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On deriving *ello* from the Copy Theory of Movement

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1. Introduction: optional overt expletives in Dominican Spanish

It has been said that Dominican Spanish (DS) is a "forefront of linguistic innovation" (Toribio 2000: 317) since it present unique properties with regard to other Spanish dialects.

> And perhaps the most intriguing and most telling characteristic of the dialect is the presence of the non-referential pronoun *ello*, which is completely devoid of thematic content and force; the overt expression of the expletive […] is striking, as it has no equivalent expression in other varieties of Spanish. (Toribio 2000: 321).

As Toribio points out, Dominican Spanish (DS) has an expletive form *ello* that ***may or may not appear*** in existential constructions (1), impersonal constructions (2), with meteorological verbs (3), and unaccusative verbs (4).

(1) *Existential construction in DS (from Martínez-Sans 2011: 30)*

Vamos	ahí	que	(***ello***)	hay	sillas.
Let's go	there	that	EXP	are	chairs

'Let's go there, since there are chairs in that place'.

(2) *Impersonal construction in DS (from Martínez-Sanz 2011: 30)*

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

'It should be other path'.

(3) *Met. Verb construction in DS (from Bullock & Toribio 2009: 11)*

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

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

(4) *Unaccusative construction in DS (Bullock & Toribio 2009: 11)*

(***Ello***) vienen	haitianos	aquí.
EXP come	Haitians	here

'Haitians use to come here'.

As it is well-known, there are no expletives in other dialects of Spanish. The following table captures the basic variation pattern.

(5)

		Dominican Spanish	*Spanish*
a.	Llueve	YES	YES
b.	Ello llueve	YES	NO

It is tempting to homologate *ello* with cases of expletive use found in other romance varieties:

(6) *17th Century Spanish (from Silva-Villar 1998:249)*

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

'You have to get married'.

(7) *European Portuguese (from Silva-Villar 1998: 249)*

Ele	muitos	estudantes	vieram	à	festa
EXP	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 explain its optionality. But, as Martínez-Sanz (2011) points out, there is a crucial difference between DS and the romance varieties in (6) and (7) regarding *Transitive Expletive Constructions*.

(8) *17th Century Spanish (from Silva-Villar 1998:256)*

Ello	yo	no	sé	por qué		mi	padre	no
EXP	I	not	know	why		my	father	not
me	llamó		la	torda	o	la	papagaya.	
me	called-3sg		the	thrush	or	the	parrot	

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

(9) *European Portuguese (from Silva-Villar 1998: 256)*

Ele	os	lobos	andan	com	fame
EXP	the	wolves	go-3pl	with	hunger

'Wolver are hungry'.

However, DS speakers don't accept this kind of construction.

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

***Ello**	yo	no	sé	por qué	mi	papá	me	puso	Almeida.
EXP	I	not	know	why	my	dad	me	called-3sg	Almeida

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

According to Martínez-Sanz (2011), this evidence suggest that expletives in DS occupy the [Spec,T] position. So, taking this into consideration, there is a very natural question that any analysis of *ello* should try to answer:

(11) How a subject expletive can be optional?

In order to provide a methodological basis for the analysis of availability of overt expletives in Spanish varieties, let us take into consideration the *Uniformity Hypothesis* of Chomsky (2001).

(12) *Uniformity Hypothesis (Chomsky 2001: 2)*
In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.

If we bear in mind the *Uniformity Hypothesis*, there are two possible options of analysis regarding overt expletives in DS:

(13) a. It is a superficial phenomenon, maybe a PF variation. The syntactic structure of sentences as (1) to (4) is identical for all varieties of Spanish, even for DS.

b. It is a core syntax variation. In sentences like (1) to (4), DS makes use of syntactic mechanisms (i.e., expletive insertion) not available in others varieties of Spanish.

As you may notice, (12) states that (13a) should be always the "default" type of analysis. (13b), the idea that there is variation in the syntactic procedure, is an option that should be considered only if there is persuasive evidence contrary to (13a).

