

## Introduction to the Null-Subject Parameter

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This presentation is mainly based on Roberts & Holmberg (2010), Saab (2011), Camacho (2013) and on my own observations.

### 1. A typology of Null-Subject Languages

We will discuss the basic properties associated with the Null-Subject Parameter (NSP). The basic and obvious property is that they do not require an overt constituent to express a definite, referential, pronominal subject.

- (1) a. Parla italiano
- b. \*Speaks English
- c. Habla español.
- d. Mila ellinika.
- e. \*Parle français.

As we discuss in the first class, this phenomenon is very different from the classical control patterns.

- (2) a. [(Him) smoking] bothers me.
- b. John expects [(Mary) to leave soon].
- c. Jean a essaye' [de – partir].  
        John has tried [– to leave].

Let's explore the types of languages associated with the property depicted in (1).

#### 1.1. CONSISTENT NULL-SUBJECT LANGUAGES

In these languages, all persons in all tenses may feature a null subject:

- (3) *Italian*
- bevo           'I drink' (etc.)
- bevi
- beve
- beviamo
- bevete
- bevono

Consistent null-subject languages can use pronouns in subject positions, but they have an emphatic (focalized) interpretation.

- (4) a. Lui parla italiano. (Italian)  
     HE speaks Italian.
- b. Él habla español. (Spanish)  
     HE speaks Spanish.
- c. Aftos mila ellinika. (Greek)  
     HE speaks Greek.

An important aspect of the interpretation of null-subjects is that they allow coreference with the matrix subject if they are placed in an embedded sentence.

- (5) a. Il professore ha parlato dopo che (lui) e' arrivato. (Italian)  
     The professor has spoken after that (he) is arrived  
     'The professor spoke after he arrived.'
- b. I Maria jelase afou (afti) idhe ton Yianni. (Greek)  
     The Mary laughed after (she) saw the Yiannis.  
     'Mary laughed after she saw Yiannis.'

The same sentences in English and French are ambiguous.

- (6) a. The professor spoke after he arrived.
- b. Le professeur a parlé après qu'il est arrivé.

As maybe you noticed, there seems to be a correlation between the possibility of having null subjects and the morphological properties of the inflection. This classic intuition is today termed as *Taraldsen's Generalization*.

#### (7) *Taraldsen's Generalization*

There is a connection between the possibility of referential, definite silent pronominal subjects of finite clauses and the notional "richness" of the verbal agreement paradigm.

We will see how (7) is used in the theoretical explanation of these phenomena.

#### 1.2. EXPLETIVE NULL-SUBJECTS

In some languages you can have null expletives (e.g., German, Cape Verdean, Dutch, Haitian).

- (8) a. Gestern wurde (\*es) getanzt.  
     Yesterday was (it) danced.  
     'Yesterday there was dancing.'
- b. Gestern war \*(es) geschlossen.  
     Yesterday was (it) closed.  
     'Yesterday it was closed.'

Languages of this sort are not considered consistent null-subject languages. In fact, the existence of such languages led Rizzi (1982) to identify to *Parameters* of variation regarding null-subjects: (i) a parameter in charge of overttness of expletives and (ii) a parameter in charge of overttness of referential pronouns in subject position.

Wait. Do you remember what a *parameter* is? In its most general sense, a parameter is a typological distinction between two (or more) languages regarding some grammatical property.

In a more theoretical sense, *parameters* are part of the theory of UG: it is assumed that child may succeed in language acquisition because they are provided with a set of universal linguistic principles and a set of parameters that provide optional grammatical postulates that result in significant linguistic variation.

#### 1.3. DISCOURSE PRO-DROP (AKA 'RADICAL PRO-DROP')

These are languages that allow null subjects without having ANY agreement or inflectional markings (e.g., Chinese, Japanese, Korean, Thai, Vietnamese).

- (9) a. – kanjian ta le  
     (he) see he ASP
- b. Ta kanjian – le.  
     He see (him) ASP  
     'He saw him.'

There are several analyses for these null subjects (e.g., Tomioka 2003, Neeleman and Szendrői 2007, Saito 2007). However, I like thinking on these as cases of ellipsis.

(10) *Spanish*

- a. María<sub>i</sub> cree que su<sub>i</sub> propuesta será aceptada.  
 María believes that her proposal will.be accepted  
 'Maria thinks that her proposal will be accepted'.
- b. Juan también cree que *e* será aceptada.  
 Juan too believes that will.be accepted  
 'Juan also thinks that it will be accepted'.  
*e* = 'Mary's proposal' [strict reading]

(11) *Japanese*

- a. Mary-wa zibun-no teian-ga saiyo-sare-ru-to omotteiru.  
 Mary-top her-gen proposal-nom accept-PASS-PRES-C thinks  
 'Mary thinks that her proposal will be accepted'.
- b. John-mo *e* saiyo-sare-ru-to omotteiru.  
 John-too accept-PASS-PRES-C thinks  
 'John also thinks that *e* will be accepted'.  
*e* = 'Mary's proposal' [strict reading]  
*e* = 'John's proposal' [sloppy reading]

1.4. PARTIAL NULL-SUBJECT LANGUAGES

This is a "new" category, mainly defended by Holmberg in a series of papers. It includes Finnish, Hebrew, Russian and Brazilian Portuguese, among others. In Finnish, for example, only 1<sup>st</sup> and 2<sup>nd</sup> person pronouns may be unexpressed.

- (12) a. (Minä) puhun englantia  
 I speak-1SG English  
 'I speak English' (etc.)
- b. (Sinä) puhut englantia  
 You speak-2SG English
- c. \*(Hän) puhuu englantia  
 He/She speak-3SG English
- d. (Me) puhumme englantia  
 We speak-1PL English
- e. (Te) puhutte englantia  
 You speak-2PL English
- f. \*(He) puhuvat englantia  
 They speak-3PL English

3<sup>rd</sup> person pronouns can be null if they are bound to a higher argument (under some conditions that are poorly understood). Compare this fact with (5), by the way.

- (13) Pekka<sub>i</sub> väittää [että hän<sub>i</sub>/*e*<sub>i</sub>/*e*<sub>i</sub> puhuu englantia hyvin].  
 Pekka claims that he speaks English well

Also, generic pronouns must be null.

- (14) Täällä ei saa polttaa  
 Here not may smoke  
 'One can't smoke here'

In languages as Italian or Greek, an (impersonal) pronoun is required in those positions.

- (15) a. Qui non si puo' fumare. (Italian)  
 Here not SI can smoke
- b. Apoghorevete to kapnisma. (Greek)  
 prohibit-3SG-.MEDIOPASS the smoking  
 'One can't smoke here.'

1.5. INTERIM CONCLUSION

There are, then, four identifiable forms of null-subject language. These are typically ordered in a ranking of "liberality" as the following.

- (16) expletive null subjects  $\supset$  partial null subjects  $\supset$  consistent null subjects  $\supset$  discourse pro-drop

2. What is a Null-Subject?

There are basically three theoretical approaches to Null-Subjects

(17) *Theory I*

In null subject languages, verbal inflection is pronominal and may function as a subject.

(18) *Theory II*

Rich verbal inflection licenses and identifies an empty category (namely *pro*).

(19) *Theory III*

Verbal inflection establishes some kind of "sameness" relation with a pronoun, which causes the deletion of the later.

2.1. BRIEF DISCUSSION OF THEORY I

This is the most "popular" theory. It was originally proposed by traditional grammarians (e.g., Fernández Ramírez 1951), but it has been recently updated by several scholars (e.g., Alexiadou & Anagnostopoulou 1998, Ordoñez 1997, Ordoñez & Treviño 1999).

- (20) a. Corre rápido.  
 Runs fast

- b. Corr<sub>[pronoun -e]</sub> rápido.

- (21) a. El niño corre rápido.  
 The kid runs fast

- b. [El niño]<sub>i</sub> corr<sub>[pronoun -e]</sub><sub>i</sub> rápido.

2.2. BRIEF DISCUSSION OF THEORY II

As we already discussed when we talked about traces, explaining (and constraining) the distribution of inherently empty categories was a great problem in the 80s.

- (22) *pro* corre rápido.  
 runs fast

- (23) A: Este libro es de Juan.  
 This book is of Juan  
 'This is Juan's book'

- B: \*Y este cuaderno también es [PP de *pro*]  
 And this notebook also is of  
 'And also this notebook'.

