morpho-syntactic features like D and ϕ do not enter syntax fully specified for phonological features. Their phonological shape is determined after the syntactic computation on the way to PF (a process called *late insertion*; see e.g. Harley and Noyer 1999). Here, so-called Vocabulary Items (VIs) pair a phonological exponent with a given morpho-syntactic context of insertion (cf. Embick and Halle 2005). A natural consequence is that languages can differ with respect to the features and contexts that motivate or trigger insertion of a phonological exponent, which can be null or overt, into (abstract) subject pronouns post-syntactically.

A long tradition in the literature considers Case a necessary requirement for phonological realization of nominal phrases (as is expressed by the *Case Filter*; see Chomsky 1981). However, it has also been discussed in the literature that relating overt realization of NPs to Case might not hold without exceptions cross-linguistically (as is shown by the vast body of literature on Case-marked PRO; cf. e.g. Sigurðsson 2008 and references). In fact, concerning English and Spanish, we have to wonder whether nominative Case plays the same role in the phonological realization of subject pronouns in the two languages.

Let us have a look at the conditions under which nominative Case is assigned to the subject position. If structural Case is “a reflex of an uninterpretable ϕ -set [...]” (cf. Chomsky 2000: 122), and agreement is interpretable/pronominal in Romance NSLs, the possibility arises that structural nominative Case is actually not assigned to the subject position in these languages. This would come close to arguing that nominative Case on T can be assigned to (or absorbed by) the agreement affix in a language like Spanish by virtue of V-to-T movement (see Alexiadou and Anagnostopoulou 1998) and, thus, an overt pronominal subject either receives default nominative Case (see e.g. Kato 1999) or nominative Case is fully absent. In

English, in contrast, nominative is automatically assigned to the subject position as a consequence of uninterpretable agreement on T.²⁵

- (50) a. [TP T_[NOM]-Duerm-e_[iφ:3sg] [_{VP} *pro* ~~duerm-e~~ ...]]
 b. [TP He_[iφ:3sg,m] T_[NOM] [_{VP} He sleeps]]

If structural nominative is not assigned to the subject position in Romance NSLs, it should not play the same role in the conditioning of morpho-phonological insertion rules into pronominal subjects as in English. I would thus like to argue that the features $\sigma_{[-\text{continuous}]}$ and $\pi_{[\pm\text{contrast}]}$ emerge as an alternative to nominative Case in triggering post-syntactic morphological insertion rules into D-subjects. The differences in the relevant English and Spanish VIs can be depicted as follows:

- (51) D
 [1], [nom] \leftrightarrow /aɪ/
 [2], [nom] \leftrightarrow /ju/ ... (English)
- (52) D
 [1], [π] \leftrightarrow /jo/
 [2], [π] \leftrightarrow /tu/ ... (Spanish)
- (53) D
 [1], [$-\text{continuous}$] \leftrightarrow /jo/
 [2], [$-\text{continuous}$] \leftrightarrow /tu/ ... (Spanish)

This reasoning reflects the view that insertion must be motivated, while null realization is the unmarked, default case (see e.g. Chomsky's 1981 *Avoid Pronoun*).²⁶

In DM, the unmarked option for insertion of phonological features into abstract morphemes can be implemented by means of a default or 'elsewhere' Vocabulary Item (in the sense of e.g. Harley and Noyer 1999), where the context of insertion is simply zero. Let us thus assume that the default/elsewhere VI for insertion into D is the following for Romance NSLs as well as non-NSLs of the English type:

- (54) D \leftrightarrow \emptyset (default/elsewhere VI)

The default VI in (54) and the higher specified VIs in (51) and (52)/(53) compete for insertion into D-subjects. In English, nominative is obligatorily assigned to Spec,T in finite clauses and the higher specified VIs in (51) automatically block the lower

²⁵Already Rizzi (1982) points to the possibility that nominative Case can be absorbed in Romance NSLs. See Rosselló (2000) for the assumption that nominative Case has only a "spurious" role in Romance NSLs.

²⁶See also Landau (2004: 869) for discussion of PRO as the "elsewhere case" and Sundaresan (2010: 28) for PRO as a "default element". I argue here that PRO as well as *pro* are morphological defaults if overt realization is not enforced – what differentiates English from Spanish is the trigger for blocking default null insertion, which can be morpho-syntactic or discourse-sensitive.

specified elsewhere VI for insertion into $D_{[\phi]/[NOM]}$.²⁷ In Spanish, the default VI can only be blocked if D receives [-continuous] or π – which, by definition, are optionally assigned, discourse-sensitive features. ϕ is thus a necessary, but not a sufficient condition for blocking the default VI in an agreement-based language (in the sense of Miyagawa 2010): if $D_{[\phi:val]}$ reaches morphology without [-continuous] or π , the VIs in (52) and (53) contain a feature which is not present in the terminal morpheme and, thus, the conditions for insertion are not met (cf. Halle’s 1997 *Subset Principle*):

- (55) The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen. (Halle 1997: 428)

This way, only the default VI can insert content into $D_{[\phi]}$, which matches the conditions for insertion because it contains at least one feature, namely D, which is present in the terminal, and there is no higher specified VI which would match the conditions for insertion.