Strikingly, most (if not all) of the analysis proposed in the relevant literature for the optionality of *ello* follow the alternative (13b).

(14) *Toribio's (2000) account*
Since DS is in a process of restructuring, two grammars coexist in the minds of its speakers: a Spanish-like grammar and an English-like grammar. When DS speakers use the Spanish-like grammar, the subject position may be occupied by a null expletive; when DS speakers use the English-like grammar, the subject position may be occupied by an overt expletive.

(15) *Martínez-Sanz's (2007) account*
Overt expletive insertion follows from the impossibility of moving V-to-T in DS. Since this operation is the one that checks the EPP in general varieties of Spanish (Alexiadou & Anagnostopoulou 1998), in DS it is necessary to introduce an expletive *ello* in order to rescue the derivation

In this talk, I am going to try to offer an analysis of DS expletive *ello* according to the *Uniformity Hypothesis* of Chomsky (2001). This hypothesis leads to a very concrete observation regarding expletive phenomena in other varieties of Spanish.

(16) *Basic observation for this talk to make sense*
If core narrow syntax is uniform along the varieties of Spanish, and if DS *ello* is a real subject expletive, then all varieties of Spanish should have (null) expletives[1].

Moreover, if we assume that the observed variation in (1) to (4) is merely superficial (e.g., a matter of PF), the hypothesis in (17) follows:

(17) Overt expletive *ello* is a phonetically realized instance of expletive *pro*.

There are two main reasons in order to believe that a "superficial" analysis of *ello* is on the right track: (i) as observed, *ello* and expletive *pro* seem to be in a completely free distribution in DS; (ii) as Toribio (2000) observes, *ello* "is devoid of thematic content and [discursive] force".

Note that this kind of analysis cannot be postulated if we take *pro* to be a primitive empty category (e.g., Chomsky 1982), since an empty category, by definition, does not have phonetic representation. So, in order to carry on this analysis it is necessary to assume an analysis of *pro* in which its silent nature may be derived from independent factors.

So, in what remains of this talk, I am going to:

(i) Present a deletion analysis of null subjects in line with Holmberg (2005), Roberts (2010) and Saab (2009), which derives the emptiness of *pro* from the Copy Theory of Movement.
(ii) Extend this analysis in order to explain the optionality of the expletive *ello* in DS.

2. Deriving *pro* from the Copy Theory of Movement

From Holmberg (2005) on, there has been a growing interest in deriving the properties of null subjects from an unpronounced pronominal element that occupies the [Spec,T] position[2]: Roberts (2010) attempts to derive the emptiness of this pronoun from the assumptions of his theory of clitic incorporation, which relies in a deletion operation that he subsumes to the Copy Theory of Movement; on the other hand, Saab (2009) proposes a highly explicit mechanism according to which null subjects are weak pronouns marked for non-insertion of phonological exponents under formal identity and local adjacency with T.

As it is going to be seen, my analysis takes several aspects from both proposals. Particularly, I think that several aspects of Roberts' proposal follow from my implementation of the Copy Theory of Movement[3].

For starters, I take three main assumptions

(18) *My assumptions*
a. LIs are sets of features and phrases are sets of LIs.
b. Phonological exponents are introduced at PF.
c. There are no uninterpretable features.

The assumption on (18c) deserves some clarification. What I disregarding is, in Preminger's (2011) terms, **an approach to syntactic operations which implements its obligatoriness on the existence of *derivational time-bombs***, features that need to be eliminated through syntactic mechanisms in the course of the derivation in order to obtain a well-formed final representation. So, for a more explicit proposal, I am going to assume that *Agree* is an operation that is not motivated by the necessity of checking some uninterpretable feature, but for the need of valuing some feature F of a functional head H[4]. **As in Chomsky's (2001) system, I am assuming that Agree (i) may trigger the movement (i.e., Copy + Merge) of the goal into the [Spec, H] position due an EPP feature on H, and that (ii) H may assign a feature (e.g., Case) to the Goal if H is a non-defective head**.

