WHEN DISCOURSE MET NULL SUBJECTS

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ABSTRACT. In this paper a novel view of the distribution of null subjects in Spanish is explored in which the discourse category of the antecedent of *pro* is crucially paid attention to. Implementing Frascarelli's (2007) work, I propose that the relevant interpretative condition to meet is for the null subject to be coreferential with an Aboutness-Shift Topic, which must be either an explicit one or a null (i.e. silent) double in the local domain where *pro* occurs. When silent, this antecedent can refer back to any type of discourse category in a previous clause. This implies an update of the information provided in the sentence containing *pro*. The analysis is supported by an experiment run among native speakers of Spanish.

Keywords. null subject, types of topics, types of foci, silent double

RESUMEN. En este artículo se explora un novedoso modo de ver la distribución de sujetos nulos en español, basado en la categoría discursiva que tiene el antecedente de *pro*. Implementando el trabajo de Frascarelli (2007), propongo que la condición interpretativa que indispensablemente debe cumplir un sujeto nulo es el que sea correferente con un Tópico Oracional, el cual debe aparecer explícitamente o tener un doble nulo (o mudo) en el dominio local donde se encuentra *pro*. Cuando este antecedente es mudo, puede éste referirse cualquier tipo de categoría discursiva en la ración precedente. Esto implica una actualización de la información que se da en la oración donde aparece *pro*. El análisis presentado se apoya en un experimento llevado a cabo entre hablantes nativos de español.

Palabras clave. Sujeto nulo, tipos de tópicos, tipos de focos, doble mudo.

1. Introduction[1]

In this work I explore the Information Structure conditions for licensing null subjects in Spanish. In particular, I discuss the connection of *pro* with the type of topic (Aboutness-Shift Topic, Contrastive Topic and Given or Familiar Topic in the sense of Frascarelli and Hinterhölzl 2007, Bianchi and Frascarelli 2010) and the type of focus (Information Focus and Contrastive Focus; cf. Belletti 2004) which serves as its antecedent.

Traditionally, Generative Grammar has paid attention to the agreement conditions of NSs in terms of φ-features and its correlation with the rich morphological import of V (Chomsky 1981; Jaeggli 1982; Rizzi 1986), which is a hot issue even today (Barbosa 2011a,b; Biberauer 2010; Pešková 2014; a.o.). Another hallmark in the

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literature has been the distinction between consistent, partial and radical *pro*-drop (Barbosa 2013; Miyagawa 2013; Roberts 2010; Duguine 2014; a.o.), to capture null subjects in agreementless languages (Âmbar 2014). See D'Alessandro (2014) for a detailed state of the art and hints about the future.

Null subjects have been traditionally classified into two types, namely referential and non-referential null subjects. In this paper, I discuss the interpretation of referential *pro*. More precisely, I discuss the distribution of third person referential *pro*. Thus the analysis I put forth does not say anything about non-referential *pro*, such as the one we can find with weather verbs such as *llover* 'rain' (pro *Estuvo lloviendo todo el tiempo* 'It was raining all the time'). Here the null subjects is just an expletive. On expletive *pro*, see Svenonius (2002). On the other hand, first and second person NSs are contextually salient and, as a reviewer points out, they need no antecedent. I do not deal with first and second person pro, and leave aside the question of whether they do or do not have an antecedent.

To my knowledge, not much heed has been given to the discourse conditions of NSs. Exceptions are just a few. Grimshaw and Samek-Lodovici (1998: 195) mention the topic discourse status of the antecedent of *pro*, but offer no further elaboration. Camacho (2013: 146 and ff.) argues that null subjects are topic-oriented and connects their availability with the fact that the relevant language is topic-oriented. Frascarelli (2007: 694) claims that "[a] thematic NS is a pronominal variable, the features of which are valued (i.e., 'copied through matching') by the local Aboutness-Shift Topic."

To illustrate the connection between a referential null subject and its Aboutness-Shift Topic antecedent, consider (1), where the underlined constituent is the antecedent:

(1) <u>Un empresario   diferente</u>$_i$ es   arrestado cada día. ¡Y pro$_i$ se
     a   businessman different be.3sg   arrested   each day And   SE
     declara   inocente!
     declare.3sg   innocent
     'A different/some businessman is arrested every day. And he declares himself innocent!'

In (1) the null subject refers back to the businessman mentioned in the first clause, and this is the only interpretation of *pro* in this context.

