Interpretive asymmetries between null and overt PRO in complement and adjunct infinitives in (Colombian) Spanish

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Abstract

Cross-linguistically, control complement clauses have been reported to allow overt pronominal subjects displaying the diagnostics of obligatory control ('Overt PRO'; see Livitz 2011; Mensching 2000; Szabolcsi 2009). Building on Gómez (2017), we extend the empirical range of the overt PRO phenomena to *para*-finality adjunct clauses in (Colombian) Spanish. We show that the controlled subject of *para*-infinitives —be it null or overt PRO— has the same distribution and interpretive properties as that of complement infinitives. We bring to light unexpected asymmetries in the interpretive properties of overt *vs*. null PRO which we dub the *Overt vs. covert PRO paradox*: while they both only allow a bound variable reading under ellipsis, overt PRO, unlike null PRO, also allows a

coreferential reading under association-with-focus. Here again, the data are identical in complement *vs.* adjunct control clauses. We account for this paradox with the *Anaphor Generalizations*, which state that (i) both overt and null anaphors must be syntactically bound, and (ii) while null anaphors must, overt anaphors can but need not be semantically bound. We further show how these generalizations can be extended to account for similar patterns of interpretation with English/French inherently vs. overtly reflexivized predicates.

Keywords: obligatory control; overt/null PRO; binding; anaphora; (Colombian) Spanish

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1.   Introduction*

The literature on obligatory control in complement clauses has observed the existence of overt controlled pronominal subjects that alternate with null PRO. This alternation is illustrated in (1)-(4):

(1)   María$_i$ quiere [ir   PRO$_{i/*j}$ /ella$_{i/*j}$ al   cine].
      María wants go.INF   she   to.the movie.theater
      'María wants to go herself to the movie theater'
                              (Spanish; adapted from María L. Hernanz (1982, p. 344))

(2)   Nem akar   [PRO$_{i/*j}$ /cask ő$_{i/*j}$ menni busszal].
      not   want.3SG   only he   go.INF bus.with
      'He/she doesn't want to be the only one to take the bus.'
                        (Hungarian; Szabolcsi (2005:621) quoted from Livitz (2014:144))

(3)   Gianni$_i$ odierebbe   [andare PRO$_{i/*j}$ /anche lui$_{i/*j}$ a Milano].
      Gianni would.hate.3SG go.INF   also   he   to Milan
      'Gianni would hate it if also he went to Milan.'
                           (Italian; Szabolcsi (2005:621) quoted from Livitz (2014:144))

(4)   Decidiu [PRO$_{i/*j}$ ir   ele$_{i/*j}$ ao   mercado].
      decide   go.INF he   to.the market
      'He decided to go/ that he would be one to go to the market.'
                                   (European Portuguese; Barbosa (2009:103-104))

Szabolcsi (2009) and Livitz (2011, 2014) show that these pronominal subjects display properties of obligatory control (OC) PRO, and can therefore be characterized as the overt counterpart of null PRO, so called 'overt PRO' (see also Mensching (2000, pp. 61-62) Alonso-Ovalle & D'Introno (2000), Barbosa (2009, 2018), and Herbeck (2015, 2018)). Barbosa (2009, 2018) further points out that languages with overt PRO seem generally to be pro-drop languages.

The existence of overt controlled pronominal subjects raises important issues for the theory of Control.[1] This paper sets out to contribute novel empirical and theoretical generalizations to these issues. First, we extend the empirical range of these phenomena to adjunct clauses in Colombian Spanish. We provide a detailed study of the properties of overt vs. null subjects in a subtype of infinitives introduced by the preposition *para*, namely *para*-finality clauses (or *para*-adjuncts for short) according to the terminology of Galán Rodriguez (1999), María Luisa Hernanz (1999), Pérez Vázquez (2007), and Schulte (2007).

Second, we carry out a detailed comparative analysis of the distributive and interpretive properties of overt vs. null PRO across both complement and *para*-finality infinitival clauses in final position.

In Pérez Vázquez's (2007) typology, *para*-finality clauses are adjuncts that serve to express an intention motivating the action described by the main clause. Crucially, they allow controlled overt pronominals —i.e., overt PROs— in subject position, in alternation with PRO. Gómez (2017) was to our knowledge the first to systematically test the availability and the interpretation of overt PRO in *para*-finality adjunct clauses in Colombian Spanish with an experimental study (see also Gómez (in progress)).[2]

Obligatory control in *para*-adjuncts with both overt and null PRO is illustrated in (5) and (6):

(5)   Laura$_i$ ha comprado el   libro [para PRO$_{i/*k}$ /ella$_{i/*k}$ poder   estudiar].
      Laura has bought   the book for   she   can.INF study.INF

      'Laura has bought the book in order for herself to be able to study.'

(6)   Juan$_i$ se   fue [para él$_{i/*j}$ /PRO$_{i/*j}$ estar   feliz].
      Juan CL.3 left for   he   be.INF happy

      'Juan left in order to be happy.'