This approach considers Spanish subject pronouns ‘topic/focus morphemes’ which are spelled out in combination with ϕ . It implements the assumption that the *pro*-drop property has the consequence that a language like Spanish, Catalan, or Italian can have a *morphological* strategy for the expression of topic/focus-marked subjects, apart from a stress-based one. Interpretability of AGR thus converts a morpho-syntactic strategy of pronoun construction in an agreement-based language into a (more) discourse-based one.²⁸

Evidence that discourse-sensitive features can condition morphological insertion rules is well-known from languages which have specific morphemes for encoding information structural information, such as *-nun* in Korean (see Choi 1999), *walga*

²⁷See also Neeleman and Szendrői (2007), who argue that the combination of ϕ and Case blocks elsewhere null insertion in non-NSLs (implementing a version of Kiparski’s 1973 *Elsewhere Principle*), but with a different implementation. In particular, the authors argue that the combination of these features blocks Asian-type radical *pro*-drop. For Romance-type *pro*-drop a context-sensitive rule is necessary, which mentions agreement. In the approach defended here, a context-sensitive rule is not necessary because null insertion arises as the default case in Romance NSLs if the *optional*, discourse-sensitive features [-continuous] or π are not assigned.

²⁸If we adopt a parameter of degree between *discourse-oriented* and *syntax-oriented* languages (see Huang 1984, citing Tsao 1977) or *topic-prominent* vs. *subject-prominent* (see Li and Thompson 1976), interpretability of AGR has the consequence that the agreement-based language Spanish is closer to a discourse-oriented or topic-prominent language than English. For discussion of Spanish in between discourse- and syntax-oriented languages, see also Díaz and Licerias (1992: 469).

in Japanese (see Kuno 1972), or the focus-marker *-nde* in Wambon (see Dik 1997, Erteschik-Shir 2007).²⁹

In Spanish, morpho-syntactic requirements pertaining to the T-D relation are absorbed by pronominal AGR so that discourse-sensitive features fulfil functions with respect to morphological insertion that are fulfilled by Case in a language like English.³⁰ If the features [-continuous] and π are not assigned, D will be identified with respect to the current Topic in the left periphery without causing a shift or it will be bound by a matrix antecedent and remains empty per default.³¹

Let us turn to point (i): the assignment of topic/focus features is not necessarily restricted to the C-domain. Belletti (2001, 2004, 2005) argues that Romance NSLs, apart from having a high, C-related left periphery (in the vein of Rizzi 1997), project a low left periphery between ν P and TP:

(56) ... [TP T [TopP Top [FocP Foc [TopP Top [ν P ν ...

Notice that Rizzi's (1997) high and Belletti's (2004) low left periphery correlate with phases (ν P and CP) as interface points for interpretation (see also López 2009 for discussion).³² The availability of topic/focus projections at the ν P level accounts for the possibility of focused inverted subjects in Romance NSLs. English, in contrast, does not activate the low left periphery, so neither inverted focused subjects nor overt focused pronouns inside control infinitives are available:

(57) *John promised [to do he his homework].

The question, however, is why English lacks a low left periphery for subjects. Belletti (2005: 32f) tentatively links it to the non-Null Subject status of English. In fact, an answer to this question could be found in the application of V-to-T movement in Romance NSLs (see Alexiadou and Anagnostopoulou 1998): the authors convincingly argue that interpretable AGR and V-to-T movement have the

²⁹Certain parallels between types of strong pronouns in Catalan and *walga* in Japanese have already been drawn by Rigau (1989).

³⁰That features pertaining to information structure can fulfil similar functions to ϕ and Case is a hypothesis well-known in the literature. A review would go beyond the scope of this paper, but I refer the reader to Erteschik-Shir (2006), who assumes that topic and focus are features assigned to elements in the Numeration, similarly to ϕ and Case, or to Miyagawa (2007) who claims that in Japanese, it is focus that is downloaded from C to T and not ϕ , as in English.

³¹Note that, in the system outlined, there is no need to postulate a separate Vocabulary Item for null insertion into [+continuous] D-subjects: adopting Halle's (1997) *Subset Principle*, a D marked for [+continuous] still matches the default Vocabulary Item, because it is the highest specified, available VI, which contains a subset of the features of $D_{[+continuous]}$.

³²An anonymous reviewer objects that, according to phase theory, it should be VP and TP, rather than ν P and CP, that are interface points, given that these are the units that are spelled-out. However, Chomsky (2001: 14) defines phases on the basis of "semantic-phonetic integrity" and, furthermore, Chomsky (2001: 12) states that "the whole phase is 'handed over' to the phonological component", which might indicate that phases can be interpreted as a whole (cf. also Herbeck 2015b and references for discussion).

function of absorbing a subject-related EPP-effect, making the preverbal subject position in NSLs an A'-position (cf. also Barbosa 2009b).

Note that Focus or Topic assignment to a subject at the ν P level would only be licit if A-movement to Spec,T is not obligatorily triggered: topic or focus-marking of a DP in the low left-periphery could be argued to establish an A'-dependency while EPP-driven movement to Spec,T is A-movement. Thus, while Focus or Topic-marking of subjects in Spec, ν should be available in English, their assignment would yield Improper Movement (A'- to A-movement).³³ In Romance NSLs, in contrast, the EPP on T is absorbed, the preverbal position is not an obligatory A-position and, thus, A'-dependencies at the ν P level are unproblematic.

There is some evidence that ν P-related Focus assignment plays a role in sanctioning overt 'bound' subject pronouns in Romance NSLs. It has been observed in the literature that emphatic pronouns in Romance infinitives are preferably postverbal. At the same time, high left-peripheral fronting operations like Focus Fronting are degraded (cf. Haegeman 2004; Pérez Vázquez 2007; Herbeck 2015b):

- (58) *Julia quería [ella telefonar]. (Sp.; Piera 1987: 160)
 Julia wanted she telephone.INF
- (59) *Luis quiere CERVEZA beber (y no sidra).
 Luis wants BEER drink.INF and not cider
 'Luis wants BEER to drink (and not cider).' (Sp.; Gallego, 2010: 147)

Thus, overt focused pronouns inside control infinitives must be available independently of a high left periphery.