Rizzi (1986) assumes that *pro* needs to be licensed (24) and identified (25).

- (24) *pro* is governed by  $X^0_y$ , where the class  $y$  of licensing heads can vary from language to language.
- (25) Let  $X$  be the licensing head of an occurrence of *pro*: then *pro* has the grammatical specification of the features on  $X$  coindexed with it.

### 2.3. BRIEF DISCUSSION OF THEORY II

The third option is assuming that null subjects are ordinary pronouns that, by some PF-related reason, are deleted (cf. Perlmutter 1969).

- (26) a.  $[_{DP} \text{El niño}] \text{ corre rápido.}$   
 b.  $[_{TP} SD_\phi [_{T'} T_\phi \dots]]$

- (27) a.  $\emptyset \text{ corre rápido.}$   
 b.  $[_{TP} D_\phi [_{T'} T_\phi \dots]]$

The challenge for these theories is deriving the phonological emptiness of null-subjects from independent and principled mechanisms.

### 3. The classic NSP and the cluster of properties associated to it

The NSP has played an important role in the study of comparative syntax because it has shown a way to unify apparently unrelated linguistic properties.

Do you remember this?

- (28) *Observational adequacy*  
 An observationally adequate grammar presents the data correctly (this is kinda basic).
- (29) *Descriptive adequacy*  
 A descriptively adequate grammar specifies the observed data in terms of significant generalizations that express underlying regularities in the language.
- (30) *Explanatory adequacy*  
 Explanatory adequacy can be interpreted as asserting that data of the observed kind will enable a speaker whose *intrinsic capacities* are as represented in the general theory to construct for himself a grammar that characterizes exactly this intuition.

Thus, (30) amounts explaining the relation between the data and the universal/innate mechanisms of language.

Suppose that some linguistic properties come “all together”: e.g., the property  $p_1$  correlates with the property  $p_2$  as reflexes of a general parameter  $P$ . This “linguistic design” would make grammars much more “learnable”, aiding to solve somehow the problem of the poverty of the stimulus.

This was, more or less, the idea behind trying to cluster linguistic properties under a single parameter of variation. And the NSP is an excellent example of how this was (and still is) done.

### 3.1. FREE INVERSION

Languages like Spanish or Italian have a default, unmarked word order SVO. But these languages also display an alternative VS word order in declarative sentences, that may be associated with distinct assertion structures.

- (31) *Habló Marta* (Spanish)  
 spoke Marta  
 ‘Marta spoke’.
- (32) *Mangia Gianni* (Italian)  
 eat Gianni  
 ‘Gianni eats’.

Notice also that the availability of these configurations may be elegantly explained by assuming that an EC *pro* occupies the Spec,T position.

- (33)  $[_{TP} \text{pro} [_{T'} \text{habló} [_{VP} \text{Marta} \dots]]]$

### 3.2. NULL RESUMPTIVE PRONOUNS

The long-distance link between the antecedent and the null position inside the embedded clause, illustrated in (34b), crosses a wh-island (headed by *quién* ‘who’), and under normal circumstances, this wh-island should prevent such a long-distance link.

- (34) a. *Esta es la mujer que me pregunto [quién cree [que no venga]].*  
 This is the woman that I wonder who believe that not come  
 ‘This is the woman that I wonder who believes might not come.’  
 b. *la mujer [CP OP<sub>i</sub> [IP I+V [CP quién cree [CP que [IP  $t_i$  no venga]]]]]*

- (35) \*This is the woman that I wonder who believes might come.

However, if the subject of *venga* ‘come’ is a null subject, as shown in (36a), there would be no violation of the wh-islands extraction constraint because there would be no extraction.

- (36) a. *Esta es la mujer [OP<sub>i</sub> que me pregunto [quién cree [que *pro<sub>i</sub>* no venga.]]]*  
 b. This is the woman that I wonder who she believes might come.

### 3.3. VIOLATION OF THE THAT-TRACE FILTER

There is an asymmetry regarding extraction from embedded clauses in English:

- (37) a. Who do you think that he will meet?  
 b. \*Who do you think that will meet Jim?

However, the asymmetry is lost if the complementizer is deleted.

- (38) a. Who do you think will meet Jim?  
 b. Who do you think he will meet?

Null Subject Languages do not show that-trace asymmetries, as Perlmutter (1971) discovered.

- (39) *Quién piensas que vendrá?*  
 Who think.you that will.come  
 ‘Who do you think will come?’

In these languages, in fact, is typically forbidden deleting the complementizer.

- (40) \**Quién piensas vendrá?*

Jaeggli (1980) argued that the grammaticality of (39) follows from the fact that Spanish has postverbal subjects (cf. 3.1), hence extraction takes place from the postverbal subject position.

Trentino and Fiorentino support this idea since subject wh-movement can be shown to take place from a postverbal position. In Fiorentino, a subject clitic obligatorily agrees with a non wh-subject when it is preverbal, as shown by the grammaticality of feminine *l’* in (41a)

agreeing with (*la Maria*) vs. the ungrammaticality of masculine/default *gl'* in (41b). However, when the subject is postverbal, the clitic can take the default, 3.SG.MAS form *gli*, as shown in (41c).

- (41) a. La Marie l' è venut-a  
the Maria 3.sg.fem is come-FEM  
'Maria has come'.  
b. \*La Maria gli a telefonà.  
The Maria 3.sg has telephoned  
'Mary has telephoned'.  
c. Gl' è venut-o la Maria  
3.sg is.3sg come.MASC the Maria  
'Maria has come'.

Thus, no gender agreement in post-verbal position. Now, look:

- (42) a. \*Quante ragazze le sono venute?  
How many girls 3.pl.fem are come  
b. Quante ragazze gli è venuto con te?  
How many girls 3.sg.masc is come with you  
'How many girls came with you?'

It seems that movement to Spec,C takes place from the post-verbal position.

There is additional evidence for this: consider the distribution of *alcune* and its restrictor *ne*.

- (43) a. Alcune sono cadute in mare. / \*Alcune ne sono cadute in mare.  
Some are fallen in sea / CL.GEN  
'Some (of them) fell into the sea.'  
b. \*Mario ha prese alcune. / Mario ne ha prese alcune.  
Mario has taken some / CL.GEN  
'Mario took some (of them)'.  
c. \*Sono cadute alcune in mare. / Ne sono cadute alcune in mare.  
Are fallen some in sea / CL.GEN  
'Some (of them) fell into the sea.'

The genitive clitic *ne* must appear if *alcune* is post-verbal. Replace *alcune* for a wh-phrase and you have a straightforward way of knowing from where wh-extraction takes place.

- (44) a. \*Quante hai detto che hai preso \_\_?  
How.many you.have said C have.2sg taken  
b. Quante hai detto che **ne** hai preso \_\_?  
How.many you.have said C CL.GEN have.2sg taken  
'How many (of them) did you say that you took?'  
(45) a. \*Quante hai detto che \_\_ sono cadute?  
How.many you.have said C are fallen  
b. Quante hai detto che **ne** sono cadute \_\_?  
How.many you.have said C CL.GEN have.2sg fallen  
'How many (of them) did you say fell?'

Thus, no violation of the that-trace in Italian and, presumably, in other null subject languages.

#### 4. Parametric Theory

(This is a brief introduction for next week's presentations).

The classical definition of parameter has a very important problem: proliferation. Consider this:

- (46) *List of parameters (adapted from Roberts & Holmberg 2010)*  
(i) Null subjects  
(ii) V-to-T  
(iii) T-to-C  
(iv) Negative concord  
(v) wh-movement  
(vi) at least 10 parameters for word order (head-parameter related "subparameters")  
(vii) subject raising  
(viii) at least four parameters governing auxiliary selection  
... the list goes and goes.

Roberts & Holmberg count at least 80 parameters, and that is a very little piece of the whole variational cake (sorry, it's late and I'm a little hungry).

Anyway, nowadays is more common assuming that variation follows from some version of the *Borer-Chomsky Conjecture*.

- (47) All parameters of variation are attributable to differences in the features of particular items (e.g. the functional heads) in the Lexicon.

