

Reflexivity and adjustment strategies at the interfaces^{*}

Ismael Teomiro

Universidad Autónoma de Madrid

Abstract

I argue in this work that Reinhart & Reuland's (1993) conditions A and B hold for Spanish. I provide evidence supporting the hypothesis that this language makes use of both SE and SELF-anaphors. Inherent reflexive verbs undergo an internal argument reduction operation in the lexicon. However, the syntax always requires two arguments. Therefore certain clitics, which are SE-anaphors, are inserted in these derivations. This is a last-resort mechanism that makes an adjustment between the valence of the lexical entry of the verb and the requirements of the syntax in order for the derivation to converge at the C-I interface. These clitics are syntactic arguments. Nevertheless, they are not interpreted as semantic arguments since they violate the *double chain condition*, which forces nominal elements to share both a tense and thematic features with the verb and the tense heads. Non-inherent reflexive verbs require the presence of a SELF-anaphor, which is formed out of a SE-anaphor along with a protector SELF element. Therefore, both syntactic elements are interpreted as two distinguishable semantic elements at C-I despite the fact that there is binding between them both. The interpretation of both syntactic elements as just one semantic element is a pragmatic epiphenomenon.

1. Introduction

I will show in this paper that Spanish makes use of both complex (SELF-) and simple (SE-) anaphors as other Germanic languages do. The SE-anaphors do not obey either Chomsky's (1981) Condition A or Condition B. Therefore, they can be either locally bound, as it occurs with *inherent reflexive verbs*, or non-locally bound (though this possibility is not attested in Spanish, i.e. binding in Reuland & Koster's (1991) domains 2 and 3). The SELF-anaphors in Spanish (which are formed following the pattern *x+mismo*) are necessary to license the reflexive reading of *non-inherent reflexive verbs*. The clitics that appear with inherent reflexive verbs are SE-anaphors inserted along the syntactic derivation as last resort mechanism in order for the derivation to converge at the C-I interface. The clitics are needed to adjust the valence (arity) of the verb and the formal requirements of the syntax. In conclusion, I will show that Reinhart & Reuland's (1993) A and B Conditions hold for English, Dutch and Spanish. The cross-linguistic variation in the occurrence of SE-anaphors with inherent reflexive

* I acknowledge support by the Spanish Ministry of Science and Innovation (BES-2006-11703) and by the project 'Optionality and Pseudo-Optionality in Native and Non-Native Grammars' (FFI2008- 01584/FILO).

verbs will be explained in terms of conditions on the spell-out of the φ -features of SE-anaphors (i.e. by resorting to mechanisms at the S-M interface).

The paper is structured as follows. The second section is devoted to presenting the empirical data regarding reflexivization in English, Dutch and Spanish. Subsequently, the theoretical background to be used throughout the paper is exposed. In the third section I put forward the working hypotheses on the anaphoric system of Spanish, and I provide an analysis that accounts for the semantic and syntactic properties of the inherent and non-inherent reflexive verbs, as well as the semantic differences introduced by the SE- and SELF-anaphors. In the fourth section I argue that the differences among English, Dutch and Spanish reflexive verbs are due to mechanisms at the syntax-phonology interface. Finally, I present the conclusions in the last section.

2. Reflexivity in Romance and Germanic

In this section I review the basic empirical data regarding reflexivization in English, Dutch, and Spanish. Other languages such as German, French and Italian, may be sometimes mentioned here they but are, nevertheless, left aside and out of the scope of this work.

2.1 Reflexivity in English and Dutch

The Canonical Binding Conditions (CBC) in (1) are proposed by Chomsky (1981) in the framework of Government & Binding to account for the distribution and the referential interpretation of the pronouns.

(1) *Canonical Binding Conditions (CBC):*

A. An anaphor is bound in its governing category.

B. A pronominal is free in its governing category.

Where γ is a governing category for β iff γ is the minimal category containing β , a governor of β , and a SUBJECT (accessible to β); and α binds β iff α and β are coindexed and α c-commands β .

The CBC distinguish two types of pronouns: anaphors and pronominals. An anaphor is *himself* in (2a), which must be bound in its local configuration. This is defined by means of the concept *governing category*. A pronominal is *him* in (2b), which must be free (not bound by any antecedent) in its governing category. Nevertheless, an antecedent outside the governing category can bind a pronominal.

(2) a. Gandalf_i bewitched *himself*_{i/*j}.

b. Gandalf_i bewitched *him*_{j/*i}.

The CBC and the data in (2) summarize fairly well the basic facts concerning reflexivization in English. Nevertheless, Everaert (1986), Reinhart & Reuland (1991), Reuland & Koster (1991) and Reinhart & Reuland (1993), among many others linguists, noted that the CBC were too restrictive so as to account for the behaviour of the anaphors in languages other than English. It can be seen in (3) that Dutch has a two-way anaphoric system (both (3a) and (3b) are anaphors despite their morphological differences) unlike English, which has just one type of anaphor (2a).

- (3) a. Frodo waste **zich**
Frodo washed zich
 ‘Frodo washed (himself)’
 b. Frodo zag **zichzelf**
Frodo saw zichzelf
 ‘Frodo saw himself’

The anaphor *zichzelf* in (3b) is basically equivalent to *himself* in (2a), and it obeys Condition A. This kind of anaphors is called SELF-anaphor. On the other hand, the anaphor *zich* in (3a) does not obey Condition A (unlike *zichzelf*). Therefore, an antecedent outside its governing category can bound *zich* as in (4). In this case, it can also alternate with the pronominal *hem* (similar to English *him*), which obeys Condition B. This kind of anaphors is called SE-anaphors.

- (4) Frodo_i zag [jou achter zich_i / hem_i staan]
Frodo_i saw you behind zich_i / him_i stand
 (5) Smeagol_i haat *zich_i / zichzelf_i
*Smeago_il hates *zich_i / zichzelf_i*
 ‘Smeagol hates himself’

Another difference is that *zichzelf* (but not *zich*) is able to license a reflexive reading with verbs that are not marked as reflexives in the lexicon. In (5) only *zichzelf* can occur since the sentence has a reflexive interpretation and the verb *haten* (hate) is not lexically marked as reflexive.

Note in (6) that English uses zero-morphology with verbs like *wassen* (wash) in (6a) instead of a SE-anaphor as Dutch does in (3a). With this kind of verbs, also a SELF-anaphor can occur in Dutch as in (6b), but this is optional both in English (as can be seen in the translations of (6)) and in Dutch. I will argue below that the difference between (3a) and (3b) is that in the former the verb is inherently reflexive (IRV) whereas in the latter the verb is non-inherently reflexive (nIRV).

- (6) a. Frodo washed Ø (himself).

- b. Frodo waste zich/zichzelf.
Frodo washed zich/zichzelf
 ‘Frodo washed (himself)’

2.2 Reflexivity in Spanish

The reflexivization in Spanish looks quite different from the reflexivization in English and Dutch. There are three ways of marking reflexivization in Spanish (7):

(7) *Reflexivization marks in Spanish:*

- a. Clitics: me,te,se,nos,os
 b. (Morphologically) complex anaphors: sí/mí/ti/él/etc.+mismo
 c. (Morphologically) simple anaphors: si/mí/ti

Simplex anaphors normally do not need to be subject to Condition A (CBC) unlike complex anaphors (see Reuland & Koster (1991); Otero 1999:1437). Nevertheless, both kinds of anaphors seem to be subject to Condition A in Spanish. Note that even the sentence (9) below is a case of local binding since the PP *por sí y ante sí* is an adjunct to the verbal phrase, and it is c-commanded by the subject *Juan* (examples from Otero (1999)).

- (8) *Ana_i le dijo a Luis_j [que Juan_k habló mal de sí_i].
Ana told Luis that Juan spoke badly about sí
 ‘Ana told Luis that Juan talked badly about her’
- (9) Juan_i decidió [que Ana_j se hiciera cargo de la fábrica que hasta entonces había dirigido Luisa_k] por sí_i y ante sí_i.
Juan_i decided that Ana_j took management of the factory that till then had lead Luisa_k by sí_i and before sí_i.
 ‘Juan decided himself that Ana took management of the factory that till then had lead Luisa.’

Besides the examples above, in (10) and (11) it can be seen that *sí* obeys condition A (CBC) and hence, it has to be bound by the most local suitable antecedent (examples from Otero (1999)).

- (10) a. Rosa_i apretaba a Luis contra sí_i.
Rosa_i huddled to Luis against sí_i.
 ‘Rosa huddle Luis (against herself)’
- b. En las dificultades, el clan_i se plegaba siempre sobre sí_i bajo un espeso manto de silencio.
In the difficulties, the clan_i bent always over sí_i under a dense cover of silence.
 ‘In the difficulties, the clan always bent over itself under a dense cover of silence.’