To summarize, while nominative absorption has consequences for post-syntactic morphological insertion rules into D-subjects, being governed by σ/π and not by Case, EPP absorption has the consequence that σ/π can be assigned to subject pronouns, not only in a high, but also in a low position. Both properties are consequences of the pronominal nature of AGR. In the next section, I discuss the technical syntactic derivation of bound and free pronouns.

3.2 Spanish Subject Pronouns Are Controlled by AGR and C

In the vein of Borer (1989), I assume that the binding theoretic status of (null) subjects is not an inherent property of the nominal element, but that it arises through association with verbal functional categories. This way, two different *empty categories* PRO and *pro* do not exist (at least not as lexical formatives) – null subjects are generally the result of a ϕ -underspecified PRO-element (Landau's 2015 $D_{[\phi: _]}$), which acquires a ϕ -value through association with AGR (see Rizzi 1982; Chomsky 1982; Huang 1989; Barbosa 2009b for similar ideas; see also Sundaresan 2014 for relevant discussion) and/or C. Given that overt realization of

³³For discussion of improper movement, see e.g. Chomsky (1995: 326ff).

subject pronouns is the result of post-syntactic insertion of morphological content, also strong and emphatic pronouns derive from this same PRO-like element, where differences derive from the assignment of discourse-sensitive features in the high and low left periphery. This approach aims at accounting for the fact that null as well as overt subject pronouns can apparently be controlled and bound, but that these options are influenced by the functional category a D-subject is associated with and by the type of discourse-sensitive features that are assigned to it.

As we have seen, the *pro-drop* property of consistent NSLs (in the sense of Holmberg et al. 2009) has frequently been linked to the presence of pronominal/interpretable subject-verb agreement morphology (see Rizzi 1982; Barbosa 1995, 2009a, b; Alexiadou and Anagnostopoulou 1998; Kato 1999, among many others). In fact, Rizzi (1982: 169) suggests that INFL ‘controls’ PRO in finite *pro-drop* clauses. In an *Agree*-based theory of control (see Landau 2000, 2004), null subjects in control structures are underspecified nominal elements, lacking a full ϕ -specification (implemented as $D_{[\phi:_]}$). A ϕ -specification is provided through an *Agree* operation with a matrix antecedent, either directly or mediated by the C-head (Landau’s 2000, 2004 Exhaustive vs. Partial Control distinction).

More recently, Landau (2015) argues that the contrast between the two types of control strategies is to be found in a difference between predicative and logophoric control (building on Bianchi’s 2003 notion of internal logophoric centre). For reasons that will become clear in Sect. 4, I follow Wurmbrand (2001) in assuming that at least some predicative control complements are reduced VPs lacking a syntactically projected PRO-subject and, thus, they are not full propositions; logophoric control complements, in contrast, project at least a FinP layer which hosts internal *self*-coordinates, mediating the referential dependency between D and its antecedent (see Landau 2015 for further elaboration):

- (60) a. Juan consiguió [_{VP} hacer la cena].
 John managed do.INF the dinner
 b. Juan promete [_{FinP} Δ_{SELF} hacer $D_{[\phi:_]}$ la cena].
 John promises do.INF the dinner

If AGR is interpretable in Romance NSLs, null subjects could be analyzed as the same D-element as in (logophoric) control infinitives and a ϕ -value is provided by AGR within the same clause (see also Barbosa 2009b):

- (61) [_{CP} C [_{TP} T [_{i ϕ :3sg}]- hizo [_{VP} $D_{[\phi:_]}$ ~~hizo~~ la cena]]].
 made.3SG the dinner

However, the configuration in (61) raises a non-trivial problem: while AGR is specified for person and number in Romance NSLs, it lacks gender-markings. Thus, an underspecified D-subject could not be fully ‘identified’ (using Rizzi’s 1986a terminology) by AGR in these languages. In fact, Cole (2009: 578) introduces the notion of *morphological maximality*, according to which languages differ with

respect to the point up to which the features necessary to interpret a null pronoun can be provided by subject-verb agreement, whereas the missing features must be provided from context. In the case of Romance NSLs, only person and number, but not gender, can be provided to a $D_{[\phi: _]}$ subject within the TP domain.

Bianchi (2003) argues that person-features are anchored in the C-domain by external ([1p], [2p], [3p]) or internal (anaphoric person) logophoric coordinates:

- (62) Every clause is anchored to a Logophoric Centre: a speech or mental event, with its own participants and temporal coordinates, which constitutes the centre of deixis. (Bianchi 2003: 3)

That is, just like anaphoric AGR (cf. Borer 1989) has to be anchored to internal *self*-coordinates, 1st, 2nd, and 3rd person has to be anchored by external *speaker/addressee* coordinates in the C-domain to the participants of the speech event (see also Sigurðsson 2011). I would thus like to argue that the lack of gender-markings on T/AGR has the consequence that ϕ on the underspecified D-subject has to be completed by means of *speaker/addressee*-coordinates ($\Delta_{\pm S/\pm A}$) in C:

- (63) $[_{CP} \Delta_{\pm S/\pm A} [_{TP} T_{[\phi: 3sg]} \text{-Durmió} [_{VP} D_{[person: _, number: _, gender: _]} \text{mucho}]]]$
-

Thus, ‘control by AGR’ is in fact always ‘control by AGR + Δ ’.