If referential *pro* is licensed when coreferent with the local Aboutness-Shift Topic, its antecedent must be a [+specific] DP (cf. also Frascarelli to appear). Consequently, *pro* cannot co-refer with a [-specific] DP since AS-Topics always get a specific interpretation. However, Spanish brings about a certain conspiracy since, as I will show, the antecedent of *pro* may be other types of topic (Given and Contrastive topics), and even a focused element. Moreover, in Spanish the antecedent of *pro* can be [+ specific] or [-specific], as illustrated in (2):

(2) <u>Muchos profesores</u>$_k$ se han   puesto de huelga, y pro$_k$ han ..... dejado
     many   professors SE have.3pl put   of strike   and   have.3pl left
     de   dar   clases.
     from   to.give classes
     'Many professors have gone on strike, and have stopped teaching their classes'

Quantified subjects such as *muchos profesores* in (2) are taken to be ambiguous, yielding a specific or non-specific reading (Suñer 2003), yet they can qualify as antecedent of *pro*.

I follow Suñer (2000) and Di Tullio and Zdrojevski (2008) in taking [+ specific] to refer to an identifiable entity, already mentioned in the previous context. On the other hand, definiteness is a grammatical concept which is connected with the presence of a definite or indefinite article. In this perspective, a DP such as un famoso niño 'a famous kid' is dubbed by Di Tullio and Zdrojevski (2008: 27) as [+ specific, - definite]. On the other hand the DP el niño que termine primero 'the child who finishes fist' is regarded as [-specific, +definite]. Note the use of subjunctive in the latter case, which is taken to be compatible with only non-specifics.

My working hypotheses are four:

(i)   In Spanish the antecedent of *pro* must simply be a topic, regardless of the type (Aboutness-Shift, Contrastive or Given Topic; hereafter AS-Top, C-Top or G-Top, respectively).

(ii)   Spanish is quite permissive with the coreference of NS. Hence, other types of discourse categories (Contrastive Focus, henceforth CF) can serve as antecedent for *pro*, as long as they contain the feature [+ given], meaning that their reference is mentioned in (or inferred from) the previous context.

(iii)   As a consequence of 2, Information Focus (IF) should not be allowed as an antecedent.

(iv)   All discourse categories (except IF) may qualify as antecedent irrespective of their [+/-specific] interpretation.

The proposal I want to put forth is that *pro* is coreferential with any discourse category, which is *resumed* in the local domain of *pro* via a null AS-Top, and this silent double changes the specificity feature of the *fake* antecedent, in that in the *pro*-containing clause the real AS-Topic antecedent is specific given that it has been mentioned before in the context..

In elaborating this proposal, I try to answer the following questions: 1) If G-Tops can be antecedents, can other types of topics (C-Top) be antecedents as well? 2) With respect to focus, can a focused DP function as antecedent of a NS? 3) Provided that NSs convey given information and that given information presupposes specificity (Leonetti 2004, 2008; Jiménez-Fernández and Spyropoulos 2013), can the antecedent be really [-specific]? 4) What evidence have we got that there is a null AS-Top serving as antecedent of *pro* when there is an intervening G-Top?

The paper is organised as follows. In section 2 the data from the survey is presented classified depending on the type of topic or focus that the null subject is coreferential with; in addition, the methodology used in the survey is briefly explained and the results of the test are discussed. In section 3 I deal with the connection between specificity and the interpretation of null subjects, focusing on indefinite subjects and their ambiguity in terms of specificity. Section 4 presents my analysis arguing that the licensing condition that null subjects have to meet is to have a local explicit or null AS-Top as antecedent. Being a topic, this antecedent is always specific. Section 5 provides evidence supporting the existence of null AS-Tops, based on Differential Object Marking. Finally, section 5 summarises the main findings.

2. Types of topics and foci: data, statistics and problems

2.1.   Methodology

In this section I present the data which have been used in my analysis alongside a brief description of the types of topics and foci taken into account. I have made a test for Spanish informants. This experiment was given in written form, where the distinct tokens were conveniently randomised. The task was carried out mostly face-to-face, although some informants were asked to fill in the survey via e-mail. The total number of participants in the experiment has been 56, from different areas of Spain. Speakers were asked to express their judgments as "OK" (full acceptance/grammaticality), "??" (marginal, but still acceptable) and "NO" (unacceptable/ungrammatical). They were warned about connecting the subject of the relevant clause with the specific discourse category in the previous sentence, which was underlined, so as to avoid other possible interpretations that the null subject may have.

Speakers were confronted with data such as those in (4-10). In these data the first sentence establishes the context which will induce a particular discourse interpretation of the relevant DP as antecedent of the null subject (G-Top, C-Top, IF and CF). For each discourse type I provide just one example, but speakers had two to make sure that their judgements were consistent (hence they were given two examples for each discourse category).

Since one of the properties of topics is that they are marked as [+specific] (Leonetti 2008; Frascarelli 2007), the examples include specific DPs as topics, but they could be definite or indefinite (Alexopoulou and Folli 2011; Jiménez-Fernández and Spyropoulos 2013).