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1   There is a rich literature on the properties of overt and null subjects of infinitives in Spanish. A broad comparative analysis of the different types of infinitives is beyond the scope of this paper. See however Gómez, Duguine, & Demirdache (to appear) (and references therein) for a systematic exploration of the properties of overt and null subjects of non-finite adjuncts headed by the prepositions *para*, *sin* and *al*, where we observe important variation in the properties of both overt and null subjects.

2   The experimental study carried out in Gómez (in progress) involved 34 native speakers from Colombia, 1 speaker from Bolivia and 1 from Mexico, all of them native speakers of Spanish. The goal was to test the interpretation of overt pronominal subjects in three different types of adjunct clauses, using the distribution of sloppy and strict readings to establish whether control is obligatory or not. The results confirmed, in particular, that the overt pronominal subject in *para*-infinitives is obligatorily controlled (e.g. it only allows sloppy construals), thus patterning like the null subject of *para*-infinitives, which likewise was only accepted on a sloppy reading (see section 2 below for further discussion).

We apply obligatory control diagnostics to both overt and null PRO and in both complement and *para*-adjunct clauses to probe their distribution and interpretation. We will show that null and overt PRO subjects have identical syntactic properties across both complement and *para*-adjunct clauses. In a nutshell, they are obligatorily c-commanded by a local controller. We uncover, however, a surprising asymmetry in the interpretive properties of null vs. overt PRO which, importantly, holds alike across both complement and *para*-adjunct infinitival clauses.

Obligatory controlled PRO is expected to allow only bound variable (BV) construals under the two canonical tests for pronominal interpretation: ellipsis and association-with-focus (where the controller for PRO is associated with a focus particle such as *only* or *even*) —see Hornstein (1999) and Landau (2000, 2013) and references therein. Here we show that both null and overt PRO behave as obligatory controlled under the ellipsis test. However, overt PRO contrasts with null PRO in not behaving as obligatory controlled under the association-with-focus test, since it allows for coreferential readings (in addition to the expected BV reading). We dub these asymmetrical patterns of interpretation the overt vs. covert PRO paradox:

(7)   **Overt vs. Covert PRO paradox**

(i)   Both null and overt PRO only allow BV interpretations under the ellipsis test.

(ii)   Overt PRO, unlike null PRO, also allows coreferential interpretations under the association-with-focus test.

Why do null PRO and overt PRO pattern differently (yield conflicting results) with respect to the two standard tests for pronominal interpretation? In particular, why does overt PRO, unlike null PRO, also allows coreference interpretations, and why so only under the association-with-focus test, but not under the ellipsis test?

Importantly, we further show that the conflicting patterns of interpretations that arise across the two types of control clauses is not an exclusive property of overt referentially dependent pronouns surfacing in control constructions, but more generally of overt SELF-anaphors such as *himself* in English and *se* in French. As pointed out by Büring (2005) and Sportiche (2014, pp. 6-7), SELF-anaphors only allow sloppy identity (BV) readings in contexts of VP-ellipsis (VPE). However, in contexts of association-with-focus, they allow both strict (coreferential) and sloppy readings, as illustrated by the paradigm in (8)-(9):[3]

(8)   a.   John shaved himself and Pierre did too.

b.   Jean s'est   rasé   et   Pierre aussi.
     Jean SELF.is shaved and Pierre also
     'Jean shave himself and Pierre did too.'

(i)   ✓Sloppy reading (BVA):
     Pierre shaves Pierre, too.

(ii)   ✗Strict reading (coreference):
     Pierre shaves John, too.

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3   See section 3 for the derivation of these readings.

(9)   a. Only Pierre shaves himself.

       b. Seul Pierre se   rase.
only Pierre SELF shave

          'Only Pierre shaves himself.'

        (i) ✓Sloppy reading (BVA):
No one other than Pierre shaves himself.

      (ii) ✓Strict reading (coreference):
No one other than Pierre shaves Pierre.

We show that these facts follow naturally from the Anaphor Generalizations in (10), which appeal to a distinction between syntactic vs. semantic binding, as advocated by Büring (2005) a.o. (see section 3).

(10) **The Anaphor Generalizations:**

     (i)   Both null and overt anaphors need to be syntactically bound.

    (ii)   Overt anaphors *can* be semantically bound, null anaphors *must* be semantically bound.

The paper is structured as follows. Section 2 establishes the properties of overt and null subjects in both complements and *para*-adjunct clauses, on the basis of the diagnostic tests for obligatory control identified in the literature, converging on the paradox put forth in (7). Section 3 develops an analysis in terms of the Anaphor Generalizations in (10), showing that the latter can account not only for the contrast between null PRO vs. overt PRO, but can also be extended to overt SELF-anaphors. Section 4 concludes the paper, drawing a parallel between the asymmetries found with null vs. overt PRO and those found with inherently vs. overtly reflexivized predicates in English and French.