If ϕ of underspecified D-subjects must be completed via coordinates in C in Romance NSLs, there are at least two ways of obtaining this: either C links D to a discourse antecedent (i.e. \pm speaker/ \pm addressee in the *Common Ground*),³⁴ as in (64), or C links D to a matrix antecedent, yielding a bound interpretation (see (65)). In the latter case, Δ on C functions as a binder of D (for discussion of binding via C in different contexts, see e.g. Kratzer 2009 and references):

- (64) $DP\ V\ [_{CP} \Delta_{\pm S/\pm A} [_{TP} T_{[\phi: 3sg]} \text{-V} [_{VP} D_{[person: _, number: _, gender: _]} \dots \forall]]]$
-
- (65) $QP\ V\ [_{CP} \Delta_{\emptyset S/\emptyset A} [_{TP} T_{[\phi: 3sg]} \text{-V} [_{VP} D_{[person: _, number: _, gender: _]} \dots \forall]]]$
-

Even though Frascarelli (2007) argues that *pro* depends on a direct matching relation with the local Aboutness-Shift Topic, there is evidence that AGR as well as C is involved in determining the interpretation of D-subjects (see Camacho 2013):

³⁴I use the notion *Common Ground* in the sense of knowledge that is mutually shared between speech participants (see e.g. Krifka 2007: 15, citing Stalnaker 1974; Karttunen 1974; Lewis 1979, for discussion). See also Bianchi (2003) and Pérez Vázquez (2007) for discussion of the relation between the notions of ‘external logophoric centre’ and *Common Ground*.

- (66) a. María y yo llegamos a casa. Yo/*pro* abrí la puerta.
 Maria and I arrived to home I/*pro* opened.1SG the door
 b. María y yo llegamos a casa. Yo/ella/**pro* tenía las llaves.
 Maria and I arrived to home I/she/*pro* had.1SG/3SG the keys
 (taken from Camacho 2013: 148, citing Sheehan 2007: 84)

As Camacho (2013: 148) and Sheehan (2007: 84), citing Cole (2000), discuss, the only relevant contrast between (66a) and (66b) is that person-agreement on the verb is unambiguous in the former, but ambiguous between 1st and 3rd person in the latter case. Furthermore, *pro* cannot be unambiguously identified by an antecedent in (66b) so that overt realization of the subject position is necessary (here, the overt pronoun is necessary to disambiguate between two potential topics).

Camacho (2013: 78f) further discusses the Spanish data in (67), in which a plural subject DP can be associated with 1st, 2nd or 3rd person agreement on the verb. Depending on the verb's ϕ -specification, the DP is interpreted as including the speaker or the addressee:

- (67) Los estudiantes tenemos/tenéis/tienen mala memoria.
 the students have.1PL/have.2PL/have.3PL bad memory
 'We/you/the students have bad memory.'

This indicates that person specification of the verb crucially mediates linking of the subject to \pm *speaker*/ \pm *addressee* coordinates in the left periphery, i.e. AGR mediates C-peripheral linking of D-subjects.

Notice that sanctioning of apparently 'bound' overt subject pronouns in Spanish crucially involves gender-matching with the matrix QP:

- (68) a. Ningún estudiante_i piensa [_{CP} que él_i mismo es inteligente].
 no.M student thinks that he self is intelligent
 b. Ninguna estudiante_i piensa [_{CP} que ella_i misma es inteligente].
 no.F student thinks that she self is intelligent
 (69) Nadie_i piensa [_{CP} que ella_{*i} misma es inteligente].
 nobody thinks that she self is intelligent

In (68), the Neg-QP is specified for [gender] markings and the bound pronoun with matching features is possible for some speakers. The same speakers, however, do not accept binding of a feminine pronoun by a bare negative quantifier, which is not overtly specified for gender markings, but contains default [3sg.m].³⁵

³⁵An anonymous reviewer points to the following example from English, which is problematic if ϕ -features (in particular [gender]) are acquired from a matrix antecedent in the case of bound pronouns:

- (i) No student thinks that SHE is smart.

However, the matrix Neg-QP could in fact be abstractly specified for gender (as in the Spanish counterpart but without overt realization), the D-subject matching ϕ -features through C-linking.

This approach predicts that the *syntactic* configuration should make available a free and a bound construal for overt and empty subject pronouns in Spanish. Given that phonological features are provided to D after syntax, $D_{[\phi:_]}$ should be linked to AGR on T and completed by means of left peripheral anchors, which link D either to a discourse ($\Delta_{\pm S/\pm A}$) or to a matrix antecedent ($\Delta_{\emptyset S/\emptyset A}$):

- (70) *Ningún estudiante_i piensa que pasó ____i el examen.*
- $[_{VP} D_{[\phi:_]} v\text{-pasó}_i [_{VP} t_i \text{ el examen}]]$
 - Agree* [$T_{[\phi:3sg]} / D_{[\phi:_]}$]
[$_{CP}$ que- $\Delta_{\emptyset S/\emptyset A}$ [$_{TP}$ T-pasó_i [$_{VP}$ $D_{[\phi:3sg]}$ t_i [$_{VP} t_i$ el examen]]]]]
 - C-linking to matrix antecedent: $\Delta_{\emptyset S/\emptyset A[+m]} \rightarrow D_{[\phi:3sg.m]}$
Morphology: $D \leftrightarrow \emptyset$ (default)
- (71) *Ningún estudiante_i piensa que ____i pasó el examen.*
- $[_{VP} D_{[\phi:_]} v\text{-pasó}_i [_{VP} t_i \text{ el examen}]]$
 - Agree* [$T_{[\phi:3sg]}/D_{[\phi:_]}$], π -assignment to D:
[$_{CP}$ que $\Delta_{\emptyset S/\emptyset A}$ [$_{FocP}$ $D_{[\phi:3sg]/[\pi:+c]}$ [$_{TP}$ T-pasó_i [$_{VP}$ $D_{[\phi:_]}$... el examen]]]]]
 - C-linking to matrix antecedent: $\Delta_{\emptyset S/\emptyset A[+m]} \rightarrow D_{[\phi:3sg.m], \pi[+c]}$
Morphology: $D, [3], [m], [\pi] \leftrightarrow /el/$