2.2.   Types of topics and null subjects

In this section three types of topics are distinguished based on the different properties assigned to each class by Frascarelli & Hinterhölzl (2007), Bianchi & Frascarelli (2010), Frascarelli & Jiménez-Fernández (2016), among others. It should be stated that the main distinguishing property for each type is prosody. For AS-Top we have a complex L*+H tone pitch accent; for C-Tops a H* pitch accent is detected; and finally, a L* tone is associated with G-Tops. However, intonation is out of the scope of this work. See the references above for the prosodic properties.

Syntactically, Frascarelli (2007) has claimed that the three types of topics sit in different designated positions in the CP system. On the other hand, Jiménez-Fernández & Miyagawa (2014) have argued that A-Tops move to CP, whereas C-Tops and G-Tops move to (possibly multiple) specifiers of TP. Since the main goal of this paper is to analyse the interpretation of null subjects, I will focus on the interpretative properties that set apart the three types of topics.

2.2.1. Aboutness-Shift Topic

An AS-Top connects Reinhart's (1981) aboutness (i.e. the sentence Topic) with the property of being newly introduced or reintroduced and changed to (hence, the shift). It is what Lambrecht (1994) described as what the sentence is about. The AS-Top is illustrated in (3) by the DP *tu hermano* 'your brother' (underlining is used for the relevant discourse category; the subindex marks the coreference between the NS and its antecedent):

(3) *Has   estado hablando de Juan durante   horas….   ¿Y tu   hermano_k*
     have.2sg been   talking of John during   hours   and your brother
     cómo está?   Siempre pro_k *está   de viaje...*
     how be.3sg   always   be.3sg of trip
     'You have been talking about John for hours…. (as for) your brother, how is he?
     He is always travelling'

The relevant DP *tu hermano* shows a shift of topic with respect to the previous context, but no contrast at all is established between this DP and *Juan*. As opposed to C-Tops, AS-Tops do not involve a set of different members which are contrasted between them with respect to a given proposition. Therefore, in the preceding example Juan and the speaker's brother may be member of the group of friends that both interlocutors share, but this does not mean that they are somehow compared.
Since there is no controversy about the role of AS-Tops in licensing NSs, this kind of discourse category has not been tested among informants.

2.2.2. Contrastive Topic

Marking an element as C-Top is used to divide a complex proposition into a conjunction of more simple propositions in which a predicate applies separately to each member of a salient set. In the survey I included examples showing coreference with an indefinite C-Top as in (4) and with a definite C-Top as in (5) –note that the relevant examples are preceded by a sentence which establishes the specific context that is pursued:

(4) A: *¡¿Te has   enterado   de cuántos   regalos ha   hecho Juan*
        reflx have.2sg heard   of how.many presents have.3sg   made Juan
        a Jimena por su cumpleaños?!
        to Jimena for her birthday
        'Did you hear how many presents Juan gave Jimena for her birthday?!'
    B: *Bueno, todos los regalos, no sé.   Algunas joyas_k las   está*
       well   all   the presents not know.1sg some   jewels them be.3sg
       estrenando   hoy en su fiesta (del   resto de regalos,
       wearing for the first time   today in her party of.the rest of presents,
       ni idea). pro_k *le   sientan muy bien.*
       no idea   her   suit.3pl very well
       'Well, I don't know about all the presents. Some jewels she's wearing for the first time today at her party (I don't know about the other presents). They suit her very well'

(5) *El programa de Lingüística me parece   demasiado exigente   este año,*
     the programme of Linguistics me seem.3sg too   demanding this year
     y   por varios motivos… el examen final tiene   demasiados apartados;
     and for several reasons   the exam   final have.3sg too.many   sections
     y   los trabajos   semanales_k los han   cambiado por lecturas
     and   the assignments weekly   them have.3pl changed   for readings
     obligatorias. pro_k *eran   más   fáciles para   los alumnos.*
     Obligatory   be.past3pl more   easy   for   the students
     'This year's programme in Linguistics is rather demanding, and for several reasons… The final exam has too many sections; and the weekly assignments have been changed for obligatory readings, and they are easier for students'

Concentrating on the first example, the DP *algunas joyas* 'some jewels' is a member of the set identified as Jimena's presents. Other members of the set are only implicitly inferred. However, in the second example the set represented by this year's programme in Linguistics has two explicit members, namely the final exam and the weekly assignments. In both cases, a clear contrast is established, which makes the relevant topic qualify as a C-Top.