[1] This is a very provocative consequence of the assumption of (12), since it involves the existence of a dedicated subject position in Spanish, something that currently is under discussion. See Camacho (2006) for discussion.

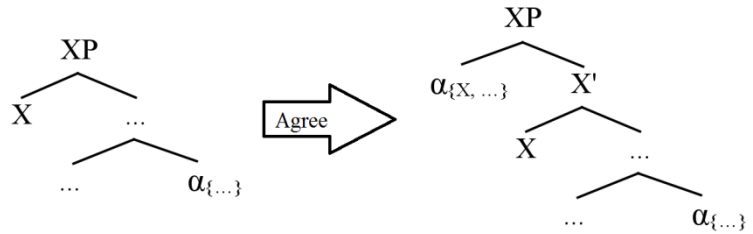
[2] Nevertheless, Perlmutter (1968) is considered the original reference for this kind of proposal.

[3] For a more complete presentation of this system, see Muñoz Pérez (2012).

[4] I will keep using the "uF" abbreviation in order to identify a head that is going to trigger Agree, since "uF" aside from "uninterpretable feature" also stands for "unvalued feature".

Now, let's say that we have the SO $\alpha_{\{...\}}$ in which {…} represents the set of features associated with it. Then, α is probed by a higher head in the syntactic structure, let's say X, and a copy of it is merged in [Spec,X]. Let's suppose that X is a non-defective head and that, by virtue of Agree, X assigns some feature to α (the X feature), so the new copy of α becomes $\alpha_{\{X, ...\}}$.

(19) *A copy of α is merged in [Spec,X] and receives an X-feature*



As may be noticed, there is a natural relation between both copies: every feature member of the set $\alpha_{\{...\}}$ is also a member of the set $\alpha_{\{X, ...\}}$. So, we can say that $\alpha_{\{X, ...\}}$ is a superset of $\alpha_{\{...\}}$ ($\alpha_{\{X, ...\}} \supseteq \alpha_{\{...\}}$), or, conversely, that $\alpha_{\{...\}}$ is a subset of $\alpha_{\{X, ...\}}$ ($\alpha_{\{...\}} \subseteq \alpha_{\{X, ...\}}$). Interestingly, this inclusion relation would persist for every new copy of α: it would be a superset of each of the lower copies.

Since the inclusion relation between copies is systematic, it is possible to capitalize it in order to define the conditions on the formation of chains.

(20) *Conditions on Chain Formation*
Two constituents α and β form a chain if
a. α is a superset of β;
b. α c-commands β;
c. there is no constituent γ between α and β such that (i) β is a subset of γ and (ii) γ is not a subset of α.

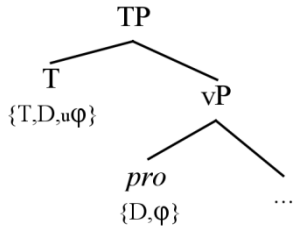
So, the "sameness" relation between links in a chain is reduced to inclusion. This is an optimal solution from a minimalist point of view for the "nondistinctiveness problem" posed by Nunes' version of the Copy Theory of Movement, since inclusion is the simpler kind of relation that may hold between sets[5].

The principle in (21) derives the typical pattern of phonetic realization of chains[6].

(21) *Pronounce the Superset*[7]
Given a Chain CH, pronounce the link which is the superset of all the remaining links in CH, unless this causes a violation of some PF condition.

This system may be used to implement a deletion analysis of null subjects: with Roberts (2010) I assume (i) that T in consistent NSLs carries a D-feature and (ii) that null (thematic) subjects are weak pronouns with a D-feature and φ-features (from now on, *pro*) that occupy the [Spec,v] position and receive a θ-role.