- (11) a. *Rosa_i observó [que Tomasa apretaba a Luis contra sí_i].
Rosa_i observed that Tomasa huddled to Luis against sí_i.
 ‘Rosa observed that Tomasa huddled Luis against her.’
- b. *El clan_i partía de la base de [que, en las dificultades, la familia se plegaba siempre sobre sí_i bajo un espeso manto de silencio].
The clan_i started of the base of that, in the difficulties, the family se bent always over sí_i under a dense cover of silence.
 ‘The clan started out from the idea that, in the difficulties, the family always bent over itself under a dense cover of silence.’

Further evidence of the fact that *sí* has to be locally bounded in Spanish can be seen in sentences (12)-(13) below (examples from Otero (1999)):

- (12) a. Juan_i confía en sí_i.
Juan trust in sí_i
 ‘Juan trust himself.’
- b. Juan_i insiste en [que Ana_j confía en sí_{*i/j}].
*Juan_i insists in that Ana_j trust sí_{*i/j}.*
 ‘Juan insists that Ana trusts *him/herself.’
- (13) a. [Las historias de Blas_i sobre sí_i] son muy divertidas.
Blas_i’s stories about sí_i are very funny
 ‘Blas’s stories about himself are very funny.’
- b. Blas_i encuentra divertidas [las historias de Ana_j sobre sí_{*i/j}].
*Blas_i finds funny the stories of Ana_j about sí_{*i/j}*
 ‘Blass finds the stories of Ana about *him/herself very funny.’

Sentences (14) and (15) below show the differences in the binding domains¹ between Dutch *zich* and Spanish *si*. Whereas the former can be bound in Reuland and Koster’s (1991) domain 2 (i.e. the subject position of the matrix clause), the latter can only be bound in domain 1 (i.e. within its clause).

- (14) a. *Rosa_i me hace [(a mí) trabajar para sí_i].
Rosa me_{dative} makes (to me) work for sí
 ‘Rosa makes me work for her’
- b. Rosa_i laat me [voor zich_i werken].
Rosa makes me for zich work
 ‘Rosa makes me work for her’

¹ As defined by Reuland & Koster (1991).

- (15) a. *Juan_i vio (a) [sí_i caer].
Juan saw (to) sí fall
 ‘Juan saw himself fall/falling’
- b. Juan_i zag [zich_i vallen].
Juan saw zich fall
 ‘Juan saw himself fall/falling’

In (16) below we can see the differences in binding domain of Spanish *si*, which can only be locally bound in domain 1, and Italian *se*, which can be also be bound in domain 3 (‘real’ long distance anaphors, according to Reuland & Koster) (examples from Otero (1999)):

- (16) a. Aquel dictador_i pensaba que el pueblo_j hubiera sido mucho más feliz si los libros de historia hubiesen hablado más de sí_{i/*j} y de sus hazañas.
*That dictator_i though that the folk_j had been much more happy if the books of history had talked more about sí_{i/*j} and his exploits.*
 ‘That dictator though that the folk would have been more happier if the History books had talked more about him and his exploits.’
- b. Quel dittatore_i pensava che ik popolo_j sarebbe stato molto più felice se i libri di storia avessero parlato di piè di sé_{i/*j} e delle sue gesta.
*That dictator_i though that the folk_j had been much more happy if the books of history had talked more about sí_{i/*j} and his exploits.*

Sí cannot occupy nominative positions as seen in (17) and (18b), unlike *sich* in German (18a). Neither can it appear in accusative positions (19). Hence, we can conclude that *sí* bears oblique Case (examples from Otero (1999)).

- (17) a. ¿Es que alguien fue a la fiesta en vez de Juan_i?
Is that anyone went to the party instead of Juan?
- b. *No, es que sí_i fue.
No, is that sí (=Juan) went.
- (18) a. Wen wascht Otto_i? Sich_i.
Who washes Otto? Sich (=Otto)
- b. *¿Quién lava a Otto_i? Sí_i.
Who washes to Otto? Sí (=Otto)

- (19) *Anand_i parecía otra vez sí_i (mismo).
Anan looked again sí (self)
 ‘Aban looked himself again’

Moreover, observe in (20) that *si* cannot refer to neither the speaker (1st person pronouns) or the interlocutor (2nd person pronouns):

- (20) a. *Yo_i estoy durmiendo en la habitación de sí_i.
I am sleeping in othe room of sí (=I)
 b. *Vosotros_i estáis durmiendo en la habitación de sí_i.
You_{plural} are sleeping in the room of sí (=you_{plural})

In (21) below we can see that *si* also shows characteristics that are not typical of logophors: (21a) shows that *si* can have an inanimate antecedent, and (21b) shows that *si* can refer to an antecedent that is not subject-oriented.

- (21) a. Este salario_i no da mucho de sí_i.
This salary no gives much of sí (=itself)
 b. Los piratas le dieron a Juan_i el tesoro para sí_i.
The pirates him_{dativ}e gave to Juan the treasure for sí (=Juan)

Finally, Otero (1999) characterizes Spanish *si* as follows:

(22) *Properties of si:*

- a. *Sí* cannot refer to an antecedent in the discourse, as seen in (17) and (18b).
- b. *Sí* cannot occupy a nominative position, as seen in (17) and (18b).
- c. In general, *si* cannot refer to a 1st or 2nd person antecedent as in (20).
- d. *Sí* cannot be mid-distance bound unlike other pronominal elements such as Dutch *zich* (14) and (15). Neither can it be long-distance bound like Italian *se* (16).
- e. It always follows a preposition: i.e. *si* bears oblique Case with few exceptions as in (28) below.
- f. *Sí* does not need to be subject oriented as in (21b), and can refer to an inanimate antecedent as in (21a).

As for the reflexive clitics (7a) in Spanish, sometimes their presence is enough to get a reflexive reading as in (23a). In other cases, it is necessary to use a morphologically complex anaphor (7b), as in (23b).

- (23) a. Juan *se* lavó
Juan se washed
 ‘Juan washed’
- b. Juan *se* besa *a sí mismo*
Juan se kisses to sí self
 ‘Juan kisses himself’

With inherent reflexive verbs² (Otero 1999, Doron & Rapaport-Hovav 2007), a clitic (7a) is usually enough to license a reflexive reading of the predicate. These verbs can also appear with complex anaphors, though. In this case, there is an emphatic nuance, as in (24).

- (24) a. Juan *(*se*) lavó (a *sí mismo*)
Juan (se) washed (to himself)
- b. Juan *(*se*) peina (a *sí mismo*)
Juan (se) combs (to himself)

The non-inherent reflexive verbs³ require a complex anaphor (7b) so as to get the reflexive reading as in (25).

- (25) a. María *se* critica *(a *sí misma*)
María se criticizes (to herself)
 ‘María criticizes herself.’
- b. María *se* hace cosquillas ?(a *sí misma*)
María se makes tickles ?(to herself)
 ‘María tickles herself.’

The complex anaphor has to be duplicated by a clitic when it occupies an argumental position marked with accusative or dative (Torrego 1995), as in (26). However, look at the example (27) from ‘El Quijote’ as well as the sentences in (28), which are fixed expressions where the clitic does not need to be doubled.

- (26) María_i *(*se*) miró a *sí_i misma*
María (se) saw to her self
 ‘María saw herself’
- (27) a. Yo he tomado el pulso a *mí mismo*⁴.
I have taken the pulse to mí self
 ‘I have taken my pulse’

² This kind of verbs, as well as non-inherent reflexive verbs, will be defined in the next section.

³ See footnote 2.

⁴ From Quijote II (by Miguel de Cervantes): IV, cited in Otero (1999:1458).

- b. Yo *(me) he tomado el pulso a mí mismo.
*I *(me) have taken the pulse to my self*
 ‘I have taken my pulse (myself).’
- (28) a. Blas_i (se) es fiel a sí_i mismo.
Blas_i (se) is loyal to sí_i self
 ‘Blas is loyal to himself.’
- b. Tú (te) eres fiel a tí mismo.
You (te) are loyal to tí self
- c. Yo (me) soy fiel a mí mismo.
I (me) am loyal to mí self

On the contrary, when the complex anaphor occupies non-argumental positions or positions that are not marked with accusative or dative, the anaphor cannot be duplicated by the clitic (Torrego 1995), as in (29).