2.2.3. Given Topics

G-Tops are employed either for continuity with respect to the current sentence Topic or to resume background information. In the survey G-Tops were also indefinite (6) or definite (7):

(6) A: *Me encantaría   una ensalada de tomates   para la   cena.*
      me would.please.3sg a   salad   of tomatoes for   the   dinner
      'I'd love a tomato salad for dinner'
  B: *Pues, no te   olvides   de comprar   en el   mercado. Varios tomates$_k$*
      well   not you forget.2sg   of to.buy   in the market   several tomatoes
      los   he   tenido que tirar   a la   basura. pro$_k$ *estaban*
      them have.1sg had   that to.throw   to the rubbish   were.3pl
      podridos.
      spoilt
      'Well, don't forget to buy in the market. I had to throw several tomatoes to the rubbish bin. They were spoilt'
(7) A: *Espero que la   cena esté   lista ya.   Estoy muerto de hambre.*
      hope   that the dinner be.3sg ready already   be.1sg dead   of hunger
      'I hope dinner is ready. I am starving'
  B: *La cena   la he   preparado yo ya.* pro$_k$ *está   ya   servida*
      the dinner it have.1sg prepared   I already   be.3sg already served
      on the table
      en la mesa.
      'I have already prepared dinner. It is on the table.'

As topics, both C-Tops and G-Tops imply information shared in the context. For example, in (6) the DP *varios tomates* 'several tomatoes' is resuming the information conveyed by speaker A. Thus, it is given information. However, no contrast is established. There is actually no need to continue this conversation with a sentence about the rest of tomatoes. It may simply be the case that there were no other tomatoes. The fact that G-Tops convey purely shared information (and the absence of any contrast whatsoever) is even clearer in (7), where the DP *la cena* 'dinner' in B is repeating exactly the same entity used in A.

2.3.   Types of focus and null subjects

In this section I discuss the two types of foci I have concentrated on, namely Contrastive Focus and Information Focus. Intonationally, they are different (see Vanrell & Fernández Soriano (2013) on the intonation of focus in Spanish). Syntactically, Rizzi (1987) made a distinction between CF, moving to the left periphery, and IF staying low in the structure. The latter could be in situ or moved to a designated position in a low periphery (Belletti 2004). However, recent research has found out that in some languages such as Spanish CF can also occur postverbally (Ortega-Santos 2013, 2016), so the focussed element moves to FocP in the left

periphery and the rest of the sentence undergoes remnant movement to a position preceding Foc. In addition, IF has also been shown to target the left periphery in at least some Spanish varieties such as Andalusian Spanish (Jiménez-Fernández 2015b) or Spanish in the Basque Country (Vanrell & Fernández-Soriano 2013). In this work, I have tested fronted CF and in-situ IF. Given that I focus on interpretative properties, I leave the intonation and syntax of focus aside.

2.3.1. Contrastive Focus[2]

Following Zubizarreta (1998) and Jiménez-Fernández (2015), I take CF to denote a constituent which is asserted in clear opposition with another previously mentioned entity. Example (8) illustrates the coreference of a NS with CF:

(8) A: *Ana es   una crack de la   lingüística. Ha   publicado en revistas*
      Ana be.3sg   an   expert of the Linguistics have.3sg published in journals
      de alto prestigio internacional en este año.
      of high prestige international in this year
      'Ana is a star in Linguistics. She has published in high-quality international journals this year.'

   B: *¡De eso nada!   En revistas internacionales no. <u>En revistas nacionales</u>*$_k$
       of that nothing in journals international   not in journals national
      ha   publicado. Y   además, pro$_k$ *no están   indexadas   en*
      have.3sg   published and besides   not be.3pl   indexed   in
      ninguna base de datos.
      no   database
      'No way! She hasn't published in international journals. She has published in national journals. Moreover, they are not indexed in any database.'

As an anonymous reviewer notes, B's reply may perfectly leave the fronted CF in situ (*Ha publicado en revistas nacionales* 'She has published in national journals'). However, I did not test in-situ CF here. My intuition is simply that the position of CF (in the left or right periphery) does not alter the compatibility with null subjects.

2.3.2. Information Focus

IF denotes purely new information (Zubizarreta 1998; Belletti 2004). According to Krifka (2006), question-answer congruence requires the Focus in the answer to satisfy the information request in the interrogative phrase of the question, so the backgrounds should be identical in the question and in the answer. The relevant element in the answer constitutes new information, as illustrated in (9) with a NS referring back to a focused indefinite DP and in (10) with a NS coreferential with a focused definite DP:

(9) *Se esperaba   que sólo unos cuantos políticos   estuvieran   presentes*
     SE waited.3sg   that only a   few   politicians were.3pl   present
     en la   rueda de prensa.   Y, ¿sabes   quiénes asistieron?
     in the   circle of press   and know.2sg who   attended.3pl

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[2] In this paper I concentrate on two types of focus, namely contrastive focus and information focus. For a full typology of focus, see Jiménez-Fernández (2015a,b).