(47) has three very important advantages:

First, theory imposes a very strong limit on what can vary from language to language: no variation regarding syntactic mechanisms.

Second, associating parameters with lexical entries is "economic", since it reduces variation to aspects of language that must be learned anyway.

Third, it imposes a restriction on the form of parameters: features (or second class features) that trigger or prevent the application of linguistic operations.

This class of "parameters" is now well known as *microparameters* since explaining cross-linguistic variation requires assuming an accumulation of microvariants associated with features.

On the other side, "big" parameters as the NSP are now termed *macroparameters*, since they involve several cross-linguistic differences based on a single contrast (e.g., parameter-on vs. parameter-off).

## Introducing (little) *pro*

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This presentation is based on Chomsky (1981), Huang (1984), Rizzi (1986), Saab (2011) and on my own observations.

### 1. A little preamble

The GB model was conceived as a universal theory of language. Thus, it was a perfect framework for comparative grammar: every linguistic principle is supposed to apply to every single human language.

#### (1) *Projection Principle* (Chomsky 1981:29)

Representations at each syntactic level (i.e., LF, and D- and S-structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items.

Thus, the subcategorization properties of a verb like *put* must be preserved during the whole generative process.

#### (2) put [ \_\_ NP PP], <Theme, Locative>

- (3) a. They put the beers in the fridge.
- b. What<sub>i</sub> do they put <sub>t<sub>i</sub></sub> in the fridge?

However, the principle in (1) does not seem to explain the properties of subjects:

#### (4) There seems to be a beer in the fridge.

Is the expletive selected somehow by the lexical item *seem*? It is not likely.

#### (5) *Extended Projection Principle* (EPP)

Every sentence must have a subject.

The principle in (5) seems to apply for English in a very trivial way. However, its universality is not that obvious.

- (6) Parece        haber        una cerveza        en la heladera.  
Seems        to be        a beer        in the fridge  
'There seems to be a beer in the fridge'.

Two options: (i) either the EPP is not a universal principle but just a rule of English and some other languages, or (ii) it is a universal principle that can be *parametrized* somehow. Since the second choice is theoretically more appealing (we want to find universal laws for language, or at least dismiss fake universals), the *Pro-drop Parameter* was proposed.

#### (7) *The Pro-drop Parameter*

ON → (6)

OFF → (4)

We discussed last class some of the properties associated with this parameter:

#### (8) *Null Subjects*

- a. Compramos un libro.
- b. \*Bought a book.

#### (9) *Free Inversion*

- a. Trabajó Juan.
- b. \*Worked John.

#### (10) *Null resumptive pronouns*

- a. Esta es la chica<sub>i</sub> que me pregunto quién cree que *e<sub>i</sub>* pueda cantar
- b. This is the girl who I wonder who thinks that *she* may sing

#### (11) *Violations of the that-trace filter*

- a. ¿Quién creés que vino?
- b. \*Who do you think that comes?

The first attempt to explain this properties is due to Chomsky (1981). According to him...

[...] the parameter involves the inflectional element INFL, or more precisely, the agreement element AGR (=PRO) that is the crucial component of INFL with respect to government and binding. The intuitive idea is that where there is overt agreement, the subject can be dropped, since the deletion is recoverable. (Chomsky 1981:241).

This intuition is what Huang (1984) called *Taraldsen's Generalization*.

#### (12) *Taraldsen's Generalization*

There is a connection between the possibility of referential, definite silent pronominal subjects of finite clauses and the notional "richness" of the verbal agreement paradigm.

Consider Pashto, an eastern Iranian language. In this language there is a split regarding agreement depending on the tense: present tense behaves in a nominative-accusative fashion (verbs always agree with subjects), while in the past it behaves as an ergative language (the intransitive verbs agree with subjects and transitive verbs agree with objects).

#### (13) *Present*

- a. Jān ra-z-i.  
John DIR-come-3.masc.sg  
'John comes.'
- b. Zə maṇa xwr-əm.  
I apple eat-1.masc.sg  
'I eat an apple'.

#### (14) *Past*

- a. Jān ra-ḡ-ay.  
John Asp-come-3.masc.sg  
'John came'.
- b. Ma maṇa wə-xwar-a.  
I apple PRF-eat-3.fem.sg  
'I ate an apple'.

Now, (12) predicts that (i) you should have null subjects when there is subject agreement and (ii) null objects when there is object agreement. Huang (1984) showed that this prediction holds.

- (15) a. [e] ra-z-i.  
DIR-come-3.masc.sg  
'(He) comes.'
- b. [e] maṇa xwr-əm.  
apple eat-1.masc.sg  
'(I) eat an apple.'

- c. \*Zə [e] xwr-əm.  
I eat-1.masc.sg  
'I eat (it).'
- d. Zə-ye xwr-əm.  
I-CL.OBJ eat-1.masc.sg  
'I eat it.'
- (16) a. [e] ra-ğ-ay.  
DIR-come-3.masc.sg  
'(He) came.'
- b. ma [e] wə-xwar-a.  
I PRF-eat-3.fem.sg  
'I ate (it).'
- c. \*[e] maɲa wə-xwar-a.  
apple PRF-eat-3.fem.sg  
'(I) ate an apple'.
- d. Maɲa-me wə-xwar-a.  
apple-CL.SUBJ PRF-et-3.fem.sg  
'I ate an apple.'

These data confirm the Taraldsen's Generalization.

## 2. Are Null Subjects instances of PRO?

Suppose we assume the EPP. So, the basic structure for a sentence in any language would be something like (17).

- (17)  $S \rightarrow NP\ INFL\ VP$   
(where  $INFL = [[+/-\ Tense], (AGR)]$ ) (Chomsky 1981:241).

Thus, every sentence has a preverbal NP as a subject. A Null Subject Language (NSL), then, must have an EC  $[_{NP}\ e]$  as subject in cases as (6).

Suppose that a null subject is an instance of PRO (i.e.,  $[_{NP}\ e] = PRO$ ). In old GB theory, PRO had a very specific property pompously called *PRO Theorem*. It is very simple:

- (18) a. I want PRO to play football.  
b. PRO playing football is fun.

In (18a), PRO behaves as an anaphor since it is bound by a governing element. In (18b), however, PRO behaves as a pronoun since it has arbitrary reference (i.e., it is NOT bound by a governing category). These are "contradictory" statements regarding the government-related properties of PRO. Chomsky solved this contradiction in a very simple way:

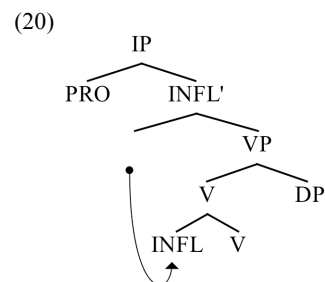
- (19) *PRO Theorem*  
PRO must be ungoverned.

Since PRO cannot be subject to government, it cannot violate government-related principles. Also, (19) predicts that PRO can only appear in non-governed syntactic contexts. Since AGR is a governor, PRO must appear only in non-finite clauses. Notice, also, that Case is assigned under government, and (typically) PRO does not receive Case.

However, null-subjects appear in (apparently) governed positions. How can this be?

Suppose that the inflected verb is formed through Affix Hopping (a transformational-kind of operation that does not leave traces behind). Thus, INFL "goes down" and incorporates into the verb.

Suppose this may happen in two different places: (i) in the syntactic component or (ii) at PF. If it applies during the syntactic computation, then AGR is not going to govern PRO.



Thus, the pro-drop parameter can be postulated in a very simple way: in NSL (e.g., Spanish, Italian, Greek), Affix Hopping applies in the syntactic component; in non-NSL (English, French), Affix Hopping applies at PF.

- (21) *Distribution of PRO in NSLs (adapted from Chomsky 1981:258)*

The subject of a finite clause is PRO if and only if Affix Hopping has applied in the syntax.

However, this solution does not work for a VERY simple reason. Overt subjects must be governed by INFL to receive nominative Case. And overt subjects and null subjects have the same distribution:

- (22) a. Los niños compraron un libro.  
The kids bought a book  
b. PRO compraron un libro.

## 3. Rizzi's (1986) theory of *pro*

Rizzi's (1986) theory of *pro* is one of the "standard" accounts for null subjects. However, this proposal was originally advanced for null objects.