- (29) El presidente_i (*se) desconfía de sí_i mismo
The president (se) distrust of himself

As seen in (29) above, the clitic is not necessary when *sí* is within a prepositional phrase (where it bears oblique Case) or within a coordinated structure, as in the following examples from Otero (1999):

- (30) a. Ana escribió una carta [[a la humanidad] y [a sí/ella misma]].
Ana wrote a letter to the mankind and to sí/her self
 ‘Ana wrote a letter to the mankind and herself.’
- b. [Ana (le) escribió a Blas] y [*(se escribió) a sí misma].
*Ana (him_{dative}) wrote to Blass and *(se wrote) to sí self*
 ‘Ana wrote to Blas and wrote to herself.’
- c. Ana ?*(se) escribió una carta [[a sí/ella misma] y [a la humanidad]].
Ana ?(se) wrote a letter to sí/her self and to the mankind*
 ‘Ana wrote a letter to herself and the mankind.’
- (31) Ana escribió una carta [[sobre la condición humana] y [sobre sí/ella misma]].
Ana wrote a letter about the human condition and about sí/her self
 ‘Ana wrote a letter about the human condition and about herself.’

In non-argumental positions, both a simple anaphor and a complex one can be used, as in (32).

- (32) María_i tiene ante sí_i / sí_i misma un gran problema
Maria has before sí / herself a big problem

Note that in (33b) the complex anaphor is subject to Condition A (CBC), and the pronominals like *ella* in (33a) are subject to Condition B (CBC). This is basically the same pattern followed by the SELF-anaphors and the pronominals in English.

- (33) a. *María_i se critica a ella_i
 María se criticizes to her
- b. María_i se critica a ella_{i/*j} misma
 María se criticizes to herself

2.3 Recapitulation

We have seen that English uses zero morphology with inherent reflexive verbs, and SELF-anaphors with non-inherent reflexive verbs (and optionally with inherent reflexive verbs too). The CBC of Chomsky's were formulated in order to account for the distribution of SELF-anaphors and pronominals in English. However, other languages, such as Dutch, make use of a two-way anaphoric system, i.e. SE- and SELF-anaphors. Dutch uses SE-anaphors like *zich* with inherent reflexive verbs, whereas SELF-anaphors like *zichzelf* are required for non-inherent reflexive verbs and optional with inherent reflexive verbs.

Spanish, on the other hand, has three marks of reflexivization: clitics with inherent reflexive verbs, morphologically complex anaphors with non-inherent reflexive verbs (and optional with inherent reflexive verbs), and morphologically simple anaphors with non-inherent reflexive verbs, which virtually always require a preposition and thus, oblique Case.

In table (34) we can see a summary of the properties of English, Dutch and Spanish reflexive systems. In what rests of the paper, I will give a unified analysis of reflexivization in these three languages resorting to processes that take place at the interfaces in order to adjust the lexical information and the requirements of the syntax.

(34) *Reflexivization in English, Dutch and Spanish:*

| ENGLISH | DUTCH | SPANISH | |
|------------------------------------|-------------------------------------|---|-------------------------------|
| Zero-morphology | SE-anaphor (<i>zich</i>) | Clitics (<i>me,te,se,nos,os</i>) | IRVs |
| SELF-anaphor (<i>himself</i>) | SELF-anaphor (<i>zichzelf</i>) | Complex anaphor (<i>sí/mi/ti+mismo</i>) (<i>él/ella/yo+mismo</i>) | nIRVs (optionally IRVs) |
| | | Simplex anaphor (<i>mí,tí,sí</i>) | nIRVs + PP |

3. Theoretical background

3.1 Lexical reflexivization and reflexive binding

I will follow Doron & Rapaport-Hovav's (2007) proposal that inherent reflexive verbs (IRVs hereinafter) are the result of a reflexive operation on theta roles in the lexicon (as in Reinhart 2002 and Reinhart & Siloni 2005). On the other hand, the non-inherent reflexive verbs (nIRVs hereinafter) license a reflexive reading by means of a reflexive binding, i.e. a SELF-anaphor bound by an antecedent (Reuland 2001).

The IRVs are derived from a lexical operation of reflexivization by which the internal θ -cluster is reduced and bundled with the external θ -cluster. Moreover, the verb is no longer able to assign accusative Case (Reinhart and Siloni 2005). I will follow Reinhart and Siloni's formalization of the reflexivization operation in (35). Note that these verbs behave as unergative verbs in the syntax, which points out that they have just one syntactic argument, although the predicate receives a reflexive interpretation (with two semantic arguments) in the C-I system. I will add to Reinhart & Siloni's formalization that despite the presence of two semantic arguments in the C-I system, just one lambda operator binds these arguments. This is because the reduction of the internal θ -cluster prevents the projection of a second lambda operator in the semantics.

(35) *Lexical reflexivization:*

- a. Transitive (basic) entry: $V_{acc} ([agent]_1, [theme]_2)$ ⁵
- b. Reflexivized entry: $R(V_{weak\ acc}) ([agent]+[theme])_1$
- c. Syntactic realization: $DP_{[agent]+[theme]_1} V$
- d. Interpretation: $\exists e \lambda x [e=V \ \& \ [agent], e = x \ \& \ [theme], e = x]$

The nIRVs enter in the syntactic derivation with their lexical entry unaltered. The reflexive interpretation comes from A-binding rather than a reflexivization operation in the lexicon.

(36) *Reflexive binding:*

- a. Lexical entry: $V_{acc} ([agent]_1, [theme]_2)$
- b. Syntactic realization: $DP_{[agent]} V DP_{[theme]}^{SELF-anaphor}$
- c. Interpretation: $\exists e \lambda x \lambda y [e=V \ \& \ [agent], e = x \ \& \ [theme], e = y \ \& \ y=f(x)]$

⁵ The indexes are marks for the syntax (Reinhart 2002): an index 1 indicates that an argument has to merge out of the VP whereas an index 2 marks an argument to merge within the VP.

The nIRVs do not undergo any reflexivization operation in the lexicon. Therefore, their argumental structure requires two syntactic arguments. The SELF-anaphor makes it possible to bind a local antecedent without violation of the Thematic Criterion. This is due to the presence of the protector SELF-element (Reuland 2001).

Reuland shows that in Dutch there can be local binding between an antecedent and a SE-anaphor. However, this binding process forces the two elements to be interpreted as just one element in the semantic system (because there is just one chain and the SE-anaphor is defective in ϕ -features, see Reuland (2001)). A verb like *voelen* (feel), whose argumental structure requires only one semantic argument, allows that the subject binds *zich* (there is no Theta Criterion violation).

- (37) **[Jan]_i** voelt **[zich]_i** goed.
 └──────────┘
 *Jan feels zich well*⁶

However, verbs like *haten* (hate) require two arguments both in the syntax and in the semantics, since they are nIRVs that have not undergone any reduction operation in the lexicon. If there were not two arguments in the semantics, there would be a Theta Criterion violation. In order to prevent the anaphor and its antecedent from being interpreted as one semantic argument, Reuland argues that a protector SELF-element is added. Hence, the chain is not formed between the antecedent and the anaphor - the τ phrase in (38) - but it is formed between the antecedent and the SE-element (within the τ phrase) of the SELF-anaphor. This chain is interpreted as A-binding but there are two syntactic objects that are translated to two distinguishable semantic objects, since the antecedent and the τ phrase do not form a chain themselves. The chain is formed between *zich* (the SE-element) and the antecedent. Therefore, the reflexive binding does not violate the Theta Criterion.

- (38) **[Jan]_i** haat [τ **zich_i** [_N zelf]]
 └──────────┘
 *Jan hates zich zelf*⁷

Note an important difference between the lexical reflexivization (35) and the reflexive binding (36). In the lexical reflexivization, both the subject and the object are exactly the same individual since there are two variables

⁶ Note that there are 2 syntactic arguments that are interpreted as just 1 semantic argument at C-I.

⁷ Note that there are two syntactic arguments interpreted as two distinguishable semantic arguments at C-I.

in the semantic representation bound by the same lambda operator. On the other hand, in the reflexive binding there are two variables bound by two different lambda operators. Not only has the SELF-element a protective function in the syntax, but it also introduces an identity function in the semantic (39), which forces the second variable to be interpreted as a function of the first one⁸.

(39) $x R f(x)$

Later on it will be shown how this function is responsible of the different semantic interpretation of the IRVs with SE-anaphors and the nIRVs that require SELF-anaphors in syntactic configurations where both kinds of anaphors can alternate.

3.2 Null SE-anaphors

I will adopt the analysis I have elaborated elsewhere (Teomiro 2005, 2007, 2008) on PRO as a null SE-anaphor with interpretable and unvalued ϕ -features, as well as with an uninterpretable and unvalued Tns feature (structural Case, see Pesetsky & Torrego 2004, 2007). The feature composition of PRO is summarized in (40) below.

PRO is interpreted depending on the structural configuration where it appears. When agree-chains can be formed between PRO and a suitable antecedent, PRO is interpreted as a bound anaphor, and obligatory control rises. When no agree-chains can be formed, PRO is interpreted as a pronominal, and non-obligatory control rises. The interested reader is referred to Teomiro (2005, 2007, 2008, and in progress) for a more detailed discussion and analysis.