In control infinitives in a language like Spanish, π -assignment to $D_{[\phi:_]}$ is available in Spec, v as in finite clauses with the only differences that a full ϕ -specification (i.e. person, number and gender) is assigned to D from a matrix antecedent via left peripheral coordinates in the C-domain and π -assignment is not available in the high left periphery so that preverbal subjects are excluded:

- (72) *Ningún estudiante_i promete hacer ____i la cena.*
- Focus-assignment to the vP -periphery:
 $[_{VP} D_{[\phi:_]}/[\pi:+c] v\text{-hacer}_i [_{VP} t_i \text{ la cena}]]$
 - Ningún estudiante* promete [$_{FinP} \Delta_{self}$ [$_{TP}$ hacer [$_{VP}$ $D_{[\phi:_]}/[\pi:+c]$... la cena]]]
 - Agree* [$QP_{[3sg.m]} / \Delta_{self [3sg.m]} / D_{[\phi:_]}$] $\rightarrow D_{[\phi:3sg.m]}$
Morphology: $D, [3], [sg], [m], [\pi] \leftrightarrow /el/$

That such an overtly realized PRO element is morphologically pronominal in Spanish is expected because it relies on a parallel strategy to finite *pro*-drop (cf. Herbeck 2015a, b), where a D-subject is made visible to morphological insertion by means of π -assignment in the high or low left periphery. In contrast, overt realization of the subject position is governed by ϕ and nominative in English (as depicted in (51)) and control infinitives notoriously lack a full specification for one of these two features, so that only the default VI can insert the \emptyset exponent into D.³⁶ In Spanish, overt realization of the subject position can be triggered by the assignment of discourse-sensitive features in the low pragmatic interface

³⁶For the present purposes, it is not crucial whether it is lack of full ϕ (see Landau 2004; Sigurðsson 2008; Sundaresan 2010) or lack of nominative Case (as assumed in the Government and Binding

point Spec,*v* in finite *and* nonfinite clauses, π requiring ϕ -valuation at the matrix level in control infinitives to sanction licit VI-insertion. This way, the overt/covert alternation in nonfinite domains is conditioned by the availability of a low left periphery (in the sense of Belletti 2001, 2004, 2005), which in turn depends on V-to-T movement and lack of obligatory A-movement to Spec,T.³⁷

4 Failing to Be Bound?

According to the system so far, both – the bound and the free construal of D-subjects in Romance NSLs – derive from a combination of ϕ -feature assignment from AGR and completion via C, which optionally links either to a discourse or a matrix antecedent. The *syntactic* configuration makes available both options also to overt pronouns. However, it has to be addressed why this optionality does not hold unrestrictedly with overt pronouns in Romance NSLs (contrary to English). The present section is devoted to offering a sketch of a solution to this problem. I argue that the dependency of overt realization on the notions of [–continuous] or π has the consequence that a syntactic identification strategy is blocked and discourse-identification is enforced, i.e. assignment of these features requires Δ in C to be specified as $\pm S/\pm A$, linking to a salient element in the Common Ground.

4.1 Apparently ‘Bound’ Overt Pronouns Are Topic-Linked

I have argued that Spanish subject pronouns are ‘topic/focus morphemes’ which are spelled out in combination with D and ϕ . It is exactly the dependency of morphological insertion rules on the notions [–continuous] or $\pi_{[\pm\text{contrast}]}$, that makes the bound/free alternation of overt D-subjects depend on these notions as well:

(73) QP thinks [Δ that D_{[\phi:]/Case} will come] (English)

(74) QP cree [Δ que pasó D_[\phi:] el examen] (Spanish)
 └─ [p:??] ─┘

literature) that is responsible for obligatory emptiness of PRO in English. In Herbeck (2015b), π – differently from nominative, delays null insertion into D until the matrix clause. This follows from an incompatibility between Focus and null realization. If ϕ is a precondition for overt realization of subject pronouns (at least in agreement-based languages), Focus enforces delay of insertion until ϕ -valuation takes place at the matrix level.

³⁷Note that V-to-T movement also arises in infinitives in Romance NSLs, in contrast to English (see e.g. Solà 1992). This predicts that PRO movement to Spec,T is not triggered in control infinitives in the former languages and D becomes susceptible to π -assignment in Spec,*v*.

It is those contexts where morphological insertion rules do not depend on features related to information structure, but on Case (inside Spanish PPs; English subject pronouns), which allow bound construal without further conditions.

Consider the following economy hierarchy from Reuland (2011):

(75) *Economy of encoding*: (Reuland 2011: 125)

Narrow syntax < logical syntax (C-I interface) < discourse

This hierarchy expresses the assumption that narrow syntactic identification is more economic than logical syntax, which is in turn more economical than a discourse identification strategy. This hierarchy is discussed in Reuland (2011: 124f) in the context of the impossibility of a pronoun to be bound in contexts where a *self*-anaphor is available:

(76) John_i hates him_{*i/j}/himself_{i/*j}.

Given that the option of binding with a *self*-anaphor is available, encoding the same relation via co-reference with a pronoun is less economical because it would require discourse identification while variable binding allows immediate closure of an open expression (cf. Reuland 2011: 127, building on Reinhart's 1983 *Rule 1*).