- (23) a. This leads (people) to the following conclusion.  
b. Questo conduce (la gente) alla seguente conclusione

What kind of EC is the one we have in these examples? It is not (big) PRO, because those positions are governed by a verb. It is not a trace because there are no antecedents. Thus, it must be something different: (*little*) *pro*.

Consider the following cases.

- (24) a. This leads people [to PRO conclude what follows].  
b. \*This leads [to PRO conclude what follows].
- (25) a. Questo conduce la gente a [PRO concludere quanto segue].  
b. Questo conduce a [PRO concludere quanto segue].

This pattern is explained if we assume that Italian has an EC in object position in (25b) controlling PRO.

Same argument can be made with binding patterns:

- (26) La buona musica riconcilia \_\_\_ con se stessi  
The good music reconciles with themselves  
'Good music reconciles people with themselves'.

(27) \*This can incite against oneself.

Thus, there is an EC in the object position of these verbs in Italian (and not in English). This EC is *pro*. These are the rules restricting its distribution according to Rizzi (1986):

(28) *Theory of pro*

*pro* must be licensed and identified

a. *Licensing*

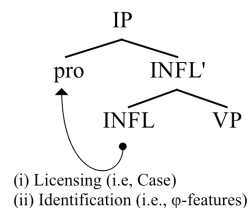
*pro* is licensed if it is Case-marked by  $X^0_y$ .

b. *Identification*

*pro* is identified by the features in  $X^0_y$ .

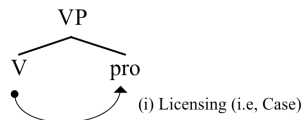
For the case of null subjects, there is a INFL/T head assigning *pro* nominative Case, and AGR (the set of  $\phi$ -features) identifies *pro* as a referential pronoun.

(29)



For the case of null objects, the verb assigns accusative Case to *pro*, but it cannot identify *pro*.

(30)



In this cases, identification assigns a referent by default, according to the following rule.

(31) Assign *arb* to the direct  $\theta$ -role.

Now, look at the definitions in (28) again. What is that subscript “*y*” on  $X^0$ ?

That is parametrization, more or less in line with the Borer-Chomsky conjecture.

(32) All parameters of variation are attributable to differences in the features of particular items (e.g. the functional heads) in the Lexicon.

Thus, a proper governor for *pro* (either INFL or V) requires having an arbitrary property *y*. That property is what licenses the presence of the EC and, at the end, explains the cluster of properties related with the null subject parameter.

- (33) a. *pro* compriamo un libro.  
 b. *pro* trabajó Juan.  
 c. Esta es la chica<sub>i</sub> que me pregunto quién cree que *pro*<sub>i</sub> pueda cantar  
 d. ¿Quién<sub>i</sub> creés que *pro* vino *t*<sub>i</sub>?

## H0 Ongoing research in language and cognition

Week 11 – Alexiadou & Anagnostopoulou (1998)

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### 1. The issue

Languages that lack pro-drop / null subjects always fill their Spec,TP position, either with a real subject or with an expletive.

- (1)a. There arrived a man. *English*  
b. A man arrived.
- (2)a. Það lasu einhverjir stúdentar bókina. *Icelandic*  
*there read some students the book*  
Some students read the book.  
b. Einnhverjir stúdentar lasu bókina.  
*some students read the book*

In Null-subject languages, no overt expletive appears in Spec,TP if the subject is postverbal. The focus in this paper is on Greek, Spanish, Arabic and Celtic languages.

- (3)a. Juan leyó el libro. *Spanish*  
*Juan read the book.*  
b. leyó Juan el libro.
- c. Ο Petros pandreftike tin Ilektra. *Greek*  
*Peter married Ilektra*  
Peter married Ilektra.  
d. pandreftike ο Petros tin Ilektra.  
*married Peter Ilektra*  
Peter married Ilektra.



- (4)a. ntaqada iisaa muusaa.  
*criticized Iisa Muusa*
- b. al-ʔawlaad-u jaaʔ-uu  
*the children came.3mpl*
- (5)a. Deir sé gur chuir sé síos é. *Irish*  
*says he COMP put he down it*  
 He says he put it down.
- b. Mair a fwrodd ef. *Welsh*  
*Mair REL.PART hit him*  
 Mair hit him.

A&A's claim: In none of the cases in (3)-(5) is the subject in Spec,TP. Preverbal subjects are higher; no covert expletive subjects exist. Consequently, Spec,TP is empty/absent.

Question: What checks off the [EPP]-feature of T?

Answer: The agreement features on the verb itself.

## 2. Background

Differences between postverbal subjects in English and postverbal subjects in null subject languages:

- Postverbal subjects are possible with every predicate in null subject languages, but not in English:

- (6) a. There left a student  
 b. ??There played a student  
 c. \*There built Mary a house

- (7)a. *efige o Petros.* *unaccusative*  
*left Peter*  
 Peter left.
- b. *epekse o Petros.* *unergative*  
*played Peter*  
 Peter played.
- c. *ektise i Maria to spiti.* *transitive*  
*built Mary house*  
 Mary built the house.

- In null subject languages every subject can appear postverbally (there are no Definiteness Restrictions):

- (8)a. *irthe to kathe pedi.*  
*arrived the every child*  
 Each child arrived.
- b. \*There arrived each child.

### 3. Questions at stake:

What checks off the [EPP]-feature of T in the case of a postverbal subject:

- English: an overt expletive
- Greek/Spanish/Arabic/Celtic: three options:
  1. Nothing (there is no EPP-feature)
  2. A covert expletive (standard theory)
  3. Something else (A&A)

### 4. The argument:

A&A claim that the Spec,TP position is always empty/absent in cases of preverbal subjects. If that can be proven, it follows that option 2 is out. In order to show this, two things need to be proven:

- Preverbal subjects are not in Spec,TP.
- There is no covert expletive present in Spec,TP.

Preverbal subjects:

Greek (a null subject language) allows many adverbials between the subject and the finite verb; French (not a null subject language) doesn't:

- (15)a. O Petros xtes meta apo poles prospathies  
*Peter yesterday after from many efforts*  
 sinandise ti Maria.  
*met Mary*  
*After many efforts, Peter met Mary yesterday.*

- b. \*Jean probablement/hier a rencontré Marie

In Greek, subjects may raise out of the clause; in English this is forbidden:

- (17)a. Epidi o Petros an erthi i Maria tha figi.  
*because Peter if comes Mary FUT leave*  
*Because if Mary comes, Peter will leave.*
- b. \*because Eric if Mary comes will leave

In Spanish, subjects and adverbials compete for the same position:

- (18)a. Temprano salia Julia de casa.  
*early left Julia the house*
- b. \*Temprano Julia salia de casa

Subjects in Spec,TP in English are ambiguous with the scope wrt their object:

- (19) Every boy loves a girl ( $\forall > \exists$ ;  $\exists > \forall$ )

In Greek this only holds for postverbal subjects:

- (20)a. Kapios fititis stihiothetise kathe arthro.  
*some student filed every article*
- b. stihiothetise kapios fititis kathe arthro.

Conclusion (for A&A): subjects are in some kind of a topic position and behave like Clitic-Left Dislocations (CLLD):

- (21) John, he was ill

CLLD-subjects generally have a different reading than regular subjects. For A&A this is also the case in null subject languages, although this is not always clear.

Covert expletives:

How to prove that there is a covert expletive or not? This is not so easy, as such elements are not pronounced. However, if they contribute some semantic effect, there would still be evidence for them. But is there?

- (31)a. There arrived a man/\*the man/\*every man. *English*
- b. Il est arrivé un homme/\*l'homme. *French*
- c. Er heeft iemand/ \*Jan een huis gebouwd. *Dutch*  
*there has someone Jan a house built*

- (32) eftase ena pedi/ o Jorgos/kathe filos mu.  
*arrived a child/George/ every friend mine*  
A child/George/every friend of mine arrived.

No definiteness effects in null subject languages. These facts show that there is no evidence in favour of covert expletives in null subject languages (which is different from saying that there is evidence against them).

To conclude: for A&A there is no evidence that any element is hosted in Spec,TP.