Vinieron <u>algunos miembros del   gobierno</u>$_k$. ¡pro$_k$ No han   apoyado
came.3pl some   members of.the government   not have.3pl   supported
la   decisión del   presidente!
the decision of.the president
'Only a few politicians were expected to be present at the press conference. And, you know who attended?
Some members of the government were present. They haven't supported the President's decision!'

(10) A: *El   pastel que ha   hecho tu   madre está   buenísimo!!   Y   también*
        the pie   that have.3sg made your   mother be.3sg very.good   and also
         la tarta!   ¿Quién la ha   hecho?
        the cake   who   it have.3sg   made
        'The pie your mother made is fantastic! And the cake as well! Who cooked it?'
     B: *¡No vas   a creerlo!   María, que se tomó   un trozo,   me dijo*
        not go.2sg   to to.believe.it Maria who SE took.3sg a piece   me told.3sg
        que la había   hecho <u>la madre de Fernando</u>$_k$. ¡Siempre pro$_k$ *ha*
        that it had.3sg made the mother of Fernando   always   have.3sg
        odiado el   dulce!
        hated   the sweet
        'You won't believe it! Mary, who had a piece, told me that Fernando's mother made it. She has always hated sweet stuff!'

2.4. Results and discussion

To answer the questions raised on the interpretation of NSs in section 1, now I turn to the results of speakers' grammaticality judgements. Figures are based on the informants' positive responses. The raw number of participants with positive answers is given in between brackets. In Table 1 I show the coreference between a NS and either a G-Top or a C-Top.

Table 1. *Coreference of* pro *and Topics*

Coreference with a TOPIC DP			
Preverbal [-def] G-Top	**Preverbal [+def] G-Top**	**Preverbal [-def] C-Top**	**Preverbal [+def] C-Top**
83% (46)	**83%** (46)	**91%** (51)	**100%** (56)

Both G-Tops and C-Tops are licit antecedents for *pro*. This is no surprise in light of the specific nature of topics in general and the constraint suggested earlier that NSs require a specific antecedent. Let us see the results in connection with foci. As observed in Table 2, both CF and IF are possible antecedents for *pro*. This is unexpected if specificity is associated with given information since it is clear that at least IF conveys new information (or at least the use of IF implies a new relation between the focused constituent and the rest of the sentence).

Table 2. *Coreference of* pro *and focus*

Coreference with focused DP		
Postverbal [-def[IF	Postverbal [+def] IF	Fronted CF
83% (46)	83% (46)	96% (54)

The following conclusions are drawn from the survey: 1) Alongside AS-Tops, G-Tops and C-Tops can be interpreted as the antecedent of a NS, regardless of the [± def] feature, which justifies the validity of my working hypotheses 1, 2 and 5. 2) CF is also construed as coreferential with the NS, thereby confirming the soundness of my working hypothesis 3. 3) Finally, IF is also a possible antecedent, contrary to the expectations expressed in working hypothesis 4.

Speakers tend to accept coreference when sharing the feature [+given] with the antecedent, which is present in the featural set of all discourse categories except that of IF. As stated earlier, the [+ given] feature is connected with specificity (i.e. mentioned in previous discourse, in Suñer's 2000 view). Asked whether the null subjects in these sentences are specific regardless of the specific/non-specific character of the antecedent (i.e. whether they were known in the context), informants gave a positive answer. From this it follows that the interpretation of *pro* depends on the availability of a specific antecedent (much in line with Frascarelli to appear; see also Âmbar 2014). The problematic key factor seems to be the unavailability of [+given] in IF. To solve this mismatch, what I will propose below is that the [-specific] feature of the antecedent turns into [+ specific] in a null AS-Top to license the NS in its local domain. In other words, in all cases (including IF) the NS establishes its co-reference with the local (silent) A-Top, hence its [+ specific] feature.

It should also be clear that the antecedent of the NS in a previous sentence is not claimed to be dislocated or focused. However, in the sentence where *pro* occurs a null double of the relevant DP is dislocated in the Left Periphery as an AS-Top.

3. On indefinites, specifics and the interpretation of *pro*

Indefinites can be ambiguous between a [+specific] reading and a [-specific] one (Ihsane and Puskás 2001), as shown in (11), from Frascarelli (2007: 715) for Italian, and (12), from Suñer (2003: 345):

(11) *Un poliziotto stava a   guardia di   ogni   angolo.*
      a policeman be.3sg at   guard of   every corner
(12) *Un vigilante montaba guardia   en cada esquina.*
      a policeman stand.3sg guard   in each corner
      'A policeman guarded each corner'   (ambiguous)

This interpretive divide is connected with the syntactic position occupied by the indefinite DP. Concentrating on subjects, much research has been carried out on the precise position of pre-verbal subjects in Romance languages. Basically, we find two mutually exclusive trends (see Sheehan 2006 for a full review), namely those linguists who have argued that pre-verbal subjects target Spec-TP, an A-position (Suñer 2003; Cardinaletti 1997; among others); and those who have claimed that these subjects are placed in the CP-domain, sitting in an A'-position (Barbosa 1995, 2000; Alexiadou and Anagnostopolou 1998; Frascarelli 2007; among others).