The introduction of PRO as a null SE-anaphor in the theoretical machinery is at not cost since we have empirical evidence of defective anaphors (Reinhart & Reuland 1993, Reuland 2001, among many others), as well as of the existence of null anaphors (Holmberg 2005).

I propose in this work that there is (at least) one other such null SE-anaphor available in UG, which is the least defined nominal item available in UG. Its feature composition is given in (40) below, and the difference with PRO is the fact that it lacks grammatical number, which renders it [-R]⁹. I will call this null SE-anaphor PRO'.

⁸ See Reuland (2001:481-486) for a more detailed explanation of the semantics of ZELF. See Otero (1999:1448-1459) for another view on the interpretation of MISMO in Spanish.

⁹ Referentially defective (Reinhart & Reuland 1993).

(40) *Feature composition of null SE-anaphors*¹⁰:

| | PRO | PRO' |
|----------------------|--|-----------------------------------|
| ϕ -FEATURES | <i>i</i> ϕ person [unvalued] <i>i</i> ϕ number [unvalued] | <i>i</i> ϕ person [unvalued] |
| θ -FEATURE(S) | <i>i</i> θ [unvalued] | <i>i</i> θ [unvalued] |
| TNS-FEATURE (CASE) | <i>u</i> T [unvalued] | <i>u</i> T [unvalued] |
| PHONOLOGICAL CONTENT | no | no |

Later on, I will argue that PRO' is inserted in the syntactic derivation whenever an arity reduction operation takes place at the lexicon in order to match the valence of the verb with the formal requirements of the syntax.

4. SE-anaphors at the lexicon-syntax and syntax-semantics interfaces

Based on the data presented in the second section, I put forward three hypotheses on the reflexivization and the anaphoric system of Spanish, which will be applied and contrasted in the following sections:

1. **Spanish has SELF-anaphors:** they are the anaphors in (7b), and follow the pattern *x+mismo*. They are [-R], are subject to Condition A (CBC) and can license reflexive predicates when the verb is a nIRV (their presence is enough to fulfil Reinhart & Reuland's Condition B). There is covert movement of the element MISMO to the predicative head (Reinhart & Reuland 1993).
2. **Spanish has SE-anaphors too:** besides PRO (see Teomiro 2005, 2007, 2008, in progress), there are other SE-anaphors in Spanish that are [-R] and cannot license a reflexive reading by themselves (i.e. their presence is not enough for a nIRV to fulfil Reinhart & Reuland's Condition B). They are not subject to Condition A or B (CBC), and they can be divided in two types:
 - a. **non-tonic:** the clitics *me, te, se, nos, os* (7a) are non-tonic SE-anaphors that adjoin to the INF system (Reinhart & Reuland 1993 propose that SE-anaphors adjoin to the predicative head).

¹⁰ In Teomiro (2005, 2007, 2008) I have defended that PRO has a full set of ϕ -features. This cannot be the case, however. If PRO had a full set of ϕ -features, it could not form a chain to be translated to A-binding at C-I. Note that Reuland (2001) stated as a necessary condition for chain formation the underspecification for some ϕ -feature. Therefore, PRO has to be underspecified for at least one ϕ -feature. The number feature is necessary since PRO is [+R] (as can be seen in non-obligatory control configurations), and person is needed in order to delete the uninterpretable instance on the verb. Therefore, gender is the most suitable candidate (for further discussion see Teomiro in progress).

- b. **tonic:** *mí, ti, sí,* are tonic SE-anaphors (7c), and their movement to adjoin the predicative head is prevented due to structural reasons (the presence of a preposition due to Case reasons).
3. Reinhart & Reuland’s (1993) Conditions A and B hold in Spanish (Reinhart & Reuland’s Conditions A and B, hereinafter).

The hypotheses are summarized in table (41) right below:

(41) *Reflexivization in Spanish (revisited):*

| SPANISH (TRADITIONAL GRAMMAR) | SPANISH (HYPOTHESES) | |
|---|---|---------------------------------|
| Clitics (<i>me, te, se, nos, os</i>) | non-tonic SE-anaphors (<i>me, te, se, nos, os</i>) | (IRVs) |
| Complex anaphor (<i>sí/mi/ti+mismo</i>) (<i>él/ella/yo+mismo</i>) | SELF-anaphors (<i>sí/mi/ti+mismo</i>) (<i>él/ella/yo+mismo</i>) | (nIRVs) (optionally IRVs) |
| Simple anaphor (<i>mí, tí, sí</i>) | tonic SE-anaphors (<i>mí, tí, sí</i>) | (nIRVs + PP) |

In what rests of the paper, I will analyze reflexive verbs in Spanish and compare them with both English and Dutch. Finally, I will provide a unified analysis of reflexivization in Spanish, English and Dutch based on Reinhart & Reuland’s (1993) framework on reflexivization and the theoretical tools presented in the third section.

4.1 Inherent Reflexive Verbs, SE-anaphors and the Double Chain Condition

IRVs are a subset of agentive verbs (verbs that select an agent subject). Some examples can be found in (42). They undergo a reflexivization operation in the lexicon, defined in (35) and repeated below. This operation is a valence reduction operation (Reinhart 2002, Reinhart & Sioni 2005): the internal θ -cluster is eliminated as well as the verb’s capacity of assigning accusative Case. Hence, the reduced verb will behave as an unergative verb in the syntax.

- (42) a. Arwen se **peinaba** ante la mirada de Aragorn
Arwen se combed before the sight of Aragorn
- b. Frodo no se **lavó** durante su estancia en Mordor
Frodo no se washed during his stay in Mordor

- c. Smeagol no podía **reconocerse** en el reflejo que el agua le devolvía
Smeagol no could recognize se on the reflection that the water gave him

(35) *Lexical reflexivization:*

- a. Transitive (basic) entry: $V_{acc} ([agent]_1, [theme]_2)$
 b. Reflexivized entry: $R(V_{weak\ acc}) ([agent]+[theme])_1)$
 c. Syntactic realization: $DP_{[agent]+[theme]_1} V$
 d. Interpretation: $\exists e \lambda x [e=V \ \& \ [agent], e = x \ \& \ [theme], e = x]$

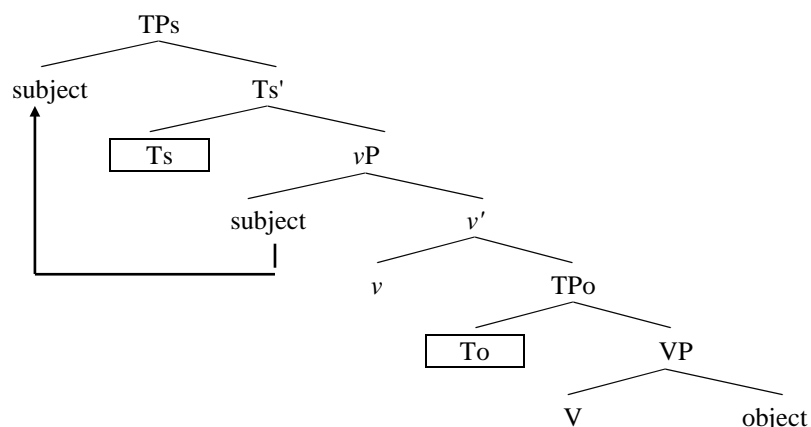
Since these verbs have undergone a lexical reflexivization operation, this is enough so as to mark the syntactic predicate as reflexive and fulfil Reinhart & Reuland's B Condition. However, a SE-anaphor (*zich*) is required in Dutch (43a), as well as the clitic *se* (defined as a tonic SE-anaphor) in Spanish (43b).

- (43) a. Jan waste *(**zich**)
Jan washed zich
 b. Juan *(**se**) lavó
Juan se washed

The question arises as to why the presence of the SE-anaphor is required in Dutch and Spanish if the lexical reflexivization operation is enough to fulfil Reinhart & Reuland's Condition B.

I will use Pesetsky & Torrego's (2007) structure of the verbal predication, represented in (44):

(44) *Verbal predication structure:*



According to Pesetsky & Torrego, there are two temporal heads: Ts licenses nominative Case and the subject, and To licenses accusative Case and the object.

My proposal is that Chomsky's (2001, 2005) view of phase heads and phase structure should be modified so as to capture the nature of these temporal heads. First, I consider that the phase heads are those in (45b) and not those defended by Chomsky in (45a). By doing this, the phases can be defined as full propositional units in the sense that all phase head (C and ν) requires an argument (NP/DP) as well as a temporal head (Ts or To). Hence, the phase is a temporally specified unit with an argument (DP).