Let us have a look at whether the hierarchy in (75) could be applied to the reluctance towards a bound construal of overt pronouns in embedded contexts in Spanish. For both – overt subject pronouns in English as well as null pronouns in Spanish – the bound construal via C (and correlated gender-assignment) can obtain in the syntax. In this case, $\Delta_{\emptyset S/\emptyset A}$ binds the D-subject to a matrix antecedent. Co-reference is possible as well (see (25)), $\Delta_{\pm S/\pm A}$ linking a $\sigma_{[+\text{continuous}]}$ -marked D-subject to a referent that is prominent in the Common Ground. However, if D-subjects receive $\pi_{[\pm\text{contrast}]}$ ($+\sigma_{[\pm\text{continuous}]}$)-marking in Spec,_v or Spec,_C in Spanish and overt realization is enforced, a discourse identification strategy via the Common Ground is invariably triggered, i.e. assignment of those features that cause overt realization requires Δ to link to $\pm S/\pm A$ in finite clauses:

(77) *Ningún estudiante piensa que él pasó el examen.*

a. [_{vP} D_[\phi:–]v-pasó_i [_{vP} t_i el examen]]

b. *Agree* [T_{[\phi:3sg]/D_[\phi:–]], π -assignment to D:}

[_{CP} que $\Delta_{.S/-A}$ [_{FocP} D_{[\phi:3sg]/[\pi:+c]} [_{TP} T-pasó_i [_{vP} D_[\phi:–] ... el examen]]]]

c. C-linking to discourse antecedent: $\Delta_{.S/-A[+m]} \rightarrow D_{[\phi:3sg,m], \pi[+c]}$

Morphology: *D*, [3], [m], [π] \leftrightarrow /e/

This reasoning predicts that, even if a referential dependency between a contrastive or focal pronoun inside embedded clauses and a matrix QP is possible for a determined set of speakers of Spanish, it crucially differs from bound variable construal of null pronouns (and overt pronouns in English). Some evidence could be provided if we consider the following difference between QP and bare quantifier antecedents with respect to an apparent bound construal of overt pronominal forms (see Carminati 2002; Alonso Ovalle et al. 2002). Carminati (2002: 266–280) tested

the acceptability of bound overt and null subjects with a QP (see (78)) or a bare quantifier (see (79)) antecedent:

- (78) Al colloquio per il posto di assistente di volo, ogni candidata ha detto che (\emptyset / lei) vorrebbe prendere le ferie ad agosto.
 ‘At the interview for the post of air steward, every candidate (fem) has said that she would like to have (her) vacation in August.’
- (79) Al colloquio per il posto di assistente di volo, ognuno ha detto che (\emptyset / lui) vorrebbe prendere le ferie ad agosto.
 ‘At the interview for the post of air steward, everyone has said that he would like to take (his) vacation in August.’ (It.; Carminati 2002: 268)

A null pronoun received a bound variable interpretation in 95% of the cases with a QP and in 90% with a bare quantifier in Carminati’s (2002) study. Interestingly, even though the percentage was lower with an overt pronoun (as predicted by the OPC), it still received a bound variable interpretation in 75% of the cases with a QP antecedent, but the percentage dropped significantly with a bare quantifier antecedent: 54% (see Carminati 2002: 271ff for full discussion). If the overt bound subject pronoun is uniformly a focused minimal pronoun without any further condition, the question is why bare quantifier antecedents should be more reluctant to occur in a bound construal than non-bare antecedents.

Note that in the example (78), the concept of ‘candidate’ is explicitly introduced as part of the matrix clause and, thus, is introduced into the Common Ground. Similar considerations hold for the Spanish sentences in (7) and (12) in that the QP introduces the concept of ‘student’. Contrast on the pronoun could now be argued to exclude a contextually determined set of students, as informally depicted in (81) with respect to Bosque and Gutiérrez-Rexach’s (2009) example:

- (80) Todo estudiante_i piensa que él_i (y no otros_j) es inteligente.
- (81) {Student 1 thinks that student 1 is intelligent, Student 1 thinks that student 2 is intelligent, Student 2 thinks that student 2 is intelligent, Student 2 thinks that student 3 is intelligent, . . . }

Thus, contrastive marking of the pronoun could have the consequence that an alternative set that is evoked *with respect to the concept of ‘student’* is resolved. What we could have here is, thus, a D-subject which refers to the (topic) concept of ‘student’.³⁸

³⁸Frascarelli (2007: 728) in fact argues that the ‘bound’ construal of *pro* is a relation between a *type* projected by a QP (e.g. ‘every student’) which consists of a number of *tokens* (e.g. the individual ‘students’); in the sense of Jackendoff (1983). The antecedent of *pro* is the *type* in topic-position, while the QP is in Spec,T (as in the following structure adapted from Frascarelli 2007: 728):

(i) [_{As for type X} [_{every X thinks [(that) X is intelligent]]]}

However, to capture the difference between null and overt pronouns with respect to the relevance of the salience of the ‘concept’ (or ‘type’), I argue that a null pronoun is in fact bound by the QP via C, while an overt, focused pronoun is bound by a ‘concept’ in topic position, which is evoked by the QP and made salient by focus marking.

- (82) $[\text{TopP}(\text{Estudiante}) [\text{Todo estudiante piensa} [\text{que} [\text{TopP} \text{D}_{[\phi:3\text{sg}/[\pi:+c]} [\text{es} \dots]]]]]]$
Morphology: D, [3], [m], [π] \leftrightarrow /eI/

Strong contrastive marking would have the consequence of bringing the concept of ‘student’ into salience, resolving alternatives that are created with respect to it. In a sentence with a bare quantifier, in contrast, the concept of student is not explicitly introduced into the Common Ground, which has the consequence that a ‘bound topic’ pronoun is disfavored.