The distinction between A'- and A-positions is far from clear, though. Frascarelli and Jiménez-Fernández (2012) put forth the hypothesis that in some languages such as Italian pre-verbal subjects which are interpreted as [+ specific], regardless of their being definite or indefinite, sit in an A'-position (following Frascarelli 2007); they implement this hypothesis by assuming that those pre-verbal subjects which are marked as [- specific] can sit in an A-position (Frascarelli and Jiménez-Fernández 2012, 2013). Here I will simply assume this positional distinction.

Indeed, QPs are ambiguous in Italian and Spanish (as opposed to Greek, cf. Alexiadou and Anagnostopoulou 1998, though see Spyropoulos and Revithiadou 2009 for a different view on Greek), as we have seen in (11) and (12) above. Pre-verbal quantified subjects may be interpreted as [+ specific] or [- specific]. However, when they serve as antecedent for referential *pro*, quantified subjects have been claimed to be always interpreted as [+ specific] (Frascarelli 2007: 714):

(13) *Un   poliziotto$_k$ stava   a   guardia di   ogni   angolo e*
      a   policeman   was.3sg   at   guard of   every corner and
      pro$_k$ *fumava   in   continuazione.*
             smoked.3sg   in   continuation
      'A (single) policeman guarded each corner and was smoking continuously'

The same restriction seems to hold in Spanish (adapted from Suñer 2003: 345):

(14) *Un vigilante$_k$ montaba guardia   en cada esquina   y*   pro$_k$
      a   policeman stood.3sg guard   in each corner   and
      fumaba   continuamente.
      smoked.3sg   continuously
      'A (single) policeman guarded each corner and was smoking continuously'

Coreference between the null subjects in (13-14) and their antecedent implies a [+specific] interpretation of the antecedent DP. This is taken by Frascarelli (2007) as strong evidence of the A'-position which is occupied by these pre-verbal subjects. More precisely, specific DPs are in a TopP in the CP-system (adopting a cartographic analysis). However, the data from Spanish apparently goes into a different direction. First, Suñer (2003: 344-345) acknowledges that even in the version in (12), without the continuation with the NS, speakers prefer the specific interpretation. Furthermore, asked whether *un vigilante* 'a policeman' could be interpreted as non-specific (similar to any given policeman, not mentioned before) in both (12) and (14), 95% of my informants gave a positive answer.

Moreover, the [- specific] interpretation of the quantified subject in example (2) – repeated here for convenience– is clear –the [+ specific] reading is also possible—yet this QP is the antecedent of *pro*:

(2)   *Muchos profesores$_k$ se han   puesto de huelga, y* pro$_k$ *han   dejado*
      many   professors SE have.3pl put   of strike and   have.3pl left
      de   dar   clases.
      from   to.give classes
      'Many professors have gone on strike, and have stopped teaching their classes'

In other words, establishing a direct relation between the NS and a [+ specific] antecedent seems to be untenable in Spanish. The constraint that *pro* is always

licensed by an AS-Topic appears not to hold in Spanish. In addition, *pro* does not induce a specificity reading of its antecedent. Consider the minimal pair in (15) in Italian and Spanish respectively:

(15) a. *Alcuni professori$_k$ pensano   che pro$_k$ sono dei geni.*
          some   professors think.3pl   that   be.3pl geniuses
      b. *Algunos profesores$_k$ piensan que pro$_k$ son genios.*
          'Some professors think that they are genius'

In (15a) *alcuni* 'some' is really ambiguous and, in [- specific] interpretation, it excludes coreference with the NS. Also in (15b) the DP is ambiguous. It may have a specific or non-specific reading. However, the difference between Italian and Spanish is that in Italian *pro* in the subordinate clause may refer to this subject only if the latter is interpreted as specific. By contrast, in Spanish *pro* may be coreferential with the DP subject in the matrix clause, regardless of its specificity feature.

Independently of the specific or non-specific feature of the QP, *algunos profesores* can serve as the antecedent for *pro*.[3] In the specific reading, the interpretation chain is similar to Italian. Hence, the QP is a topic sitting in an A'-position. By contrast, in the non-specific interpretation, this QP occupies a lower slot, namely Spec-TP, which is an A-position. The difference between Spanish and Italian is reduced to the possibility of having a non-specific reading of an indefinite DP as antecedent of *pro* in Spanish, whereas this seems to be non-existent in Italian.