(45) a. *Phase heads in Chomsky (2001, 2005):*

C - T and ν - V

b. *Phase heads (revisited):*

C - Ts and ν - To

The verb is the lexical head that introduces the values of the θ -features¹¹, as well as the Tns-s and Tns-o features¹², besides the semantic (encyclopaedic) content of the event. Hence, it has to establish agree relations with its nominal arguments, as well as with the functional heads that define the phases. These relations are established by means of the *Agree* operation, which forms θ - and Tns-chains, schematized in (46)¹³:

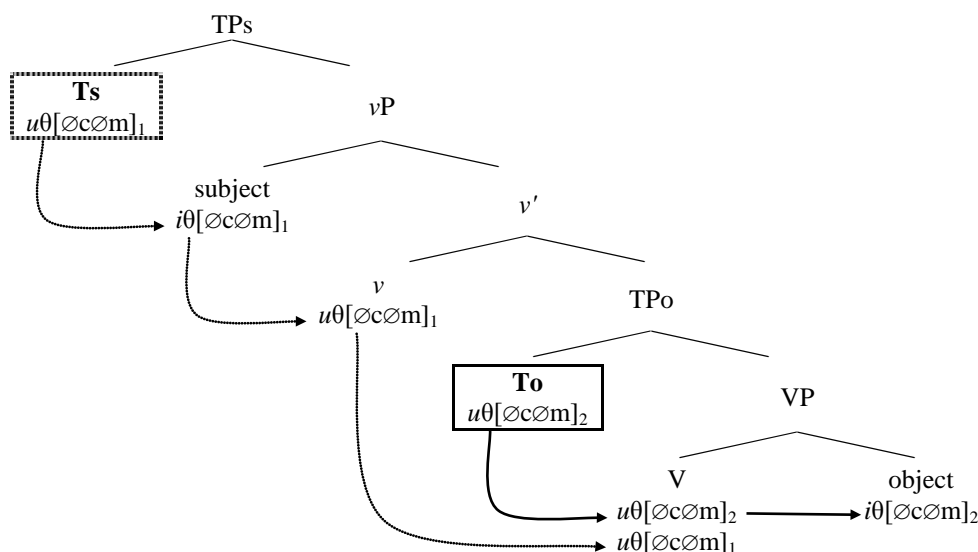
¹¹ I assume that theta-roles are encoded in features, along with Reinhart (2002). Moreover, I assume that these features come valued in the verb from the lexicon and, by means of the operation *Agree*, they value their interpretable and unvalued respective instances on nouns (Teomiro, in progress).

¹² These are the temporeal features, which, according to Pesetsky & Torrego (2004, 2007), are realized as nominative and accusative case.

¹³ Agree-chains are formed when two or more elements share instances of one feature (based upon the concept of feature valuation by Pesetsky & Torrego 2007). Three kinds of agree-chains will be used in throughout this paper:

- a. φ -chain: agree-chain formed when two or more lexical items share one or more φ -features.
- b. Tns-chain: agree-chain formed when two or more lexical items share a Tns (tense) feature.
- c. θ -chain: agree-chain formed when two or more lexical items share a θ -feature

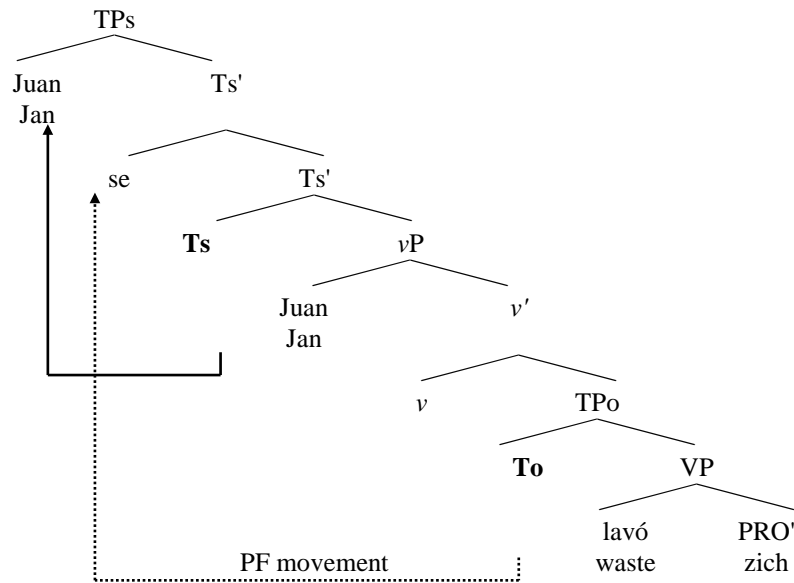
(46) Relations between the temporal heads (Ts/To) and the verb:



When a sentence with an IRV is formed, just one nominal element is introduced in the numeration (the subject, which will be interpreted both as subject and object in the C-I system due to the lexical reflexivization operation). This causes a problem because in the internal phase¹⁴ no nominal is introduced. Hence, the temporal head *To* cannot form part of a θ -chain with an interpretable instance of the θ -feature in order for the uninterpretable instance of the θ -features on *To* to be eliminated (note that the verb does not have any instance of a θ -feature for the internal argument since it has undergone reflexivization). In order to prevent the derivation from crashing, the simplest SE-anaphor available in UG is inserted: PRO'. This insertion is a last-resort mechanism. PRO' is not in the numeration, but it is inserted in the internal phase so as to form a θ -chain with *To* and hence, the uninterpretable instance of the θ -feature on *To* can be eliminated during the transference to the interfaces. Although PRO' ends up with its θ -features unvalued (unlike its ϕ -features), this causes no crash down because at the C-I interface all the uninterpretable instances of the θ -features have been deleted. I propose that an unvalued θ -feature can be tolerated by the C-I system (in a parallel way as unvalued ϕ -features are tolerated by the C-I system, see Holmberg 2005 and Teomiro 2005, 2008).

¹⁴ The terms *external phase* (CP) and *internal phase* (vP) are used for the sake of simplicity in the exposition.

(47) Juan se lavó / Jan waste zich.

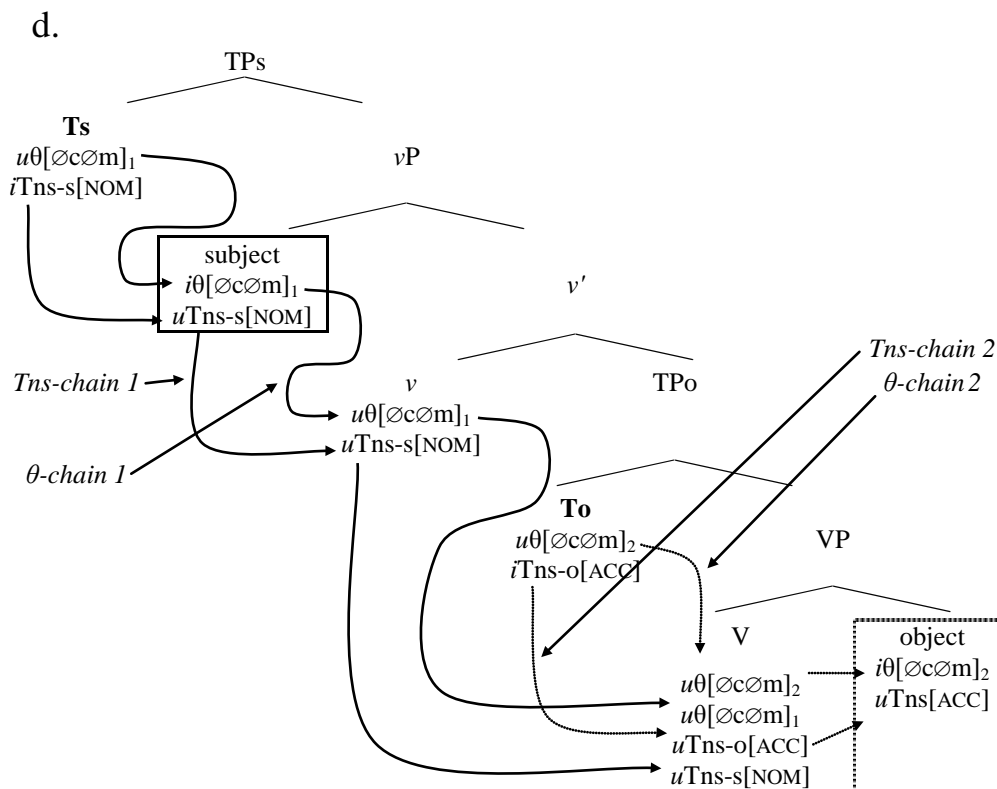


How does the C-I system handle the unvalued θ -features? Is the SE-anaphor interpreted as a semantic argument of the verb? The answers to these two questions are related to each other and can be formalized in what I will call the *Double Chain Condition* (DCC) in (48). I have argued elsewhere (Teomiro 2005) that an unvalued ϕ -feature is not problematic at the C-I interface: it is simply ignored, not interpreted at the C-I system. I will assume that the same occurs with the unvalued θ -features: if they are unvalued, they are not interpreted at C-I. What happens with an argument with unvalued θ -features? In the Government & Binding as well as in the Minimalist Program's literature, it has traditionally been argued that both structural Case assignment and thematic marking are indispensable for an argument to be interpreted as a semantic argument of the verb. In other words, the intuition has been that an argument has to be both temporally (Case-marked) and thematically (θ -marked) integrated in the eventive structure. I propose to formalize this intuition in the Double Chain Condition in (48).