2.   A double paradox in complement and adjunct control infinitivals

The goal of the present section is to explore the distributive and interpretive properties of null vs. overt pronominal subjects in nonfinite complement clauses, as well as in nonfinite *para*-adjuncts in (Colombian) Spanish.[4]

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4   It has sometimes been claimed in the literature that the overt pronominals illustrated in (1)-(6) are not the genuine subject of the infinitival clause, but are rather doubling elements modifying the null PRO subject (see for example Piera 1987; Suñer 1986; Torrego 1996 on Spanish). More recently however, scholars have provided evidence showing that such pronominals are the actual subjects of the clause (see Alonso-Ovalle & D'Introno 2000; Barbosa 2009, 2018; Duguine 2013; Mensching 2000; Szabolcsi 2009). We offer below an argument from Spanish (inspired by Barbosa (2009; 2018)): overt pronominals in Spanish cannot double any DP, including in particular preverbal derived (unaccusative/passive) subjects (i), unlike English adjunct anaphors which can modify any type of argument DP (ii). The contrast between ungrammatical (i) and grammatical (iv) follows on the assumption that the overt pronominal in (iv) is not a doubling element, but a postverbal subject, on a par with (iii).

  (i)   *La directora vino /fue castigada ELLA.
the director came /was punished SHE
'The director was punished.'

To this effect, we apply to the null and overt pronominal subjects of both types of infinitival clauses a set of criteria developed and widely used in the literature for identifying obligatory control (OC) vs. non obligatory control (NOC) (cf. Baltin, Déchaine, & Wiltschko 2015; Hornstein 1999; Landau 2000, 2013; Williams 1980). The relevant tests are illustrated below, with an OC infinitive in English:

(11)   a.   *John's campaign expects [PRO to shave himself].

      b.   *John thinks that it was expected [PRO to shave himself].

      c.   Mary expected [PRO to attend the ceremony], and Sue did too.

        (i)   ✓Sloppy (BVA):
           Sue expected that Sue would attend the ceremony.

        (ii)   ✗Strict (coreference):
           Sue expected that Mary would attend the ceremony.

      d.   Only Peter claimed [PRO to be the winner].

        (i)   ✓Sloppy (BVA):
           No one else claimed that he himself is the winner.

        (ii)   ✗Strict (coreference):
           No one else claimed that Peter is the winner.

Obligatorily controlled PRO must be c-commanded by an antecedent (11a), in a local dependency (11b). It also allows only sloppy interpretations under the two standard tests for bound variable vs. coreferential interpretations —that is, ellipsis (Lebeaux, 1985, p. 351) and association-with-focus (Jerry, 1975)—, as shown in (11c) and (11d) respectively.

We follow below these criteria to determine whether null and overt nonfinite subjects display obligatory control in Spanish complement and *para*-adjunct control clauses.[5]

(ii)   The director (herself) was punished/ came (herself).

(iii)   Vino /fue castigada ELLA.
     came /was punished SHE

     'She came/was punished.'

(iv)   La directora quiso venir /ser castigada ELLA.
     the director wanted come.INF /be.INF punished SHE

     'The director wanted to be the one who would come /be punished.'

Note moreover that Barbosa shows with focus tests that infinitival postverbal pronominal subjects such as the one in (iv) must be interpreted inside the infinitival clause (as opposed to the matrix).

5   Perez Vazquez (2007) divides adjunct clauses headed by the preposition *para* in three classes: concessives, consecutives and finality/finals. Concessives allow referentially free postverbal subjects, consecutives do not accept overt subjects, and finals only allow referentially dependent overt pronominal subjects (see also María L. Hernanz (1982, p. 413)). As pointed out by a reviewer, Torrego (1998) gives the following piece of data with an overt non-pronominal subject, in what we would classify as a finality/final *para*-adjunct under Perez Vazquez' (2007) typology:

(i)   Para   celebrar   Rita su cumpleaños, *pro* se fue de viaje al   Caribe
    in.order celebrate.INF Rita her birthday   CL went of trip   to.the Caribbean

    'In order for Rita to celebrate her birthday, she went on a trip to the Caribbean.'

Results reveal a striking parallelism between these two types of subordinate clauses. We go on to highlight, however, a surprising set of interpretive asymmetries —between overt vs. null dependent subjects on the one hand, and between contexts of ellipsis vs. contexts of association-with-focus on the other hand— which we formulate as the "Overt vs. covert PRO paradox".