Consider in this context the following English example from Partee (1978: 82):

- (83) No students came to the party. They thought they weren’t invited.

Even though ‘they’ in (83) cannot be bound by the Neg-QP ‘no students’ it can refer to the group of students, which is due to the fact that the QP can bring that group into salience (cf. Partee 1978: 81 for discussion). Thus, the concept of ‘group of students’ is introduced into the Common Ground, and the pronoun can (pragmatically) co-refer with this concept.

In apparently ‘bound’ focused pronouns in Spanish examples, like (7b) and (12), we seem to have a case in between the prototypical bound construal with null *pro* and the co-referential construal: π -marking of the subject pronoun requires its antecedent to be a salient element in the Common Ground with respect to which alternatives are evoked, and the apparent bound variable construal is a referential dependency between a concept evoked by the matrix QP and the D-subject.

The fact that the ‘bound’ construal is not the preferred option with strong subject pronouns in embedded finite clauses thus derives from the features that trigger morphological insertion into D-subjects: given the intrinsic dependency on notions relating to information structure, a discourse identification strategy is invariably triggered. Note furthermore that only a subset of the notions that are responsible for overt realization of D-subjects is compatible with co-reference and apparent binding: the feature [–continuous] causes a shift in topic and, thus, one function of a pronoun marked with this feature is to shift away from the matrix (topic) antecedent.³⁹ The feature $\pi_{[\pm c]}$, on the other hand, is assigned to the pronominal form if there is a contextually determined set of alternatives that needs to be resolved and, thus, it is not incompatible with linking to a matrix (topic) antecedent, which can be a referential DP or a concept which is projected from a matrix QP if this concept is brought into salience.

³⁹The fact that a null pronoun prefers prominent antecedents while an overt pronoun relates to less prominent ones is captured in Carminati (2002: 57) by the *Position of Antecedent Hypothesis*, which states that null *pro* has a preference for relating to antecedents in Spec,IP and overt pronominal forms preferably relate to antecedents which are in a position lower than Spec, IP. However, I have followed Frascarelli (2007) in assuming that the position to which null pronouns relate is the (Aboutness-Shift) Topic position. Strong pronouns can also relate to this position if a contextually established alternative set is evoked with respect to the topic-antecedent which the π -marked pronoun needs to resolve.

For null pronouns, in contrast, two identification strategies are available, given that they can be syntactically bound by $\Delta_{S\emptyset/A\emptyset}$ linking directly to a matrix QP antecedent or a $\sigma_{[+\text{continuous}]}$ -marked subject pronoun can related to a topic concept projected from the QP:

(84) $[_{CP} [\text{Todo estudiante piensa } [\Delta_{\emptyset S/\emptyset A} \text{ que } [_{TopP} D_{[\emptyset:3sg]} [\text{es ...}]]]]]]]$

(85) $[_{TopP} (\text{Estudiante}) [\text{Todo estudiante piensa } [\Delta_{S/A} \text{ que } [_{TopP} D_{[\emptyset:3sg]/[\sigma:+c]} [\text{es ...}]]]]]]$

Overt subject pronouns, differently from null ones, intrinsically depend on π or $\sigma_{[-\text{continuous}]}$ assignment, so that they can only be construed as topic ‘bound’ by virtue of the strategy in (85).

4.2 *Null vs. Overt PRO*

In this section, I take a look at how differences between null and ‘overt PRO’ can be accounted for with the line of reasoning pursued here. Recall that null and overt PRO in control infinitives do not fully behave alike with respect to the ‘bound’ and ‘group’ reading with an antecedent containing a numeral. I repeat the relevant configuration here for convenience (see (27)–(33)):

(86) **Cuatro vecinos** prometen hacer (\emptyset /ellos) la cena.
four husbands promise.PL do.INF they the dinner

Control of an emphatic pronoun preferably results in the group reading. Recall that in this configuration, ‘four neighbors’ is not headed by an inherent quantifier and it can be construed as a referential element and is, thus, a potential topic. This way, the group of ‘four neighbors’ is introduced into the *Common Ground*. Differently from a non-referential matrix quantifier, where only a concept projected from the QP can function as an antecedent of a π -marked D (see (87)), the constituent ‘cuatro vecinos’, containing a non-inherent quantifier, can sanction two strategies for establishing a referential dependency with an overt pronoun (see (88)):

(87) $[_{TopP} (\text{vecino}) [_{TP} \text{Ningún vecino promete } [\text{hacer } D_{\pi} \text{ la cena}]]]]]$

(88) a. $[_{TopP} \text{Cuatro vecinos}_i [_{TP} t_i \text{ prometen } [\text{hacer } D_{\pi} \text{ la cena}]]]]]$

b. $[_{TopP} (\text{vecino}) [_{TP} \text{Cuatro vecinos prometen } [\text{hacer } D_{\pi} \text{ la cena}]]]]]$

The group reading might be preferred with an emphatic pronoun in an example like (86) because the matrix antecedent *cuatro vecinos* with a non-inherent quantifier can move to the Top position (see (88)) and, thus, the group of four neighbors is available as a prominent antecedent. In the case of null PRO, lack of Focus marking correlates with the lack of a prominence requirement on the antecedent so that both – the group and bound readings are equally available.

Thus, contrastive or emphatic marking of the pronoun requires its antecedent to be a salient referent in the Common Ground. Apparent bound variable construal of overt pronouns in a language like Spanish might be possible for a number of speakers if a focus-marked pronoun evokes alternatives which are resolved with respect to a salient ‘concept’. This concept is provided by a matrix QP antecedent and made salient by the focus-marked pronoun if the antecedent XP cannot function as the topic itself (as depicted in (82) and (87)). Consider in this context the following principle:

(89) *Condition of Relative Discourse Prominence*: (Baker 1995: 80)

Intensive NPs can only be used to mark a character in a sentence or discourse who is relatively more prominent or central than other characters.