## 5. Proposal

In null subject languages generally, though not always, agreement is richer than in languages without null subjects:

(38)a.	I love	we love	b.	agapo	agapame
	you love	you love		agapas	agapate
	he loves	they love		agapa	agapane

Idea: rich agreement markers are pronominal in nature; poor agreement markers are not.

If the [EPP]-feature on T must be checked by a DP, raising the verb into T can do the job.

Economy: if the verb can do the job (i.e. if the job can be done without filling Spec,TP), then it must do the job. Consequently, a subject can never raise into Spec,TP to check off any feature; hence preverbal subjects move to TopicPs.

Advantage: (i) no zero elements have to be postulated; (ii) a natural relation between richness of agreement and pro-drop (for the exceptions, some additional story needs to be set up).

## 6. Problems

- V-raising outside null-subject languages: if verbs in null subject languages are triggered to raise to check off T's [EPP]-features, wouldn't one predict that in other languages verbs do not raise?

A&A: Verbs may still raise for other reasons, e.g. case checking (in French).

- Certain languages only have agreement with preverbal subjects and in cases of pro-drop, never with postverbal subjects (than 3<sup>rd</sup> person agreement pops up). Why would that be?

That's a problem. A&A suggest it has to do with case assignment, but do not provide a real answer.

- What is the semantics of VSO constructions in languages with full agreement on V?

For the analysis (3)-(5) contain two subjects, a pronoun and a real DP. But the semantic effect of the pronoun is zero. This is a (big) problem that A&A do not address.

- Does real pro not exist?

For A&A ideally not; In those constructions, the agreement morpheme in the verb is the subject; hence the real subject is absent. A&A acknowledge that this may have several consequences, e.g. if theta-role assignment takes place in syntax only or also in morphology.

## Deletion analysis of null subjects

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### 1. Introduction

The approach to null subjects we are exploring in this course assumes that some form of Taraldsen's Generalization holds:

#### (1) Taraldsen's Generalization

There is a connection between the possibility of referential, definite silent pronominal subjects of finite clauses and the notional "richness" of the verbal agreement paradigm.

We saw that there are some (apparent) cases of pro-drop in Asian languages, but since those have different properties, they cannot be considered null-subjects as in consistent null subject languages.

We also discussed briefly that there are (basically) three types to null-subjects:

#### (2) I-Subjects

In null subject languages, verbal inflection is pronominal and may function as a subject. There is no *pro*.

#### (3) (Little) *pro*

Rich verbal inflection licenses and identifies an empty category (namely *pro*).

#### (4) Deletion analysis

Verbal inflection establishes some kind of "sameness" relation with a pronoun, which causes the deletion of the later. There are empty elements, but these are not primitively silent.

Today we are going to discuss (i) some evidence for the third approach and (ii) some implementations of the idea.

### 2. What is a Null Subject?

We know there are unvalued/uninterpretable and valued/interpretable features. And we know that unvalued/uninterpretable features are satisfied through Agree (Chomsky 2000, 2001).

Therefore, consider Rizzi's (1986) analysis of null subjects under this perspective:

#### (5) Theory of *pro*

*pro* must be licensed and identified

##### a. Licensing

*pro* is licensed if it is Case-marked by  $X^0_y$ .

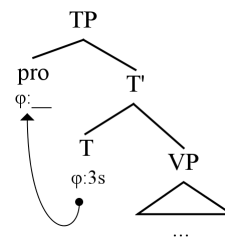
##### b. Identification

*pro* is **identified by the features in  $X^0_y$** .

Remember: *pro* is an empty category, an inherently silent element in our theory. As such, we must constrain its distribution. Therefore, (5) is proposed in order to constrain its contexts of appearance.

Now consider the interaction of (5) with an Agree based system:

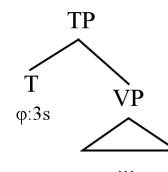
(6)



Notice that *pro* in this scenario does not contribute to value T's features: it is a pure expletive kind of element. Also, since it does not assign features to T, it does not receive Case (cf. Chomsky 2001). This would be Rizzi's (1986) proposal directly implemented in a minimalist framework.

There are two other logical alternatives, of course

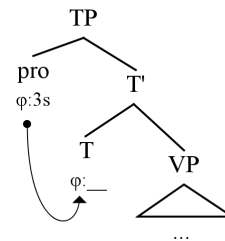
(7)



Here, there is no *pro* to identify. This is basically the proposal in Alexiadou & Anagnostopoulou (1998).

The third alternative involves a null element in Spec,T assigning its features to T:

(8)



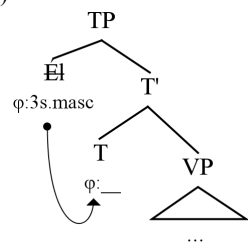
The obvious problem with this kind of theory involves restricting the context of appearance of *pro*.

- (9) a. *pro* vive aquí  
Pro lives here  
'He/She lives here'.
- b. \*Juan vió a *pro*  
Juan saw Acc-pro  
'Juan saw him/her'.
- c. \*Los regalos son para *pro*  
The gifts are for pro  
'The gifts are for him/her'

- d. \*Los hermanos de *pro* vinieron hoy  
 The brothers of *pro* came today  
 'His/her brothers came today'.

A possible solution involves assuming that what occupies the Spec,T position in (8) is a *normal pronoun* that is deleted in such position. In other words, there are no intrinsically null elements; there are elements that are deleted in some syntactic contexts (i.e., Spec,T).

(10)



- (11)a. ~~Él~~ vive aquí  
 Pro lives here  
 'He/She lives here'.
- b. \*Juan lo vió a él  
 Juan Cl.3sg.masc saw Acc-he  
 'Juan saw him'.
- c. \*Los regalos son para él  
 The gifts are for he  
 'The gifts are for him'.
- d. \*Los hermanos de él vinieron hoy  
 The brothers of he came today  
 'His brothers came today'.

Since the alternative in (6) seems to be incompatible with the Agree system, Holmberg observes that the analyses in (7) and (10) are the two only logical alternatives. Thus, there is a *Hypothesis A* and a *Hypothesis B*.

(12) *Hypothesis A* (Holmberg 2005: 537)

There is no *pro* at all in null subject constructions. Instead, Agr (the set of  $\phi$ -features of I) is itself interpretable; Agr is a referential, definite pronoun, albeit a pronoun phonologically expressed as an affix. As such, Agr is also assigned a subject  $\theta$ -role, possibly by virtue of heading a chain whose foot is in vP, receiving the relevant  $\theta$ -role.

(13) *Hypothesis B* (Holmberg 2005: 538)

The null subject is specified for interpretable  $\phi$ -features, values the uninterpretable features of Agr, and moves to Spec,IP, just like any other subject. This implies that the nullness is a phonological matter: the null subject is a pronoun that is not pronounced.

Of course, determining which of the two hypotheses is the best requires empirical support. In this sense, Saab (2009, 2011) notices an empirical "advantage" for Hypothesis B: he notices that verbal Inflection (i.e., T) behaves as being controlled by a DP regarding ellipsis.

(14) *Saab's observation*

T's  $\phi$ -features never show partial identity effects under ellipsis.

(15) *Tense identity on verbs* (Murguía 2004: 86)

\*Juan ha leído mucho y María en el futuro [~~habrá leído mucho~~] también.  
 'Juan has read a lot and María in the future [will read a lot] too'.

(16) *Gender identity on nouns* (Saab 2009: 493)

\*Juan visitó a su tía y Pedro visitó al [tío] suyo.  
 'Juan visited his aunt and Pedro visited his [uncle]'.

(17) *Gender identity on adjectives* (Saab 2009: 544)

Juan es petis-o y María también [es petis-a].  
 Juan is short-masc and María [is short-fem] too

(18) *Inflection identity on verbs* (Saab 2009: 234)

Juan fue al cine y nosotros también [fuimos al cine].  
 Juan went.3sg to the cinema and we too [went.1pl to the cinema]

Therefore, it seems that the set of  $\phi$ -features on T behaves in exactly the same way as the set of features on an adjective: they are assigned under Agree (and, crucially, they are not "interpretable" as Hypothesis A suggests).

Holmberg also proposed evidence for Hypothesis B. It involves some patterns in Finnish, a partially pro-drop language where only 1<sup>st</sup> and 2<sup>nd</sup> person pronouns may remain unexpressed.