When the Italian data is subjected to closer inspection, however, a different picture emerges. First, not all speakers agree that the antecedent of a NS is always specific; and second, with negative QPs the only interpretation available is that of non-specific, yet Italian speakers establish the coreference relation between a non-specific antecedent and *pro*, as illustrated in (16), Gigi Andriani (p.c.):

(16) *Nessun deputato   si   è   chiesto se   fosse venuto*
      no   deputy   SE   be.3sg asked   whether be.3sg come
      per niente.
      for nothing
      'No deputy has wondered whether he has come for nothing'

Even for positive indefinite QPs, Italian speakers find that both specific and non-specific interpretation are possible and set the coreferential link with the NS in sentences such as (17), Roberta D'Alessandro (p.c.):

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[3] Similar data are available in Portuguese, as clearly shown by examples such as (i), provided by Pilar Barbosa (p.c.):

(i)   *Nenhum aluno$_k$ disse que* pro$_k$ *queria falar com o professor.*
       'No student said that (he) wanted to talk to the professor'

Here the antecedent is undoubtedly non-specific; yet *pro* can be interpreted as bound by the non-referential QP. Hence, Portuguese patterns with Spanish in that referential *pro* does not have to refer back to a specific antecedent.

(17) *Alcuni deputati hanno   votato contro la   proposta. Appartenevano al*
     some deputies have.3pl voted against the proposal belong.3pl   to.the
     partito   che l'aveva   avanzata.
     party   that it.have.3sg   advanced
     'Some deputies have voted against the proposal. They belonged to the party that
     had elaborated it'

These data, at least, cast some doubts about the rule that states that in Italian coreference with *pro* induces a specific interpretation of indefinite quantifiers (Frascarelli 2007). Spanish and Italian are identical in that both allow *pro* to be identified with a specific DP, and both languages permit coreference of *pro* and a non-specific DP. There are differences, but these belong to some other domain.[4]

4.   The Information-Structure licensing of NSs

In this section I provide a discourse-based account of the fact that NSs in Spanish can be coreferential with any antecedent, regardless of its specificity and irrespective of its discourse function. However, this coreference is mediated by a null double of the antecedent serving the function of AS-Top. This solution will blur the possible distinction detected between Italian and Spanish, since what is crucial is that in both languages there must be a local AS-Top for *pro*. Given that AS-Tops are specific, the real antecedent of *pro* will always be specific.

To put it bluntly, the coreference with non-specific antecedents is just illusory because the null or silent AS-Top always carries a [+specific] feature. Once a specific antecedent is inserted, *pro* is interpreted as [+given] and [+specific].[5] This can be explained assuming the Topic Criterion proposed by Frascarelli (2007: 721):

> TOPIC CRITERION
> a) [+aboutness] is connected with an EPP feature in the high Topic field that yields a specific discourse-related property, namely 'Aboutness'.
> b) The [+aboutness] Topic matches with an argument in the main clause through Agree.
> c) When continuous, the [+aboutness] Topic can be null (i.e., silent).

This Topic Criterion applies at the interpretive level and it presupposes the existence of null duplicates when the AS-Top is continuous. However, in my data we have examples in which no continuity is needed. Implementing Frascarelli's proposal, I suggest that in general terms the [+aboutness] Topic can be null (in line with Erteschik-Shir 2006 and Lahousse 2013), without any need to imply continuity.

This AS-Top carries a [+ specific] DP by default, and establishes a matching relation with the NS in its local domain, thereby transmitting the specific interpretation to the NS. There is no direct relation between the *fake* antecedent and the null subject, thus explaining why the previous DP can either be specific or non-

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[4] Italian speakers are reluctant to accept coreference of *pro* with IF, an option which is thoroughly legitimate in Spanish, as shown by examples such as (9) and (10). An explanation for this kind of parametric variation is in order. However, I will leave this issue aside for reasons of space and because my main concern is Spanish.

[5] The role of grammatical features under T is crucial to understand the licensing of the NS. However, my discourse-based analysis does not pay attention to the syntactic side of the story, which are indeed complementary. For a full treatment of the connection between T and *pro*, see Camacho (2013).

specific and why it can serve any discourse function (topic or focus) in Spanish. The proposed analysis is as follows:

(18) DP$_{Antecedent}$ …. [$_{TopP}$ <DP> [Top° [… [$_{TP}$ [T° [$_{vP}$ *pro* [VP]] …]]]]]

Two conclusions are reached. On the one hand, coreference of NSs can be mediated by a null double of a *fake* antecedent which serves as AS-Top in the local domain of the relevant NS. On the other hand, the *real* antecedent of *pro* is always [+specific].