(48) *The Double Chain Condition (DCC):*

For a nominal item to be interpreted as a **semantic argument** of the verb at the C-I system, it has to form (by means of the *Agree* operation):

- a. one Tns-chain to share the Tns-s or Tns-o feature with the Ts or To heads (or any other head that contains an interpretable Tns feature),
- b. and one θ -chain to share the θ -feature(s) with the verb.



The DCC applies at the C-I system, not in C_{HL} (narrow syntax). For an argument to be interpreted as a semantic argument of the verb, it needs to form these chains. What happens with the SE-anaphor inserted with IRVs for the sake of convergence at the interfaces? This anaphor forms a Tns-chain with To and fulfils (48b). However, it cannot form a θ -chain with the verb. The θ -chain formed is $\{To, PRO'\}$. Since the θ -features are interpretable in PRO', the uninterpretable instances on To can be deleted but no θ -chain is formed with the verb. PRO' ends up with its θ -feature unvalued and violates (48b), and hence, the DCC. As a result, PRO' is not interpreted as a semantic argument. Nevertheless, it shares its ϕ -feature person with its antecedent. Therefore, its ϕ -feature person ends up valued and it gets materialized as *me, te, se, nos, os*. Finally, the anaphor moves to the inflexion domain and hence its tonic nature.

Note that the semantic predicates denoted by IRVs have two objects since there are two variables bound by the same lambda operator. The syntactic predicate also has two arguments, the subject and the SE-anaphor. One of them is not interpreted as a semantic argument, though. However, the verb behaves as unergative verb because the anaphor does not form part of a θ -chain with the verb. In this sense, the anaphor is like an expletive similar to the English *it*.

Note finally, that the reflexivization operation needs to be reformulated. More concretely, the syntactic realization of the lexical entry has to specify the insertion of PRO'.

(49) *Lexical reflexivization (revisited):*

- a. Transitive (basic) entry: $V_{acc} ([agent]_1, [theme]_2)$
- b. Reflexivized entry: $R(V_{weak\ acc}) ([agent] + [theme])_1$
- c. **Syntactic realization: $DP_{[agent] + [theme]_1} V PRO'$**
- d. Interpretation: $\exists e \lambda x [e = V \ \& \ [agent], e = x \ \& \ [theme], e = x]$

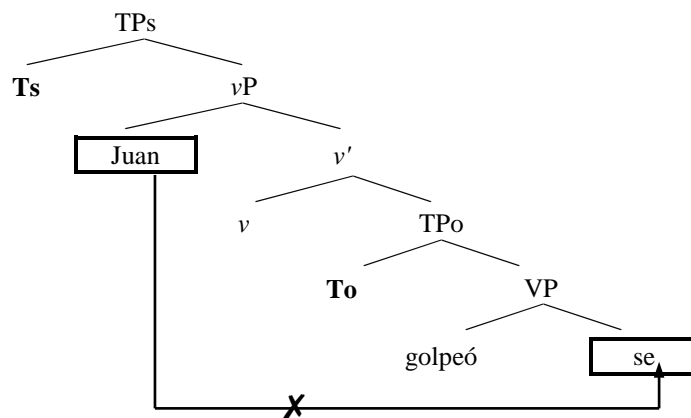
4.2 *Non Inherent Reflexive verbs and SELF-anaphors*

Virtually any verb in Spanish can reflexivize by inserting a SELF-anaphor, more concretely, causative verbs (those that select [+c] subjects). These verbs (nIRVs) enter in the numeration with its valence unaltered, i.e. they do not undergo any kind of lexical operation that modifies their valence.

The reflexive reading is derived from an A-binding process of the internal argument (the SELF-anaphor) by the external argument.

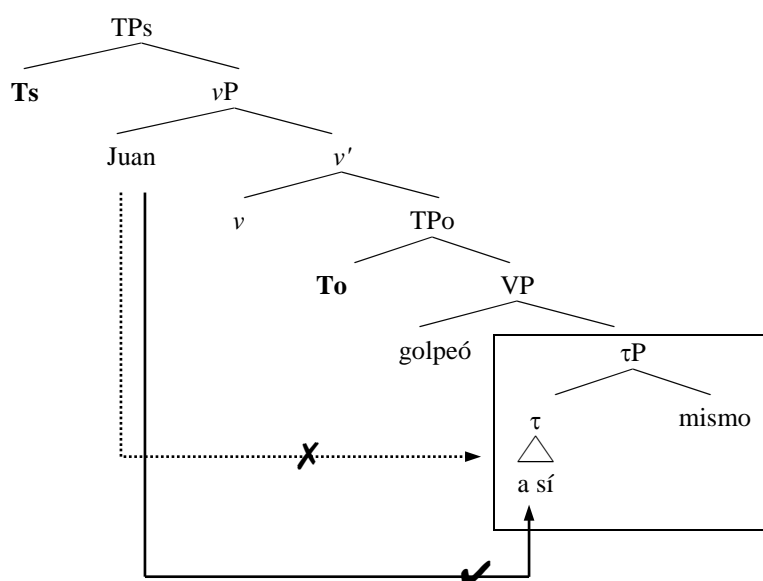
Since the verb does not undergo any reflexivization operation in the lexicon, the predicate needs to be marked as reflexive in the syntax so as not to violate Reinhart & Reuland's Condition B. Therefore, a SELF-anaphor is needed. Recall that only this kind of anaphors (unlike SE-anaphors) can license reflexivization with nIRVs. If a SE-anaphor were inserted, the subject would bind it, and the resulting chain would be translated to A-binding at the C-I interface (a desired result). However, the two syntactic objects would be interpreted as just one semantic argument. This is due to the composition operation of agree-chains between the antecedent and the bound object, the SE-anaphor.

- (50) * $[Juan]_i [se]_i$ golpeó (*reflexive reading, not inchoative*)
 * $Juan_i se_i$ hit
 'Juan hit himself.'



On the other hand, the protector SELF element (MISMO in Spanish), prevents the formation of a chain between the antecedent and the bound object τ in (51). Nevertheless, a chain is formed between the antecedent and the anaphor *sí*, which is within τ . Note however, that the chain is not formed between the antecedent and the bound object (τ). Therefore, there are two objects in the syntax that are translated to two distinguishable objects in the semantics.

- (51) [Juan]_i [se]_i golpeó a [τ *sí*_i [mismo]]
Juan se_i hit to sí_i self
 ‘Juan hit himself.’




The SELF-anaphor is duplicated with a clitic when it occupies an accusative or dative marked position, as well as other accusative or dative marked arguments in Spanish (Torrego 1995).

- (52) Smeagol_i *(se) miró a sí_i mismo en el río
Smeagol se saw to sí self on the river
 ‘Smeagol saw himself on the river’

However, when the SELF-anaphor does not occupy an argumental accusative or dative marked position, it cannot be duplicated by the clitic, as it occurs with other arguments in Spanish (Torrego 1995).

- (53) Frodo_i (*se) desconfía de sí_i mismo cuando lleva puesto el Anillo
*Frodo_i (*se) distrust of sí_i self when pro(=he) bears the Ring*
 ‘Frodo distrusts himself when he bears the Ring.’

Furthermore, in these cases, the SELF-anaphor can alternate with a tonic SE-anaphor. This is possible because in these cases, the SELF-anaphor does not mark the predicate as reflexive, and the introduction of a SE-anaphor does not violate Reinhart & Reuland’s B Condition.

- (54) Frodo_i vio ante sí_i / sí_i mismo al hombre que le robó el Anillo Único.
Frodo saw before si /sí self to the man that hem stole the One Ring
- (55) a. Sam_i se critica a él_i *(mismo)
Sam se criticizes to him self
- b. *[Sam]_i se critica a [él]_i
Sam se criticizes to him
- c. [**Sam**]_i se critica a [_τ él_i [_N mismo]]

Sam se criticizes to him self

Finally, note that the element MISMO has a protective function with the SE-anaphor in order to respect the Theta Criterion. It is a protector element with pronominals too. It allows them to be bound without violating Chomsky’s Condition B. A pronominal can be in the determiner position of the τ phrase, and be bound by a local antecedent as in (55c). A pronominal without the protector element violates Condition B (CBC) as well as Reinhart & Reuland’s Condition B.