- (19) a. (Minä) puhun englantia  
 I speak-1SG English  
 'I speak English' (etc.)
- b. (Sinä) puhut englantia  
 You speak-2SG English
- c. \*(Hän) puhuu englantia  
 He/She speak-3SG English
- d. (Me) puhumme englantia  
 We speak-1PL English
- e. (Te) puhutte englantia  
 You speak-2PL English
- f. \*(He) puhuvat englantia  
 They speak-3PL English

The language also has expletive elements:

- (20) a. \*Sattui minulle onnettomuus.  
 happened me-ALL accident
- b. Minulle sattui onnettomuus.  
 me-ALL happened accident
- c. Sitä sattui minulle onnettomuus.  
 EXP happened me-ALL accident  
 'I had an accident.'

- (21) a. Sitä olen minäkin käynyt Pariisissa.  
 EXP be-1SG I-too visited Paris-INE  
 'I have been to Paris, too (actually)'.
- b. Minä sitä olen käynyt Pariisissa.  
 I EXP be-1SG visited Paris-INE  
 'I've been to Paris (would you believe it)'.



Therefore, according to Holmberg (2005:543), “if the sentence contains one or more categories that can check the EPP, then one of them must remerge with IP, or an expletive must be merged with IP”.

Now consider the predictions made by Hypothesis A and Hypothesis B.

**According to Hypothesis A**, it would be possible introducing an expletive in sentences with null subjects. Why? Because there is nothing in the Spec,T position (cf. (7)). As seen in (20), expletives can co-occur even with overt pronouns if these do not occupy the subject position.

**According to Hypothesis B**, it is not possible introducing an expletive in null subject sentences. Why? Because there is already a (null) pronoun in that position (cf. (10)).

The data shows that Hypothesis B makes the right prediction:

- (22) a. \*Sitä puhun englantia.  
EXP speak-1SG English  
b. Oletteko (\*sitä) käyneet Pariisissa?  
be-2PL-Q EXP visited Paris-INE  
'Have you been to Paris?'

### 3. An implementation of Hypothesis B

Roberts (2010) proposes a mechanism of deletion of subject pronouns based on his own theory of clitic incorporation. I will introduce a simplified version of his ideas here. You will notice certain similarity to the system described in Handout 7.

- (23) a. No vi nunca a Juan.  
Not saw never Acc-Juan  
'I never saw Juan'.  
b. No lo vi nunca.  
Not Cl.him saw never  
'I never saw him'.  
c. \*No vi nunca lo.  
Not saw never Cl.him  
'I never saw him'.

In a nutshell, clitics are a type of pronominal element that attaches to verbs and other clitics. In Romance languages, they typically move up forming clusters around the inflectional area.

According to Roberts, relevant properties of clitics follow from the following scenario:

- (24)
- (25)

Notice that after Agree occurs, CL and (a subset of the features of) v are somehow *undistinguishable* regarding their features. In other words, this valuation procedure had the “same” effect than incorporating CL into v.

Since v typically moves to T in Romance languages, the clitic is phonologically realized in the inflectional area.

To introduce some terminology, let's define *Defective Goal*.

- (26) A goal G is defective iff G's formal features are a proper subset of those of G's probe P.

Thus CL is a Defective Goal to the probe v in (25) and (26). Notice also that only one occurrence of the  $\phi$ -features in (25) receives phonological representation. According to Roberts, this may follow from the following rule:

- (27) Defective goals always delete/never have a PF realization independently of their probe.

Let's go back to Null Subject. According to Rizzi (1982), the core property of Consistent Null Subject Languages is having pronoun-like inflectional heads. Roberts and Holmberg (2010) formalize this idea as following:

- (28) *The Null Subject Parameter (Roberts & Holmberg 2010:14)*  
Does T bear a D-feature?

Now, suppose that consistent null subject languages have a class of pronoun consisting only on Definiteness features (D-features) and  $\phi$ -features. For simplicity, call this pronominal element *pro*.

- (29)  $pro_{\{D, \phi\}}$

Now suppose you merge this element in the Spec,v position for  $\theta$ -role and then you move it to Spec,T to check the EPP and value T's  $\phi$ -features.

- (30)

As you can see, *pro* is a Defective Goal for T. And according to (27) *pro* cannot receive phonological representation, so the nullness of the pronoun follows.

An obvious problem with the proposal: there is no principled explanation for the deletion of the Defective Goal. It is achieved by stipulation.

## More on the deletion analysis of null subjects

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### 1. Where is *pro*?

Roberts' (2010) deletion analysis of null subjects assumes that *pro* occupies the Spec,T position. However, this is not an essential part of his proposal (it seems to be a complication). In fact, most of the evidence supporting the preverbal nature of *pro* has been cast in doubt. I'll give you a couple examples.

One of the types of patterns that seem to show that *pro* is preverbal involves the pragmatic conditions of use required by null subjects:

- (1) *Knock, Knock. ¿Quién es?*  
Knock knock, who is it?
- a. Soy yo.  
Am I
- b. #Yo soy  
I am
- c. #Soy.  
am

Since the correct answer for a knock knock question involves a postverbal subject, it is argued that the unacceptability of (1c) follows from *pro* being preverbal.

This argument, however, does not work. The problem relies on the discourse-related nature of the subject in (1a): it is a focalized subject (i.e., it introduces "new information"). Since the answer requires a focalized subject, it follows that the subject must be overt: focalized elements cannot be deleted (e.g., focus and ellipsis are in a complementary distribution).

Consider now the following pattern:

- (2) *Italian from Ancona*
- a. Questo, lo fa sempre i bambini  
This it do.sg always the children
- b. \*Questo, i bambini lo fa sempre  
This the children it do.sg always
- c. Questo, i bambini lo fanno sempre  
This the children it do.pl always
- 'This, the children always do it'.*

So, subject agreement must be preverbal in this variety. If the subject occupies its original thematic position, then there is no (full) agreement. This type of correlation between agreement and movement has been observed in several languages.

Now consider the same case with null subjects. In particular, the idea is that it is impossible recovering a plural null subject from a postverbal position, thus *pro* must be preverbal

- (3) *Italian from Ancona*
- a. #Questo, lo fa sempre (*pro*=3pl)  
This it do.sg always

- b. Questo, lo fanno sempre  
This it do.pl always
- 'This, (they) always do it'.*

I **REALLY** do not understand why this argument is taken seriously... It trivially violates (4):

- (4) *Condition on Recoverability of Deletion*  
An element may be deleted (i.e., not pronounced) if it is totally determined by a structurally related syntactic constituent.

Such a violation can be postulated as a violation of Rizzi's (1986) identification condition on *pro*.

- (5) *Theory of pro*  
*pro* must be licensed and identified
- a. *Licensing*  
*pro* is licensed if it is Case-marked by  $X^0_y$ .
- b. *Identification*  
*pro* is identified by the features in  $X^0_y$ .

And, on the contrary, I think there is good reason to believe that *pro* is post-verbal. Consider the patterns regarding the that-trace filter we discuss in Handout 8.

- (6) \*Who do you think that will come?
- (7) Quién piensas que vendrá?  
Who think.you that will.come  
'Who do you think will come?'

As we saw, it seems that (7) is acceptable because extraction of the subject takes place from the post-verbal position.

That means that in consistent null subject languages, movement of the subject to the preverbal position is not obligatory. This optionality seems to be very compatible with the idea that preverbal subjects in these languages occupy a position in the left periphery of the sentence (Ordóñez & Treviño 1999, among others).

Therefore, in consistent null subject languages there would not be any type of A-movement to Spec,T.

We will see that this assumption plays an important role in the analysis of Dominican Spanish I will propose this class.

### 2. Dominican Spanish

DS is a "forefront of linguistic innovation" (Toribio 2000: 317). Here, I will consider some of these innovative properties regarding the cluster of properties associated with the Null Subject Parameter.

As General Spanish (GS), Dominican Spanish (DS) and its sub-variety spoken in the region of El Cibao (DSEC) display phonologically empty referential subjects (8), free-inversion (9), and systematic violations of the that-trace filter (10).

- (8) Fui a casa.  
Went to home  
*'I went home'.*
- (9) Compré yo manzanas.  
Bought I apples  
*'I bought apples'.*

- (10) ¿Quién dijiste que compró el libro?  
Who said you that bought the book  
'Who did you say bought the book?'