2.1   *Obligatory control criteria with overt and null subjects*

We saw in section 1 that both complement and *para*-adjunct nonfinite clauses allow null, as well as overt, referentially dependent pronominal subjects. We apply below the criteria for distinguishing OC vs. NOC to these two types of pronominal subjects. It appears that both types satisfy the criteria for OC (12)-(17), except in one unexpected instance (18). First, c-command by the matrix controller is mandatory for both null PRO subjects ((a) examples) and overt PRO subjects ((b) examples), be it in complement (12) or *para*-adjunct clauses (13):

(12)   a.   [El hijo de Eduard$_k$]$_i$ prometió hacer [Ø]$_{i/*k}$ la cena.

   b.   [El hijo de Eduard$_k$]$_i$ prometió hacer   él$_{i/*k}$ la cena.
        the son of Eduard   promised make.INF he   the dinner
        'Eduard's son promised to prepare himself the dinner.'

(13)   a.   [El hermano de Juan$_k$]$_i$ se fue [para [Ø]$_{i/*k}$ estar feliz].

   b.   [El hermano de Juan$_k$]$_i$ se   fue [para él$_{i/*k}$ estar   feliz].
        the brother of Juan   CL.3 left for   he   be.INF happy
        'Juan's brother left in order for himself to be happy.'

   Non-local controllers are not allowed:

(14)   a.   Diana$_k$ recuerda [que Alba$_i$ prometió [encargarse [Ø]$_{i/*k}$de la fiesta]].

   b.   Diana$_k$ recuerda   [que Alba$_i$ prometió [encargarse   ella$_{i/*k}$ (misma) de
        Diana remembers that Alba promised take.charge.INF she   SELF   of
        la fiesta]].
        the party
        'Diana remembers that Alba promised to organize herself the party.'

(15)   a.   Pedro$_k$ sabe [que Juan$_i$ se fue [para [Ø]$_{i/*k}$ estar feliz]].

   b.   Pedro$_k$ sabe   [que Juan$_i$ se   fue [para él$_{i/*k}$ estar   feliz]].
        Pedro knows that Juan CL.3 left for   he   be.INF happy
        'Pedro knows that Juan left in order for himself to be happy.'

   Only sloppy readings are allowed under ellipsis:[6]

The possibility of having a referentially free overt DP in a *para*-finality clause is unexpected under Perez Vazquez' typology. Moreover, there appears to be some variation since none of the native speakers we consulted accept this sentence as grammatical. Interestingly, however, the subjects of the *para*-adjunct and the matrix clause are anaphorically linked in (i), just like in control constructions. We leave the exploration of these issues for future research.

6   Spanish does not admit VP-ellipsis, but allows ellipsis of larger structures (Dagnac, 2010; Saab, 2010).

(16) a. Ana prefiere [comprar [Ø] los disfraces] y Carla también.

   b. Ana prefiere comprar ella (misma) los disfraces y   Carla también.
      Ana prefers buy.INF she SELF   the costumes and Carla also

      'Ana prefers to buy herself the costumes and Carla does too.'

      (i)   ✓Sloppy reading (BVA):
           Carla prefers she herself to buy the costumes.

      (ii) ✗Strict reading (coreference):
           Carla prefers that Ana buys the costumes.

(17) a. Juan se fue [para [Ø] estar feliz] y María también.

   b. Juan se   fue [para él estar   feliz] y   María también.
      Juan CL.3 left for   he be.INF happy and María also

      'Juan left in order for him to be happy and María did too.'

      (i)   ✓Sloppy reading (BVA):
           María left in order for herself to be happy.

      (ii) ✗Strict reading (coreference):
           María left in order for Juan to be happy.

   Recapitulating: overt and null subjects pattern exactly alike in the above contexts. They satisfy the first three criteria for obligatory control (as established in (11)) in both types of subordinate clauses. These results confirm the hypothesis that the null subject in the (a) examples is OC PRO, and the pronominal subject in the (b) examples is its overtly realized counterpart 'overt PRO' (Mensching 2000; Ovalle and D'Introno (2001), Livitz 2011, 2014; Herbeck 2015, 2018).

   Importantly, however, null PRO and overt PRO subjects do not pattern alike under association-with-focus:

(18) a. Sólo Eduard prometió [Ø] hacer   la cena.
      only Eduard promised   make.INF the dinner

      'Only Eduard promised to prepare the dinner.'

      (i)   ✓Sloppy reading (BVA):
           No, Daniel also promised to prepare himself the dinner.
           Daniel (λy (y also promised that y prepares the dinner)).

      (ii) ✗Strict reading (coreference):
           No, Daniel also promised that Eduard would prepare the dinner
           Daniel (λy (y also promised that he would prepare the dinner)).
           (he= Eduard)

   b. Sólo Eduard prometió hacer   él la cena.
      only Eduard promised make.INF he the dinner

      'Only Eduard promised to prepare himself the dinner.'

      (i)   ✓Sloppy reading (BVA):
           No, Daniel also promised to prepare himself the dinner.
           Daniel (λy (y also promised that y prepares the dinner)).