It is because overt realization of subject pronouns depends on notions related to information structure (and not on Case) in Spanish that their referential construal is influenced by these notions as well. The condition of discourse prominence on the antecedent does not obligatorily hold for subject pronouns in English embedded contexts, simply because discourse-sensitive features do not condition morphological insertion rules into D-subjects in this language.

Notice that the restrictions on the matrix antecedent of an apparently (topic-) ‘bound’ pronoun in a language like Spanish are not necessarily due to a left-dislocated position in the syntactic tree, at least not in the case of embedded structures. This is different from what might be happening in matrix emphatic doubling configurations, where negative QP antecedents are excluded, in contrast to some control and certain finite complementation structures:

(90) *Nenhuma criança escreveu **ela** o poema.
no child wrote.3SG she the poem

(EP; Barbosa 2009a: 110)

(91) A Teresa / ela escreveu **ela** o poema (ninguém a ajudou).
the Teresa / she wrote she the poem (no one her helped)

(EP; Barbosa 2009a: 107)

Barbosa (1995, 2009a) argues that emphatic ‘doubles’ in matrix clauses are impossible with non-referential QPs but licit with referential DPs because the emphatic pronoun is merged in argument position so that its antecedent must be in the same position as left-dislocated objects, from which Neg-QPs are banned:

(92) *nessuno, lo conosco in questa citta.
nobody, him know.1SG in this city (It.; Rizzi 1986b: 395)

However, we have also seen that even certain control configurations are reluctant to sanction ‘bound’ overt pronouns with a non-referential quantifier antecedent (see (22) and (23)). This is also problematic for an analysis in terms of focus-triggered ‘overt PRO’, since a referential dependency between an embedded emphatic pronoun and a QP antecedent should be possible as long as a (topic) concept can be projected from the latter.

Even though a deeper investigation of the exact types of matrix verbs that sanction ‘bound’ overt PRO is still pending, a first idea could be that those control structures, where a bound overt pronoun is degraded, contain an implicative verb (*olvidarse* ‘forget’, *conseguir* ‘manage’, see (22a) and (23a)), which triggers predicative control. Verbs like *prometer* ‘promise’, in contrast, trigger logophoric control (cf. Landau 2015; Bianchi 2003). If predicative control infinitives are properties and reduced VPs (see Wurmbrand 2001, building on Chierchia 1989), they do not contain a syntactically projected D-subject. This way, there is no D inside the infinitive that could be overtly realized by means of focus-assignment:

- (93) Nenhum hospede conseguiu [VP fazer o jantar].
 no guest managed make.INF the dinner

In (93), an overt emphatic pronoun could only be a ‘matrix double’ of the antecedent (similarly to (90)), which accounts for the full acceptability of referential DP antecedents, following Barbosa’s (2009a) approach:

- (94) O João conseguiu fazer ele o jantar.
 the John managed make.INF he the dinner

The surface word order would be derived by means of verb movement/incorporation, which could be motivated by the fact that *conseguir* is a restructuring verb in EP (cf. Gonçalves 1999):

- (95) O João conseguiu-fazer ... [VP ~~ele conseguiu-fazer~~ [VP fazer o jantar]].

An apparent ‘bound’ construal of overt PRO inside control infinitives has the minimal requirement that the embedded infinitive syntactically project a D-subject. If D is not externally merged in the infinitive, it must originate in the matrix clause so that the matrix Neg-QP is forced to appear in a left-dislocated position, which prevents a concept projected from the QP to appear in this same position.⁴⁰

5 Conclusions

In this paper, I have argued that null as well as overt pronouns are externally merged as reduced, lexically underspecified D-subjects – a PRO-like element which is *derived* in the syntax and *built* by verbal functional categories as well as the

⁴⁰I have to leave open the question why a ‘bound’ construal with a Neg-Q antecedent with *conseguir* is degraded but apparently not fully out in EP. A tentative suggestion could be that the verb is ambiguous between selecting a FinP (in the vein of Landau’s 2015 analysis of predicative control) and a reduced VP (in the vein of Wurmbrand 2001), which might correspond to the restructuring and non-restructuring version of the verb. A further factor could be the presence vs. absence of logophoric anchors in the C-domain. Emphatic marking has often been related to logophoricity, so that the prediction would be that logophoric control allows controlled emphatic pronouns more readily than predicative control. I leave a more thorough investigation for future research.

assignment of discourse-sensitive features in the low and high left periphery. Strong and emphatic subject pronouns in Romance NSLs are thus ‘topic/focus morphemes’ which spell-out post-syntactically in combination with D and ϕ . This way, interpretable AGR does not have the sole function of licensing and/or identifying an inherently empty *pro*-element (in the sense of Rizzi 1986a), but also of absorbing structural requirements of T/AGR, which converts a morpho-syntactic strategy of pronoun construction in an agreement-based language (in the sense of Miyagawa 2010) to a discourse-based one. In particular, I have argued that discourse-sensitive features fulfil a parallel function in Spanish to nominative in English in conditioning post-syntactic morpho-phonological insertion rules for D-subjects, and that the dependency of the morphological construction of D-subjects on notions like topic and focus has the consequence that the referential construal of pronouns becomes sensitive to these notions as well.

Acknowledgments I would like to thank two anonymous reviewers for critical and helpful comments on a previous draft of this paper. I am also indebted to Luis López, Bernhard Pöll, and Gemma Rigau for comments on and discussions of related work, which have made me rethink my ideas several times. All errors which can be found in this paper are fully my own.

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