However, the Dominican varieties also exhibit some additional properties. I will consider four.

**First**, DS and DSEC show a higher proportion of overt subject pronouns than any other Spanish variety. Otheguy et al. (2007) report the following percentages:

(11)	Country	Overt Subjects
	Dominican Republic	41%
	Puerto Rico	35%
	Cuba	33%
	Ecuador	27%
	Colombia	24%
	Mexico	19%

Cabrera (2007) compares the varieties spoken in El Cibao (DSEC) and Santo Domingo (DS):

(12)	Overt subjects	Null Subjects
	El Cibao	67.1%
	Santo Domingo	65.8%
		32.9%
		34.2%

Martínez-Sanz (2011) provides detailed data for overt vs. covert pronouns.

(13)	Pronoun	Null	Overt
	1.sg	39.7%	60.3%
	2.sg (specific)	10.9%	89.1%
	2.sg (non-specific)	21.8%	78.2%
	3.sg (Specific)	28.8%	71.2%
	3.sg (non-specific 'uno')	23.7%	76.3%
	1.pl	73.8%	26.2%
	2.pl	37.5%	62.5%
	3.pl (specific)	49.1%	50.9%
	3.pl (non-specific)	87.3%	12.7%
	Total	39.1%	60.9%

Cabrera (2007) offers a comparison between several studies. Despite differences in methodology and aims, the tendency holds: percentages for DS and DSEC are always higher.

(14)	Study	City	Overt Subjects
	de Prada (2009)	Valladolid, Spain	12%
	Enríquez (1984)	Madrid, Spain	21%
	Orozco & Guy (2008)	Barranquilla, Colombia	35%
	Barrenechea & Alonso (1977)	Buenos Aires, Argentina	36%

**Second**, subject inversion in wh-questions is heavily constrained in DS and DSEC<sup>1</sup>. Thus, these varieties display almost invariably the order SV –an unacceptable word order in GS– in, for example, object questions.

- (15) ¿Qué tú compraste?

<sup>1</sup> The phenomenon is also attested in other Caribbean dialects, but it seems to be more systematic in the Santo Domingo varieties (cf. Cabrera 2007).

What you buy  
'What did you buy?'

In GS, subject inversion in interrogatives follows from the subject staying in its thematic position (cf. Uribe-Etxebarria 1992, among others), and not from T to C movement as in English.

- (16) [CP Qué [C' C [TP compraste [VP tú [V' ... ]]]]]

Thus, the “simplest” explanation for (15) involves assuming that the subject moved to the Spec,T position (cf. Toribio 1993). This analysis is supported by the fact that subject pronouns can be separated from the verb by negation in interrogative sentences<sup>2</sup>.

- (17) ¿Por qué tú no se lo dijiste?  
Why you not CL.DAT.3sg CL.ACC.3sg said  
'Why did you not tell him/her/them?'

Therefore, the sentence in (15) is supposed to involve a structure like (18).

- (18) [CP Qué [C' C [TP tú<sub>i</sub> [T' compraste [VP t<sub>i</sub> [V' ... ]]]]]]

**Third**, overt pronouns in DS and DSEC do not behave as in GS regarding *Discourse Topic* and *Binding*. As Camacho (2013) observes, a sequence of overt pronominals as the one in (19) does not shift the topic in DS and DSEC.<sup>3</sup>

- (19) Hay [unas muchachitas]<sub>i</sub> que están juntas conmigo, que pro<sub>i</sub>/ellas<sub>i</sub> viven pa' fuera, entonces pro<sub>i</sub>/ellas<sub>i</sub> vinieron a estudiar en la escuela del Pino...  
'There are some girls that are together with me, that they live outside, so they came to study in the Pino School...'

Regarding binding, Martínez-Sanz points out that DS does not seem to obey the *Overt Pronoun Constraint* (OPC):

- (20) *Overt Pronoun Constraint* (Montalbetti 1984: 94)  
Overt pronouns cannot link to formal variables if the alternation overt/empty obtains.
- (21) [Tio Papi]<sub>i</sub> murió tan feliz que pro<sub>i</sub> no sabe que él<sub>i</sub> murió.  
Tio Papi died so happy that pro not know that he died  
'Tio Papi died so happy that he<sub>i</sub> didn't even know that he<sub>i</sub> died'.

In a nutshell, overt pronouns appear in positions where a null pronoun is expected, and they behave as null pronouns.

**And fourth**, DSEC has an optional non-referential expletive pronoun *ello*, “which is completely devoid of thematic content and force” (Toribio 2000: 321).

- (22) *Existential construction in DSEC* (Martínez-Sanz 2011: 30)  
Vamos ahí que (ello) hay sillas.  
Let's go there that are chairs

<sup>2</sup> This fact is problematic for alternative approaches to SV order in interrogative sentences. So, for example, it does not find an explanation under the assumption that the preverbal subject in (15) is a clitic (cf. Lipski 1977).

<sup>3</sup> The same effect can be obtained in GS and other languages by focalizing the overt pronoun:

- (i) Juan<sub>i</sub> no sabe que ÉL<sub>i</sub> ganó el concurso  
Juan not know that HE won the contest  
'Juan<sub>i</sub> does not know that he<sub>i</sub> won the contest'.

*'Let's go there, because there are chairs'.*

- (23) *Impersonal construction in DSEC (Martínez-Sanz 2011: 30)*

(Ello) tiene que haber otro paso.  
should that to be other path

*'There must be another path'.*

- (24) *Met. Verb construction in DSEC (Bullock & Toribio 2009: 11)*

(Ello) no está lloviendo aquí pero allá sí.  
not is raining here but there yes

*'It is not raining here, but it is there'.*

- (25) *Unaccusative construction in DSEC (Bullock & Toribio 2009: 11)*

(Ello) vienen haitianos aquí.  
come Haitians here

*'Haitians use to come here'.*

As is well-known, there are no expletives in other dialects of Spanish.

- |      |             |      |     |
|------|-------------|------|-----|
| (26) |             | DSEC | GS  |
|      | Llueve      | YES  | YES |
|      | Ello llueve | YES  | NO  |

Crucially, *ello* does not behave as other “expletives” found in Romance varieties:

- (27) *17th Century Spanish (Silva-Villar 1998:249)*

Ello has de casarte.  
have-2sg to get-married

*'You have to get married'.*

- (28) *European Portuguese (Silva-Villar 1998: 249)*

Ele muitos estudantes vieram à festa  
many students came-3pl to-the party

*'Many students came to the party'.*

These expletives are usually analyzed as elements in the left periphery of the sentence (e.g., Silva-Villar 1998), so it would be tempting to analyze *ello* in the same way in order to derive its optionality. However, as Martínez-Sanz (2011) points out, there is a crucial difference between DSEC and the Romance varieties in (27) and (28) regarding *Transitive Expletive Constructions*.

- (29) *17th Century Spanish (Silva-Villar 1998:256)*

Ello	yo	no	sé	por qué	mi	padre	no
	I	not	know	why	my	father	not
me	llamó		la	torda	o	la	papagaya.
me	called		the	thrush	or	the	parrot

*'I don't know why I was not called either thrush or parrot by my father'.*

- (30) *European Portuguese (Silva-Villar 1998: 256)*

Ele os lobos andan com fome  
the wolves go with hunger

*'Wolves are hungry'.*

However, DSEC speakers do not accept this kind of construction: preverbal subjects and *ello* are in a complementary distribution.

- (31) *Dominican Spanish (Martínez Sanz 2011: 65, attributed to Toribio p.c.)*

*Ello	yo	no	sé	por qué	mi	papá	me	puso	Almeida.
	I	not	know	why	my	dad	me	called	Almeida

*'I don't know why my dad named me Almeida'.*

This pattern strongly suggest that *ello* occupies the Spec,T position and that it is a real expletive.

The table in (32) summarizes the generalizations/conclusions of this section.

- (32) *DS and DSEC: their behavior*

a.	Overt to Null subjects ratio:	Higher than “usual”
b.	Position of the subject in wh-interrogatives:	Spec,TP
c.	Overt & Covert subject pronouns:	Free Distribution
d.	Overt & Covert subject expletives (DSEC only):	Free Distribution

## 2. Deleting Null Subjects in General Spanish

I will follow several scholars in proposing that null-subjects are pronouns deleted under an “identity” relation with T (cf. Sheehan 2007, Saab 2009, and particularly Roberts 2010). The idea is that they form a movement-like chain at PF (and not at LF).