      (ii) ✓Strict reading (coreference):
           No, Daniel also promised that Eduard would prepare the dinner

Daniel (λy (y also promised that he would prepare the dinner)).
(he= Eduard)

The statement in (18a) with a null (by hypothesis, PRO) subject can only be denied in one way —that is, on its BVA construal—, as expected. This result signals yet again obligatory control. Crucially, if we substitute null PRO in (18a) with overt PRO as in (18b), the resulting statement can now be denied in either of two ways: on its BV construal (18ai) or its coreferential construal (18aii). This asymmetry between null and overt PRO under the association-with-focus test holds across both complement (18) and *para*-adjunct clauses (19):

(19) a. Sólo María hizo trampa [para [Ø] ganar   el primer lugar].
          only María made trap   for   win.INF the first   place
          'Only María cheated in order for herself to win first place.'

   (i) ✓Sloppy reading (BVA):
        No, Daniela also cheated in order for herself to win.
        Daniela (λy (y also cheated in order for y to win)).

   (ii) ✗Strict reading (coreference):
        No, Daniela also cheated in order for María to win.
        Daniela (λy (y also cheated in order for her to win)).
        (her= María)

   b. Sólo María hizo trampa [para ella ganar   el primer lugar].
       only María made trap   for   she win.INF the first   place
       'Only María cheated in order for herself to win first place.'

   (i) ✓Sloppy reading (BVA):
        No, Daniela also cheated in order for herself to win.
        Daniela (λy (y also cheated in order for y to win)).

   (ii) ✓Strict reading (coreference):
        No, Daniela also cheated in order for María to win.
        Daniela (λy (y also cheated in order for her to win)).
        (her= María)

The availability of a strict coreferential reading for overt PRO alongside its BV reading is surprising, since under all the previous tests, overt PRO has shown the expected OC pattern of interpretation. Association with-focus is thus the only test distinguishing overt PRO from null PRO and calling into question the former's OC status.[7, 8]

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7   Judgments for the association-with-focus test and, more generally all the Spanish data presented here, have been confirmed by 13 native speakers of Spanish: 7 Colombian, 1 Bolivian, 1 Mexican, and 4 speaking Peninsular Spanish.
8   Herbeck (2018) also observes interpretive asymmetries between null and overt PRO in control configurations. He reports, in particular, that PRO can yield distributive (bound variable) as well as collective (coreferential) readings with a weak/cardinal QP controller, whereas with overt PRO, the collective reading is preferred to the distributive reading. He gives the following paradigm to illustrate the contrast (from Herbeck 2018: 183-184). The context for the distributive reading is one in which every neighbor promises to prepare a dinner on a different day of the week, and the context for the collective reading is one where there are four neighbors in the

2.2   *The Overt vs. Covert PRO paradox*

The resulting findings for null and overt PRO in both complement and *para*-adjunct infinitival clauses are summarized in Table 1.

	Standard OC diagnostics	Null PRO		Overt PRO	
		Infinitival complement	Infinitival *para*-adjunct	Infinitival complement	Infinitival *para*-adjunct
Obligatory c-command	YES	YES	YES	YES	YES
Local antecedent	YES	YES	YES	YES	YES
Ellipsis: Sloppy reading	YES	YES	YES	YES	YES
Ellipsis: Strict reading	NO	NO	NO	NO	NO
Association-with-focus: BV reading	YES	YES	YES	YES	YES
Association-with-focus: Coreference reading	NO	NO	NO	**YES**	**YES**

Table 1: Null *vs.* overt subjects in complement and adjunct clauses in Spanish.

While null PRO exhibits a uniform OC pattern, since it must be locally c-

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kitchen promising to prepare the dinner together on the same day of the week.

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

'Four neighbors promise to prepare the dinner.'

   i   ✓BV: Each of the four boys$_i$ promised that he$_i$ would prepare dinner

   ii ✓Coreference: The four boys$_i$ promised that they$_i$ would prepare dinner together

(ii) Cuatro vecinos   prometen   hacer   ellos (mismos) la   cena.
      four   neighbors promise.3PL do.IND they SELVES the dinner

'Four neighbors promise to prepare they (themselves) the dinner.'

   i   ✗/? BV: Each of the four boys$_i$ promised that he$_i$ would prepare dinner

   ii ✓Coreference:The four boys$_i$ promised that they$_i$ would prepare dinner together

Note, however, that if we change the direct object *la cena* in (2), to *piñatas* as in (3), both the collective reading where the three neighbors meet to buy and bring all the piñatas together to the party, and the distributive reading where each neighbor buys and brings a different piñata to the party are readily available with overt PRO. (4) further illustrates the availability of a distributive reading for overt PRO with an inherently distributive infinitival predicate.