(22) *T and pro prior to Agree*



In order to valuate its φ-features, T enters in an Agree relation with D. Since T is a non-defective head, it assigns a T-feature (a.k.a. nominative Case) to D[8]. At the

[5] Inclusion is simpler than strict identity since the later may be defined in terms of the former: two sets S_α and S_β are identical if S_α is a subset of S_β and, at the same time, S_β is a subset of S_α (if $A \subseteq B$ and $B \subseteq A$, then $A = B$).

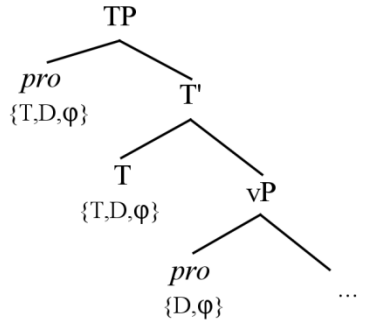
[6] It is a principle (and not an axiom), since it may be derived from independent factors. In a nutshell, I am assuming that the insertion of phonological exponents is ruled by the *Subset Principle* (Halle 1997), which assumes that the syntactic terminal in which Vocabulary insertion applies is highly specified with features. In almost all the cases, the higher copy will be an optimal candidate for Vocabulary Insertion since it has "more features" than its lower versions.

[7] Note that this "pronounce the more specified item" principle obeys exactly the same logic as Nunes' (2004) "pronounce the link with less uninterpretable features" proposal: in both accounts the pronounced elements is "the more interpretable" one.

[8] For a specific proposal regarding the nature of nominative Case as a T-feature on D, see Pesetsky & Torrego (2001).

same time, it also receives a D-feature. Finally, since T has an structural EPP feature, a copy of D is merged in [Spec,T]. The resulting structure is the one in (23).

(23) *T and both copies of pro after Agree*



Given the definition of Chain in (20), both copies of *pro* and T form a nontrivial chain CH = ($pro_{\{T,D,\varphi\}}$, $T_{\{T,D,\varphi\}}$, $pro_{\{D,\varphi\}}$).

A problem arises when the system has to select one of the links in the chain in order to pronounce it: there are two potential candidates $pro_{\{D,\varphi,T\}}$ and $T_{\{T,D,\varphi\}}$, since both are supersets of all the copies in the chain[9]. So there are two possible phonetic realizations for this chain.

(24) *Possible phonetic realizations for CH = ($pro_{\{T,D,\varphi\}}$, $T_{\{T,D,\varphi\}}$, $pro_{\{D,\varphi\}}$)*
a. CH = ($pro_{\{T,D,\varphi\}}$, ~~$T_{\{T,D,\varphi\}}$~~, ~~$pro_{\{D,\varphi\}}$~~)
b. CH = (~~$pro_{\{T,D,\varphi\}}$~~, $T_{\{T,D,\varphi\}}$, ~~$pro_{\{T,D,\varphi\}}$~~)

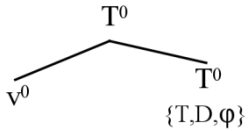
Despite it follows the general pattern of pronunciation for non-trivial chains (i.e., it phonetically realizes the higher copy), the option (24a) should be disregarded since it violates a PF condition: in Spanish it is impossible to pronounce the stem of a verb without assigning it some inflection.

(25) a. cantamos, cantábamos, cantar, cantaremos…
b. *cant

Note that a more complete representation of the T node is the one in (26).

[9] Note that the definitions in (20) and (21) do not mention the proper superset or proper subset relations. Remember that, by definition, any set is a subset and a superset of itself.

(26) *Structure of the T^0 node due v-to-T movement*



So, the pattern in (25) may follow from the ban on excorporation from Baker (1988) or from the *Subword Deletion Corollary* of Saab (2009) in (27)

(27) *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).

(28) *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).

The conditions in (27) and (28) explicitly ban the application of operations as Chain Reduction and similar mechanisms inside a complex head derived by head movement. Thus, since (24a) is not a possible pronunciation pattern in Spanish, the only option that remains consists on pronouncing T, the second link in the chain, and leave without phonological representation both copies of *pro*[10]. So, the pronunciation pattern in (29) is derived.