4.3 Oblique sí

SE-anaphors cannot be locally bound unless there is some reduction operation that reduces the arity of the verb (Reuland & Koster 1991). Otherwise, the Theta Criterion would be violated, as we can observe in (56). Reflexivization is such an operation, and more concretely, the case on which this paper focuses.

- (56) a. *Smeagol_i haat zich_i.
Smeagol hates zich
 ‘Smeagol hates himself.’
- b. *María_i se_i critica a sí_i.
María criticizes to sí
 ‘María criticizes herself.’

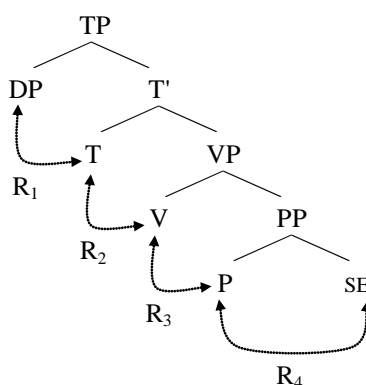
In order to avoid the Theta Criterion violation the protector element SELF/MISMO is inserted so that the anaphor (the SE/SÍ/PRON) is A-bound not by means of chain formation but directly in the C-I system (Reuland 2001).

The object τ is preserved, i.e. is not bound, and the Theta Criterion is respected as seen in (57).

- (57) a. Smeagol_i haat [_{τ} zich_i [_{N'} zelf]].
Smeagol hates zichzelf
 ‘Smeagol hates himself.’
- b. María_i se_i critica a [_{τ} sí [_{N'} misma]].
María criticizes to si misma
 ‘María criticizes herself.’

Chain formation and thus, binding in the syntax within PP, varies to a great extent from language to language (Reuland 2001). In other words, some languages allow the formation of the chains R_3 and/or R_4 in a structure such as (58), whereas others do not.

(58)



If we assume that Spanish does not allow R_3 and/or R_4 in (58), the distribution of *sí* vs. *si mismo* follows.

When *sí* is within a PP, there cannot be chain formation. The object is the PP but the binding is between the antecedent and *sí* within the PP. Since no chain composition is possible, the binding takes place at C-I. The only restriction we can observe is that the antecedent has to c-command *sí*, as can be seen in (59), which also occurs in Non-Obligatory Control when it is done by means of A-binding at C-I (see Teomiro 2005, 2007, 2008, in progress). The fact that *sí* needs to be c-commanded by its antecedent tells us that *sí* cannot get a value directly from discourse, i.e. it is [-R] as the rest of SE-anaphors (with the notable exception of PRO; see Teomiro 2008, in progress).

- (59) b. *[La madre [de Juan_i]] nunca habla mal de sí_i.
 **The mother of Juan_i never talks badly about sí_i*
 ‘Juan’s mother never talks badly about him’

- c. [La madre_i [de Juan]] nunca habla mal de sí_i.
The mother_i of Juan never talks badly about sí_i
 ‘Juan’s mother never talks badly about herself’

The fact that *sí* needs to be locally bound (it cannot be bound in Reuland & Koster’s domain 2) is because Spanish allows only binding in domain 1 for anaphors, unlike Dutch *zich* that allows binding in domain 2 as in (14b) and (15b) above, and Italian that allows binding in domain 3 as in (16b) above.

Note that dative and accusative ‘*a*’ is not a preposition but a Case marker. Hence, chains can be formed and thus the protector element MISMO is needed as we saw in (56b) vs. (57b).

4.4 SELF-anaphors vs. SE-anaphors with Inherent Reflexive Verbs

The IRVs in Spanish can appear with or without SELF-anaphors. These anaphors are not necessary to fulfil Reinhart & Reuland’s Condition B since these verbs (can) undergo a lexical reflexivization operation, which marks the predicate as reflexive. Nevertheless, IRVs can appear with SELF-anaphors. A verb like *lavar* (wash) can enter in the numeration either reflexivized or not, thus, it can enter in the numeration with its valence either altered or unaltered. In the latter case, the transitive version of *lavar* can get a reflexive reading by A-binding of a SELF-anaphor.

- (60) a. Juan se lavó. (lexical reflexivization version)
Juan se washed
 ‘Juan washed’
- b. Juan se lavó a sí mismo. (transitive version)
Juan se washed to sí self
 ‘Juan washed himself’

The verb *lavar* is lexically reflexivized in (60a), whereas (60b) is the transitive version with a reflexive reading that comes from the A-binding of the SELF-anaphor.

It should be kept in mind that there are some semantic differences between the lexical reflexivization and the reflexive binding versions. In other words, there are differences between SE-anaphors and SELF-anaphors. First, when the reflexivization operation applies, only one θ -cluster remains in the lexical entry of the verb. As a result of this, only one lambda operator will be present in the semantic representation, which will bind the two variables.

If there is no lexical reflexivization, the verb enters in the numeration with its valence unaltered. Therefore, two lambda operators will be present in the semantic representation.

(61) $x R f(x)$

The SELF/MISMO-element introduces an identity function formalized in (61), by virtue of which the second semantic argument of R will be interpreted as a function of x (the first semantic argument). Therefore the variable y in the representation in (36c), repeated below, is interpreted as a function of the variable x (Reuland 2001). The consequence of this is that the two semantic objects are distinguishable. Nevertheless they will generally be interpreted as if they were the same object, due to pragmatic reasons.

(36) *Reflexive binding:*

- a. Lexical entry: $V_{acc} (\text{agent}]_1, [\text{theme}]_2)$
- b. Syntactic realization: $DP_{[\text{agent}]} V DP^{SELF-anaphor}_{[\text{theme}]}$
- c. Interpretation: $\exists e \lambda x \lambda y [e=V \ \& \ [\text{agent}], e = x \ \& \ [\text{theme}], e = y \ \& \ y=f(x)]$

This difference, though small, can be perceived in ECM contexts in Dutch, where both a SE-anaphor and a SELF-anaphor can appear. See the following example from Reuland (2001:483):

(62) *'Madame Tussaud' context* (89) *in Reuland (2001)*

Consider the following discourse in Dutch:

Marie is beroemd en liep bij Madame Tussaud's binnen. Ze keek in een spiegel en

- a. ze zag zich in een griezelige hoek staan.
- b. ze zag zichzelf in een griezelige hoek staan.

Translation: Marie is famous and walked into Madame Tussaud's. She looked in a mirror and:

- a. she saw SE in a creepy corner stand. (i.e., she saw SE standing in a creepy corner)
- b. she saw herself in a creepy corner stand. (i.e., she saw herself standing in a creepy corner)

Favored interpretations:

- a. *zich* Marie: Marie saw herself
- b. *zichzelf* Marie's statue: Marie saw her statue

Reuland says the following regarding (62) (italics are mine):

'[In both contexts] *zich* gives an interpretation in which subject and object are identical. If *zichzelf* is chosen, subject and object are presented as distinguishable. In (89b) [(62b) here] the

distinction is effected by interpreting *zichzelf* as a *representation of Marie* rather than as *Marie* itself. [...]

In both cases the sentence with *zichzelf* expresses a relation between an x and an $f(x)$ that bears a systematic resemblance to x , but can be distinguished from it. This implies that the structure in (88) [(62) *here*] is not just an artefact of the analysis, but reflects a real property of *zichzelf* and its interpretation.’ (Reuland 2001:483)

This difference exists too in the Spanish sentences (63), as long as the context allows it.

- (63) a. Juan se lavó. (lexical reflexivization version)
 Juan se washed
 ‘Juan washed’
- b. Juan se lavó a sí mismo. (transitive version)
 Juan se washed to sí self
 ‘Juan washed himself’

(63a) can only be interpreted as Juan washing himself, washing his body, whereas (63b) can also be interpreted, in a context similar to (62), as Juan washing an image of himself like a statue.

4.5 Recapitulation

We have seen that the reflexivization in Spanish can be accounted for by resorting to Reinhart & Reuland (1993) Conditions on reflexivization, the reflexivization processes distinguished in the third section, and the null SE-anaphors PRO and PRO’.

Spanish, like Dutch (and English, as we will see in the next section) has SE-anaphors that can be tonic or non-tonic. These anaphors are needed with IRVs so as not to violate the Theta Criterion. On the hand, SELF-anaphors are inserted with nIRVs in English, Dutch and Spanish, to license reflexive readings with such kind of verbs. The table in (64) presents a summary of this section.