(iii) Tres vecinas   prometieron traer   ellas (mismas) las piñatas.
       three neighbors promise.3PL bring.INF they SELVES   the piñatas
'Three neighbors promise to bring they (themselves) the piñatas.'

   i   ✓BV: Each of the three neihbors$_i$ promised that she$_i$ would bring the piñatas

   ii ✓Coreference: Each of the three neihbors$_i$ promised that they$_i$ would bring the piñatas together

(iv) Cuatro amigas quieren   ser   ellas más altas y   delgadas.
      four   friends want.3PL be.INF they more tall and slim
'Four friends wanted (themselves) to be taller and slimmer.'

commanded by its antecedent, and only yields BV readings under both the ellipsis and the association-with-focus test, overt PRO exhibits most, but not all the properties of OC. It must be locally c-commanded by its antecedent, and yields only BV readings under ellipsis, just as is the case with null PRO. Crucially, however, under the association-with-focus test, overt PRO shows more interpretive possibilities than null PRO, since it yields a coreferential reading alongside the BV reading. In sum, both null and overt PRO pattern alike with respect to the syntactic criteria for OC (c-command and locality) across these two types of clauses. Regarding their interpretive properties, however, an unexpected contrast arises, which we dub the overt vs. covert PRO paradox:

(20)   **Overt vs. Covert PRO paradox**

   (i)   Both null and overt PRO only allow BV interpretations under the ellipsis test.

   (ii)   Overt PRO, unlike null PRO, also allows coreferential interpretations under the association-with-focus test.

   Why do null PRO and overt PRO pattern differently (yield conflicting results) with respect to the two standard tests for pronominal interpretation? In particular, why does overt PRO, unlike null PRO, also allows coreference interpretations, and why so only under the association-with-focus test, but not under the ellipsis test?

As we shall now see, the answer to these paradoxes is to be found in the interaction of the binding requirements holding over null vs. overt anaphors.

3.   The Anaphor Generalizations

We argue that the solution to the Overt vs. Covert PRO paradox lies in the Anaphor Generalizations put forth in (21) (repeated from (10) above), which appeal to the distinction between syntactic binding and semantic binding, as advocated by Büring (2005) and Heim & Kratzer (1998) for instance. Syntactic binding requires a bindee to be c-commanded by and coindexed with its binder (cf. Chomsky (1981)), while semantic binding requires the bindee to be interpreted at LF as a variable bound by a predicate abstractor/λ-operator (cf. Büring 2005; Heim & Kratzer 1998 a.o):

(21)   **The Anaphor Generalizations:**

   (i)   Both null and overt anaphors need to be syntactically bound.

   (ii)   Overt anaphors can be semantically bound, null anaphors *must* be semantically bound.

(21) requires null anaphoric expressions such as PRO to be both syntactically and semantically bound, while only enforcing syntactic binding for overt anaphors.

Consider first the ellipsis context in (18)-(19) above, repeated in (22) and (23). Recall that both overt and null PRO allow sloppy, but not strict interpretations under ellipsis:

(22)   Ana prefiere comprar [Ø] /ella (misma) los disfraces y   Carla también.
       Ana prefers buy.INF   she SELF   the costumes and Carla also
       'Ana prefers to buy herself the costumes and Carla did too.'

    (i)   ✓Sloppy reading (BVA):
         Carla prefers she herself to buy the costumes.

    (ii) ✗Strict reading (coreference):
         Carla prefers that Ana buys the costumes.

(23)   Juan se   fue [para [Ø]/ él estar   feliz] y   María también.
       Juan CL.3 left for   he be.INF happy and María also
       'Juan left in order for him to be happy and María did too.'

    (i)   ✓Sloppy reading (BVA):
         María left in order (for herself) to be happy.

    (ii) ✗Strict reading (coreference):
         María left in order for Juan to be happy.

The syntactic binding requirement in (21i) straightforwardly accounts for this contrast. As shown in (24), the sloppy reading of the elided infinitival clause satisfies syntactic binding since, be it null or overt, PRO in the second conjunct is bound by the matrix subject.

(24)   Sloppy reading (ellipsis test).
    a. Ana$_i$ prefiere [comprar ella$_i$/[Ø]$_i$ los disfraces] y Carla$_k$ también prefiere [comprar ella$_k$/[Ø]$_k$ los disfraces].
       'Ana prefers to buy herself the costumes and Carla also prefers to buy herself the costumes.'
    b. Juan$_i$ se fue [para él$_i$/[Ø]$_i$ estar feliz] y María$_k$ también se fue [para ella$_k$/[Ø]$_k$ estar feliz].
       'Juan left in order for himself to be happy and María also left in order for herself to be happy.'

In contrast, the strict (coreferential) reading of the elided infinitival clause would necessarily involve a configuration where the overt/null PRO in the second conjunct is bound by its antecedent, the matrix subject in the first conjunct, in contravention of the syntactic binding requirement in (21i), as shown in (25):

(25)   Unavailable strict reading (ellipsis test).
    a. *Ana$_i$ prefiere [comprar ella$_i$/[Ø]$_i$ los disfraces] y Carla$_k$ también prefiere [comprar ella$_i$/[Ø]$_i$ los disfraces].
       'Ana prefers to buy herself the costumes and Carla also prefers to buy herself the costumes.'
    b. *Juan$_i$ se fue [para él$_i$/[Ø]$_i$ estar feliz] y María$_k$ también se fue [para él$_i$/[Ø]$_i$ estar feliz].
       'Juan left in order for himself to be happy and María also left in order for Juan to be happy.'