(29) *Null (thematic) subject as a deleted pronominal*
b. [$_{TP}$ ~~$pro_{\{T,D,\varphi\}}$~~ [$_{T'}$ patea$_{\{T,D,\varphi\}}$ [$_{vP}$ ~~$pro_{\{D,\varphi\}}$~~ … la pelota]]]
kicks the ball
'He/she kicks the ball'

[10] Note that this analysis of the phonological emptiness of *pro* is quite similar to several patterns analyzed within the Copy Theory of Movement in which the higher copy of the chain is not pronounced due a rescuing criterion that applies in order to satisfy a PF condition. See Bošković (2002) and Nunes (2004) for discussion.

3. Extending the system to overt expletives in Dominican Spanish

Following Sheehan (2007), I assume that the deletion analysis of null thematic subjects may be straightforwardly implemented in order to derive the phonological emptiness of expletives.

Basically, for the analysis of a meteorological verb like (30a), for example, I will propose a representation like (30b), where a null expletive *pro* with a D-feature and φ-features occupies the [Spec,T] position. The non-referentiality of this element is due to its lack of θ-role.

(30) *Deletion of expletive pro in Spanish (including DS)*

a. Llueve.
Rains
'It rains'.

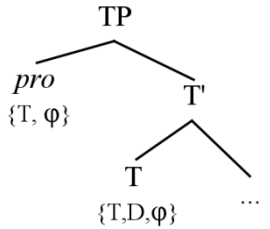
b. $[_{TP}$ ~~$pro_{\{T,D,\varphi\}}$~~ $[_{T'}$ llueve$_{\{T,D,\varphi\}}$ …]]

Once again, the deletion of $pro_{\{T,D,\varphi\}}$ follows from the conditions on *Chain Formation* in (20), the *Pronounce the Superset Principle* in (21) and the *Subword Deletion Corollary* in (28).

Note that in a sentence like (30a), the D-feature on *pro* is unnecessary: since they encode referentiality, one of the properties of D-elements is the capacity of being selected as arguments of predicates (e.g., Longobardi 1994), so given that (expletive) *pro* in (30) is not an argument and does not receive any θ-role, its D-feature is superfluous.

By assumption, this D-feature on *pro* is quite stable in most of the varieties of Spanish. However, since DS is currently in a process of linguistic change (e.g., Camacho 2010), the D-feature on *pro* has become *unstable*. This means that it may drop in sentences where it has no function at all (i.e., where it doesn´t receive any θ-role). So, an alternative representation for (30) includes a version of *pro* which lacks a D-feature.

(31) *T and the D-less version of pro in DS*



According to the conditions on *Chain Formation* in (20), $pro_{\{T,\,\varphi\}}$ and $T_{\{T,\,D,\,\varphi\}}$ do not form a chain, since T is not a subset of *pro*. If these SOs do not form a chain, then they should be pronounced independently. Particularly, the weak pronoun *pro* is spelled-out as *ello.*

(32) *Non-deletion of expletive pro in DS*

a. Ello llueve.
EXP rains
'It rains'.

b. $[_{TP}$ $pro_{\{T,\varphi\}}$ $[_{T'}$ llueve$_{\{T,D,\varphi\}}$ …]]

The occasional loss of a feature in *pro* offers an explanation for the optionality of *ello* that sticks as close as possible to the *Uniformity Hypothesis* in (12).

Moreover, given that the D-feature can drop only in those sentences where *pro* does not function as an argument (i.e., impersonal sentences, unacussative sentences, etc.), the distribution of *ello* in examples as those in (1) to (4) follows straightforwardly.

4. To conclude…

- It has been proposed a mechanism of deletion of null subjects which relies entirely on the principles of the Copy Theory of Movement.

- It has been advanced an analysis of the DS expletive *ello* that
  - (i) adheres to the *Uniformity Hypothesis,*
  - (ii) derives *ello* as an instance of an undeleted null expletive, and
  - (iii) offers an explanation for the optionality of *ello*.

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