Let's begin with some assumptions. Somewhat adopting Rizzi's (1982) and Roberts & Holmberg's (2010) insights, I will assume that the availability of pronoun-like T heads is an important component of the Null Subject Parameter:

- (33) *The Null Subject Parameter*

Does T bear both Definiteness [D] and Referential [ $R_\alpha$ ] features?

Second, I assume the following featural content for pronouns:

- |      |    |                        |                          |
|------|----|------------------------|--------------------------|
| (34) | a. | <i>Strong pronoun:</i> | {D, $\phi$ , $R_\beta$ } |
|      | b. | <i>Weak pronoun:</i>   | {D, $\phi$ }             |

Weak pronouns' referentiality is encoded in T's [ $R_\alpha$ ]. Strong pronouns' (emphatic and contrastive) referentiality is encoded in the pronoun as a feature [ $R_\beta$ ].

Subject weak pronouns are merged in Spec,v, where they receive  $\theta$ -role.

- (35)  $[TP\ T_{\{T, D, R_\alpha\}}\ [vP\ D_{\{D, \phi\}}\ \dots]]$

T needs to value its  $\phi$ -features. Thus, there is an Agree relation between T and D. Since T is non-defective, it is going to assign a feature to D, the T-feature (namely, nominative Case).

- (36)  $[TP\ T_{\{T, D, R_\alpha, \phi\}}\ [vP\ D_{\{D, \phi, T\}}\ \dots]]$

There is no EPP-related movement to Spec,T<sup>4</sup>. Null Subjects in Spanish (and consistent null subject languages) are postverbal (see Barbosa 2009 for an explicit and similar proposal).

<sup>4</sup> I am using “EPP” as a convenient term to refer to whatever property in T heads triggering movement of a DP.

In (36), all the properties of the null pronoun are already encoded in the T head. Such an scenario seems to be mandatory in order to comply with the *Condition on Recoverability of Deletion* (cf. Chomsky 1964) introduced in (4).

Under Copy Theory (Chomsky 1993), chains are assumed to be collections of syntactic objects in a “Sameness” relation.

- (37) *Sameness*  
Two constituents  $\alpha$  and  $\beta$  are “the same” if:
- $\alpha$  c-commands  $\beta$ ,
  - the features of  $\beta$  are a subset of the features of  $\alpha$ ,
  - there is no  $\delta$  between  $\alpha$  and  $\beta$  being a proper subset of  $\alpha$  or a proper superset of  $\beta$ .

Under this definition, T and D in (36) form a non-trivial chain  $CH = (T, D)$ . And as in any chain, only one of the links must be pronounced. There are two alternatives, then:

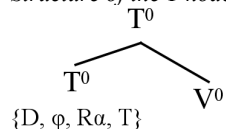
- (38) *Possible realizations for the chain  $CH = (T, D)$*
- $CH = (T, \emptyset)$  [“DELETING” THE PRONOUN AND PRONOUNCING T]
  - $CH = (\emptyset, D)$  [“DELETING” T AND PRONOUNCING THE PRONOUN]

The alternative in (32b), however, violates a PF principle: As is well known, in Spanish it is not possible spelling-out the verbal root without any inflection.

- (39)
- |    |                  |                |           |              |
|----|------------------|----------------|-----------|--------------|
| a. | cant-o,          | cant-ábamos,   | cant-ar,  | cant-arás    |
|    | Sing- PRES.1sg., | sing-PAST.1pl, | sing-INF, | sing-FUT.2sg |
| b. | *cant            |                |           |              |

The restriction in (39) may be derived by assuming any of two independently proposed PF conditions:

- (40) *Structure of the T node due V-to-T movement*



- (41) *Excorporation Filter (Baker 1988: 73)*  
A trace can never be non-exhaustively dominated by a zero-level category (i.e., there are no traces inside words).
- (42) *Subword Deletion Corollary (adapted from Saab 2009: 375)*  
No Subword can be subject to non-insertion if the Morphological Word that contains it is not subject to non-insertion (I-assigned).

So, it seems that PF conditions may override the principles of chain realization, as Franks (1998), Boskovic (2002), Bobaljik (2002) and Nunes (2004), among others, previously observed.

As a consequence of (41) or (42), pronouns in a Sameness relation with T heads are predicted to be silent<sup>5</sup>.

<sup>5</sup> This system also allows explaining cases where *pro* is preverbal (i.e., occupies the Spec,T position). These are typical cases where full agreement requires a Spec-Head relation (e.g., Ancona variety of Italian). In these scenarios, an uninterpretable/unvalued Referentiality feature [<sub>u</sub>R] requires c-commanding the T head to be checked/valued. Once checked/valued, the identity relation may hold:

### 3. Applying the system to DS and DSEC

Let’s review the conclusions in (32).

Regarding (32a), I will propose that the high amount of overt subjects *follows from systematic instances of non-deleted null subjects in DS and DSEC*. In other words, the high proportion of overt subject pronouns is due null subjects are receiving phonological representation.

Concerning (32b), the lack of subject-inversion in wh-questions and other contexts strongly suggests that the DS and DSEC allow T-heads to carry EPP-features. In other words, DS and DSEC are slowly changing into non-pro-drop languages. However, T heads do not carry EPP-features systematically yet, since both varieties allow free inversion (9) and violations of the that-trace filter (10).

In line with Toribio (2000), then, it will be advanced that DS and DSEC speakers have “two grammars”. Or, in a more microparametrical sense, they can assign a T head with two different and opposing parametric values: EPP “on” and EPP “off”.

Just as in GS, when the EPP is “off”, deletion of null subjects is predicted:

- (43)  $[TP \ T_{\{T, D, Ra, \phi\}} \ [VP \ D_{\{D, \phi, T\}} \ \dots]]$
- (44)  $CH = (T, \emptyset)$  [“DELETING” THE PRONOUN AND PRONOUNCING T]

However, if the EPP is “on”, a different scenario arises:

- (45)  $[TP \ D_{\{D, \phi, T\}} \ [T' \ T_{\{T, D, Ra, \phi\}} \ [VP \ D_{\{D, \phi\}} \ \dots]]]$

Since the features on the T head are not contained in the higher occurrence of the weak pronoun, Sameness is not satisfied. Therefore, two chains are formed:

- (46)  $CH_1 = (D_{\{D, \phi, T\}}); CH_2 = (T_{\{T, D, Ra, \phi\}}, D_{\{D, \phi\}})$

Both chains receive phonological representation independently. Since the element in the chain  $CH_1$  carries  $\phi$ -features, a D-feature and Case, it is spelled-out as a pronoun.

Thus, free distribution for overt and covert pronouns is explained as a matter of PF: PF fails at identifying as “the same” a weak pronoun and a T head, so both are pronounced separately.

The “two grammars” theory combined with a deletion analysis of null subjects also explains straightforwardly the presence of overt expletives in DSEC. Notice that *DSEC is the variety with the highest proportion of overt subject pronouns* (cf. 12). Under the present analysis, this means that it is the closest variety to a pure “EPP-on” setting. Therefore, development of impoverished pronominal forms with the only purpose of satisfying the EPP is somehow unsurprising.

Either if expletive pronouns are generated somewhere below T and undergo movement to Spec,T or if they are base generated in Spec,T, they cannot enter in an identity relation with T according to (47).

- (47)  $[TP \ D_{\{D, \phi-def, T\}} \ [T' \ T_{\{T, D, Ra, \phi\}} \ \dots]]$
- (48)  $CH_1 = (D_{\{D, \phi-def, T\}}); CH_2 = (T_{\{T, D, Ra, \phi\}}, \dots)$

(i)  $[TP \ D_{\{D, \phi, T, Ra\}} \ [T' \ T_{\{T, D, Ra, \phi\}} \ \dots]]$   
Once a chain is formed, (41) or (42) determine that T must be pronounced and D deleted.

Since expletives are  $\phi$ -defective, they cannot be overtly realized as a full pronoun. Therefore, the neuter form *ello* is spelled-out.