(64) *Reflexivization in English, Dutch and Spanish (revisited):*

| ENGLISH | DUTCH | SPANISH | |
|------------------------------------|-------------------------------------|--|---------------------------------|
| SE-anaphor (zero-morphology) | SE-anaphor (<i>zich</i>) | SE-anaphor (clitics: <i>me, se...</i>) | (IRVs) |
| SELF-anaphor (<i>himself</i>) | SELF-anaphor (<i>zichzelf</i>) | SELF-anaphor (<i>sí/mi/ti+mismo</i>) (<i>él/ella/yo+mismo</i>) | (nIRVs) (optionally IRVs) |
| | | P+SE-anaphor (<i>mí,tí,sí</i>) | (nIRVs) |

5. SE-anaphors at the syntax-phonology interface

As said before in the second section, both Spanish and Dutch insert SE-anaphors with IRVs to delete the uninterpretable instances of the θ -features on To.

- (65) a. Juan **se** lavó
Juan se washed
b. Jan waste **zich**
Juan washed zich

English, on the contrary, uses zero-morphology with IRVs.

- (66) John washed \emptyset .

Note however, that the definition we have followed of lexical reflexivization requires the insertion of PRO' to delete uninterpretable θ -features on To (49c).

(49) *Lexical reflexivization (revisited):*

- a. Transitive (basic) entry: $V_{acc} ([agent]_1, [theme]_2)$
b. Reflexivized entry: $R(V_{weak\ acc}) ([agent] + [theme])_1$
c. **Syntactic realization: $DP_{[agent] + [theme]_1} V PRO'$**
d. Interpretation: $\exists e \lambda x [e = V \ \& \ [agent], e = x \ \& \ [theme], e = x]$

Therefore, I propose that the null SE-anaphor PRO' is present in English too, although it is not pronounced. So (66) would be (66):

- (67) John washed **PRO'**.

Whether *se*, *zich* or zero-morphology is used, is accounted for at the S-M interface. Each language chooses how to spell out the ϕ -features of its SE-anaphors. This is a process that takes place at the interface between the syntax and the S-M system, i.e. outside the narrow syntax (C_{HL}). The spell-

out rules in (68) allow us to explain the presence of *se* and *zich* in Spanish and Dutch, as well as the zero-morphology in English¹⁵.

(68) *SE-anaphors spell-out rules*:

- a. Spanish and Dutch materialize the ϕ -features of PRO' iff they end up valued at the S-M interface.
- b. English never materializes the ϕ -features of PRO'.

6. Conclusions

This work shows that Spanish makes use of both SELF-anaphors and SE-anaphors, just like Dutch does. I have argued that the reflexive readings can be obtained by two routes. The first one is a reflexivization operation in the lexicon, which reduces one θ -cluster from the lexical entry of the verb and bundles it with the external θ -cluster. The other one is reflexive binding, which consists of a SELF-anaphor A-bound by an antecedent. When the reflexivization applies in the lexicon, a SE-anaphor (PRO') must be inserted in the internal phase for the uninterpretable instance of the θ -features on To to be eliminated. By doing this, the derivation can converge at the interfaces. This SE-anaphor is spelled-out as a clitic (in Spanish but not in Dutch) because its ϕ -feature person gets valued by the ϕ -features of the antecedent, and because the anaphor moves to the inflexion domain. When there is reflexive binding, the SELF/MISMO-element acts as a protector element so that no chain can be formed between the antecedent and the bound object (otherwise both syntactic elements would be translated to just one semantic element, and the derivation would crash due to a Theta Criterion violation). Within PPs, the SELF-element is not needed because the prepositions in Spanish do block chain formation. These two ways of getting a reflexive reading are not equivalent, and there exist some semantic differences between both of them. The evidence presented in this work points towards the conclusion that the phenomenon of reflexivization in Spanish takes place following the same principles as in other languages like English and Dutch. In other words, Reinhart & Reuland's (1993) Conditions also hold in Spanish.

The table (69) shows the different pronouns along a continuum in which PRO' (the simplest and most versatile pronominal element the UG has) and the pronominals define the extremes. Also the SE-anaphors of the Spanish (*se*) and Dutch (*zich*), and the SELF-anaphors are included so that

¹⁵ In Teomiro (in progress), I work these rules out so as to account for some contrasts and similarities concerning certain kinds of unaccusative verbs in Spanish, Dutch and English.

the reader has a unified view of the pronominal elements that have been analyzed in this work,

(69) PRO – Pronominals Continuum:

| | SE-anaphors | | | SELF-anaphors | pronominals | |
|-------------------------------|--------------------------|--|--|--|--|---|
| | PRO' | PRO | <i>se/sí</i> | <i>zich</i> | himself zichzelf | he/him/his |
| R | [-R] | [+R] | [-R] | [-R] | [-R] | [+R] |
| Φ-features | <i>i</i> φ person [-] | <i>i</i> φ person [-] <i>i</i> φ number [-] | <i>i</i> φ person [3 ^a] | <i>i</i> φ person [3 ^a] | <i>i</i> φ person [3 ^a] <i>i</i> φ gender [♂] <i>i</i> φ number [sing] | <i>i</i> φ person [3 ^a] <i>i</i> φ gender [♂] <i>i</i> φ number [sing] |
| Structural Case | <i>u</i> T [-] | <i>u</i> T [-] | <i>u</i> T [-] | <i>u</i> T [-] | <i>u</i> T [-] | <i>u</i> T [-] |
| Phonological content | no | no | yes | yes | yes | yes |
| Binding at C _{LH} | yes | yes | yes | yes | no | no |
| Reflexivizing function | no | no | no | no | yes | no |

To conclude, PRO and the other SE-anaphors (PRO', *se*, *zich*) have in common that they can form agree-chains that can be translated to A-binding at the C-I interface. This cannot be done by means of SELF-anaphors (precisely to prevent this is why the protector element SELF/MISMO is used) or pronominals. Nevertheless, PRO differs from the other SE-anaphors in that, since it has a grammatical number feature, it is [+R] (see footnote 10). Spanish *se* and Dutch *zich* in reflexive contexts are [-R] since they are actually an instance of PRO' (rather than PRO) with valued and spelled out φ-features (although not in the case of English). However, since they violate the DCC, they are not interpreted as semantic arguments of the verb and hence, it is no longer crucial whether they are [+R] or [-R].

References

- Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.
- Chomsky, Noam. 2001. Derivation by phase. In Ken Hale: *A life in language*, ed. M. Kenstowicz, 1–52. Cambridge, MA: The MIT Press.
- Chomsky, Noam. 2005. *On phases*. Ms. MIT.
- Doron, Edit & Malka Rappaport-Hovav. 2007. On the uniform application of valence-changing operations. in *IATL 23*. Tel-Aviv University.
- Everaert, Martin. 1986. *The syntax of reflexivization*. Dordrecht: Foris.
- Holmberg, Anders. 2005. Is there a little pro? Evidence from Finnish. *Linguistic Inquiry* 36:533–564.
- Otero, Carlos Peregrin. 1999. Pronombres reflexivos y recíprocos. In *Gramática de la lengua española*, Ignacio Bosque & Violeta Demonte (eds), chapter 23, 1428–1517. Madrid: Espasa-Calpe.
- Pesetsky, David & Esther Torrego. 2004. Tense, case, and the nature of syntactic categories. In *The syntax of time*, ed. J. Gueron and J. Lecame. MIT Press.
- Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In S. Karimi, V. Samiian y W. Wilkins (eds). *Clever and Right: a Festschrift for Joe Emonds*. MIT, UMass/Boston.
- Reinhart, Tanya. 2002. The theta system: An overview. *Theoretical Linguistics* 28:229–290.
- Reinhart, Tanya & Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24:657–720.
- Reinhart, Tanya & Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry* 36:389–436.
- Reuland, Eric. 2001. Primitives of binding. *Linguistic Inquiry* 32:439–492.
- Reuland, Eric & Jan Koster (eds.) 1991. *Long-distance anaphora*. Cambridge: Cambridge University Press.
- Teomiro, I. 2005. *Control and syntactic chains: The timing of PRO*. Master's thesis. University of Utrecht.
- Teomiro, I. 2007. Control at the interfaces. *IUIOG Working Papers in Linguistics* 14:109–120.
- Teomiro, I. 2008. *Control, reflexivización e impersonalidad*. Master's thesis. Universidad Autónoma de Madrid & Instituto Universitario de Investigación Ortega y Gasset.
- Teomiro, I. 2010. *Anaphors at the interfaces*. Doctoral dissertation. Universidad Autónoma de Madrid.
- Torrego, Esther. 1995. From argumental to non-argumental pronouns: Spanish doubled reflexives. *Probus* 7:221–241