Turning to the paradigms from the association-with-focus test, repeated below as (26) and (27), we found that the overtness of PRO matters for the licensing of the coreference interpretation. While the BV reading obtains with both null and overt PRO, the coreferential reading only obtains with overt PRO:

(26)   Null PRO

    a.   Sólo Eduard prometió [[Ø] hacer   la   cena].
        only Eduard promised   make.INF the dinner

        'Only Eduard promised to prepare the dinner.'

      (i)   ✓Sloppy reading (BVA):
          No, Daniel also promised to prepare himself the dinner.
          Daniel (λy (y also promised that y prepares the dinner)).

      (ii) ✗Strict reading (coreference):
          No, Daniel also promised that Eduard would prepare the dinner
          Daniel (λy (y also promised that he would prepare the dinner)).
          (<u>he</u>= <u>Eduard</u>)

    b.   Sólo María hizo trampa [para [Ø] ganar   el   primer lugar].
        only María made trap   for   win.INF the first   place

        'Only María cheated in order for herself to win first place.'

      (i)   ✓Sloppy reading (BVA):
          No, Daniela also cheated in order for herself to win.
          Daniela (λy (y also cheated in order for y to win)).

      (ii) ✗Strict reading (coreference):
          No, Daniela also cheated in order for María to win.
          Daniela (λy (y also cheated in order for her to win)).
          (<u>her</u>= <u>María</u>)

(27)   Overt PRO

    a.   Sólo Eduard prometió [hacer   él la   cena].
        only Eduard promised make.INF he the dinner

        'Only Eduard promised to prepare himself the dinner.'

      (i)   ✓Sloppy reading (BVA):
          No, Daniel also promised to prepare himself the dinner.
          Daniel (λy (y also promised that y prepares the dinner)).

      (ii) ✓Strict reading (coreference):
          No, Daniel also promised that Eduard would prepare the dinner
          Daniel (λy (y also promised that he would prepare the dinner)).
          (<u>he</u>= <u>Eduard</u>)

    b.   Sólo María hizo trampa [para ella ganar   el   primer lugar].
        only María made trap   for   she win.INF the first   place

        'Only María cheated in order for herself to win first place.'

      (i)   ✓Sloppy reading (BVA):
          No, Daniela also cheated in order for herself to win.
          Daniela (λy (y also cheated in order for y to win)).

(ii) ✓Strict reading (coreference):
No, Daniela also cheated in order for María to win.
Daniela (λy (y also cheated in order for her to win)).
(<u>her</u>= <u>María</u>)

Under the association-with-focus test, all the configurations giving rise to the two alternative readings available for overt/null PRO satisfy the syntactic binding condition in (21i). The latter is thus not what filters out the coreferential reading with null PRO. Rather, (21ii) is the condition that explain why null and overt PRO do not allow identical interpretations in such contexts. Given (21ii), null PRO, unlike its overt counterpart, must be semantically bound, and thus obligatorily interpreted as a BV, be it in complement or adjunct control infinitives. That overt PRO, on the other hand, need not be semantically bound, explains why overt PRO in (27a) and (27b), unlike null PRO in (26a) and (26b), allows the coreferential construal where the embedded pronoun is not semantically bound by the matrix subject, in addition to the BV construal.

4.   Conclusion: beyond OC, on overt anaphors more generally

This paper has studied obligatory control through the prism of the alternation between null and overt PRO subjects in Spanish complement and *para*-adjunct infinitival clauses. We have uncovered a two-way contrast: between the two standard contexts distinguishing BVA and coreference, as well as between the overt vs. null status of the PRO subject. Importantly, this two-way contrast holds across both types of control clauses, be it complement clauses or *para*-adjunct clauses. The Anaphor Generalizations put forth in (21) account for this double Overt vs. Covert PRO paradox.

We now suggest that the pattern of interpretation characterizing overt PRO reflects a more general property of overt anaphors. As illustrated with the paradigm in (28) and (29) (repeated from (8) and (9) above), this very same pattern also characterizes overt SELF-anaphors, which is as expected under the Anaphor Generalizations in (21):

(28) a. John shaved himself and Pierre did too.

b. Jean s'est   rasé et   Pierre aussi.
Jean SELF is   shaved and   Pierre also

'Jean shave himself and Pierre did too.'

(i) ✓Sloppy reading (BVA):
Pierre shaves Pierre, too.

(ii) ✗Strict reading (coreference):
Pierre shaves John, too.

(29) a. Only Pierre shaves himself.

b. Seul Pierre se   rase.
only Pierre SELF shave

'Only Pierre shaves himself.'

(i) ✓Sloppy reading (BVA):
No other (λy (y shaves y)).