Note that the analysis in (18) is based on interpretation. This means that it takes place at Logical Form, where Topic chains are interpreted. The implication is that syntax provides with the necessary elements in the relevant positions to be interpreted at the interfaces. With respect to the position occupied by pro in (18), it is just where the NS is generated; I am not committed to the possible movement of *pro* to spec-TP. See Camacho (2013) for discussion about different views on *pro*.

What is crucial in (18) is that the chains are interpretative. They involve a context update whose main consequence is that the NS refers to the local AS-Top, be it explicit or null. This explains why it does not matter whether the fake antecedent of pro is dislocated or focused in a preceding sentence. What does matter is that the interpretive chain connects *pro* with the (null) AS-Top in its own sentence, independently of whether this AS-Top resumes a constituent from the previous clause which is dislocated or not, focussed or not.

5. A piece of evidence supporting null AS-Tops: Differential Object Marking

In this section evidence is provided to support my proposal that *pro* is licensed by a local explicit or null AS-Top, based on the specificity effects displayed by personal *a* in Spanish.

As discussed earlier, subject QPs are ambiguous with respect to their specific or non-specific interpretation. The intuition is that when *pro* occurs it seems to refer to a [+ specific] copy of the relevant QP. The QP in subject position has no overt indication favouring one interpretation or the other. However, Spanish has strategies to distinguish the two interpretations in direct objects (DO). One such device is the use of Differential Object Marking (DOM) preposition *a* in human specific DOs (Leonetti 2004), which require its obligatory use:

(19) a. *Vi   a la secretaria.*   [+ specific]
          saw.1sg   to the secretary
      b. **Vi   la   secretaria.*   [+ specific]
          saw.1sg   the secretary
      'I saw the secretary'

This mechanism can also be used with QPs, in which case there is no difference in terms of grammaticality:

(20) a. *Vi   a una secretaria.*
          saw.1sg   to a   secretary

b. *Vi   una   secretaria.*
   saw.1sg   a   secretary
   'I saw a secretary'

In this minimal pair a distinction in terms of interpretation arises: when a QP object is introduced by DOM *a* the only interpretation available is that of [+specific], whereas if the preposition is absent, the QP is unambiguously interpreted as [-specific] (Leonetti 2004; Jiménez-Fernández and Spyropoulos 2013). This brings about some consequences for the licensing conditions of *pro*. If *pro* can only have a [+specific] antecedent, the prediction is that *pro* will be banned when referring back to a [−specific] non-prepositional DO. Consider (21):

(21)   *Vi   una   secretaria.   Llevaba   gafas.*
        saw.1sg a   secretary.   wore.3sg   glasses
        'I saw a secretary. She was wearing glasses'

Contrary to expectations, the outcome in (21) is fully acceptable: the *a*-less DO qualifies as the antecedent of *pro*. Is there any way to reconcile the [+specific] constraint on the antecedent of *pro* with these data? If my analysis based on null copies of AS-Tops is correct, there is certainly a solution for this.

The DO *una secretaria* in (21) is interpreted as non-specific in the first sentence, thereby blocking insertion of DOM *a* (if the preposition is inserted, the interpretation of the DP is that of specific). However, once this secretary is introduced in the context (once the hearer has been presented with information about that secretary), the relevant QP becomes specific and known to the participants, and hence eligible as AS-Top. In other words, it shows that there is a null copy of the secretary in the second sentence, which is marked as [+ specific], and this is precisely what serves as antecedent for *pro*:

(22)   [$_{CP}$ Vi <una secretaria$_i$>] [$_{CP}$ <~~esa secretaria$_i$~~> … [$_{vP}$ *pro*$_i$ llevaba gafas]]

In my analysis the reference of the QP object is resumed in the second clause by positing a specific null copy as AS-Top. Hence the interpretive relation between *pro* and the QP is mediated by this AS-Top which, containing the feature [+ given], assigns this feature to *pro*. This accounts for the given/specific interpretation of *pro*,[6] alongside the specific character of its antecedent in line with Frascarelli (2007; to appear).

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[6] Interestingly, non-specific null subjects (what can be called impersonal *pro*) have no AS-Top as antecedent (*pro dicen que Juan ha huido* 'They say that John has flown away'). My analysis predicts this since no matching relation can be established and hence the only reading is that of non-specific. However, a detailed analysis of the discourse properties of non-specific null subjects have to be postponed for future research.

6.   Conclusions

In this paper I have argued that NSs are licensed via matching with a local AS-Top in consistent NS languages such as Spanish. NSs can refer back to any discourse category as long as this is resumed by a (null) AS-Top in the local domain of *pro*, thereby explaining why the antecedent of a NS is always [+specific]. The referential (i.e. [+ specific] status) of NSs is accounted for by the matching relation between the *fake* antecedent, the *real* antecedent AS-Top and *pro*.

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