(ii) ✓Strict reading (coreference):
No other (λy (y shaves him)).
(<u>him</u>= <u>Pierre</u>)

Just as was the case with overt PRO, overt anaphors allow a coreferential reading under the association-with-focus test in (29), as expected since the configuration yielding this reading satisfies both Anaphor Generalizations (the SELF-anaphor is syntactically bound, and need not be semantically bound). And again, overt anaphors, just like overt PRO, do not allow the coreferential reading under the ellipsis test in (28), as expected since here the configuration yielding this reading (where the subject of the first conjunct serves as the antecedent of the anaphor in the second conjunct) does not meet the syntactic binding requirement in (21i).[9]

As is well known, however, *shave* also has an inherently reflexive (unergative) use. As we can see in (30) and (31), when the verb appears with no overt reflexive marking, the sloppy/BV reading is enforced under the association-with-focus test, just as it is under the ellipsis test:

(30)   John shaves and Daniel does too.

(i)   ✓Sloppy reading (BVA):
Daniel(λy (y shaves y)).

(ii) ✗Strict reading (coreference):
Daniel(λy (y shaves him)).
(<u>him</u>= <u>John</u>)

(31)   Only John shaves.

(i)   ✓Sloppy reading (BVA):
No other(λy (y shaves y)).

(ii) ✗Strict reading (coreference):
No other(λy (y shaves him)).
(<u>him</u>= <u>John</u>)

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[9]   Büring (2005: 141) also discusses the wrong prediction made for reflexives in association-with-focus constructions (namely, that they should only allow BV construals, contrary to fact), concluding with a suggestion similar in spirit to ours: "As far as I know, this wrong prediction has not been addressed in the pertinent literature. The only immediate way to capture this behavior would seem to be to reformulate Binding Condition A so as to require that reflexives be either semantically or syntactically bound within their local domain, accepting the fact that Binding Conditions A and B are simply not on a par." This latter suggestion, however, does not carry over straightforwardly to ellipsis contexts where, as pointed out by Büring himself, the pattern is more complex. Roughly, strict readings are generally impossible in coordinated ellipsis (i), but possible in subordinated ellipsis (ii), a generalization due to Hestvik (1992):

(i)   John defended himself, and Peter too. (sloppy only)

(ii)   John defended himself better than Peter. (strict or sloppy)

As Hestvik points out, the crucial factor at play in subordinated ellipsis –but lacking in coordinated ellipsis– is that the matrix antecedent of the reflexive on the strict reading c-commands the ellipsis site and, as such, can bind the anaphor in the elided VP. This contrast, however, is in keeping with our anaphor generalization in (21a), since the anaphor in the ellipsis site will satisfy the syntactic binding requirement in (ii), but not in (i).

This sharp contrast between predicates overtly marked as reflexive by a SELF-anaphor vs. predicates inherently (that is, lexically) marked as reflexive fits very nicely with the Anaphor Generalizations in (21). On its unergative, inherently reflexive use, *shave* is marked in the lexicon as having a reflexive meaning (i.e. $\lambda x(x \text{ shave } x)$) —that is, as having its two co-arguments semantically bound by the same λ-operator. Since semantic binding is enforced by the lexical meaning of the predicate, it follows that (31) will only allow the sloppy/BV construal. On its transitive reflexive meaning, however, *shave* takes as internal argument an overt SELF-anaphor. Since the latter can but need not be semantically bound, it follows that (29) allows both the sloppy/BV and strict/coreferential construals.[10]

We started off this paper by pointing out interpretative contrasts between null and overt PRO in Spanish complement and *para*-adjunct infinitival clauses. We imputed this contrast to the interaction between syntactic and semantic binding. We close by showing that the very same interpretative contrasts are found with verbs reflexivized by an overt SELF-anaphor (as opposed to their inherently reflexive counterpart), thus adducing further evidence for the claim that overtness matters for semantic binding, since semantic binding unlike syntactic binding, is not always enforced with overt anaphors.

More importantly, however, the parallel drawn above shows that the interpretive contrasts between overt vs. null PRO uncovered in this paper are not characteristic of control proper and, as such, should not fall under the theory of control, but rather should fall under a theory of anaphora, since the relevant interpretive asymmetries extend to overt SELF-anaphors.

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10   Recall from footnote 9 that comparatives which involve subordinating ellipsis, as opposed to coordinating ellipsis, allow both strict and sloppy readings, as discussed by Hestvik and Büring, and illustrated in (i) vs. (ii), footnote 9. The relevant observation here is the contrast pointed out by Alexiadou & Schäfer (2014) with comparatives with inherently reflexivized verbs. That is to say, while comparatives with overt SELF-anaphors (e.g. *John washes himself more than George*) allow both the sloppy (e.g. *John washes himself more than George washes himself*) or the strict (e.g. *John washes himself more than George washes John*) reading, comparatives with the corresponding inherently reflexive verb (e.g. *John washes more than George*), only allow the sloppy reading, as expected.

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