Stress-by-Reduplication in *Los Silos* Spanish.

Alejo Alcaraz (EHU/UPV & HiTT)[1]
alejo.alcaraz@ehu.eus

Science is built up of facts, as a house is with stones.
But a collection of facts is no more
a science tan a heap of stones is a house.
Henry Poincare

1. Introduction.

This piece of work mainly focuses on some *exotic* morpho-phonological processes –at least regarding Spanish dialectology- found in the verbal compound forms of Los Silos Spanish (LS Sp). *Los Silos* is a small town in the North-Western Coast of *Santa Cruz de Tenerife* Island, Spain (see Fig. 1).

Figure 1.

Specifically, I deal with Present and Past Perfect verbal forms in the indicative mood. It is worth pointing out that, in LS Sp, there are no dedicated forms for the Present and Past Perfect in the subjunctive mood (Lorenzo Ramos 1976:110-3).

If we take a look at the Present Perfect of LS Spanish (Lorenzo Ramos 1976: 109), the first property of the verbal paradigm in (1) striking us as exceptional is precisely the exceptionally regular make-up of the auxiliary *have.* The auxiliary *have* in the Present Perfect of LS Sp consists on a vowel (the theme vowel *a*) plus agreement markers: [$_{aux}$ a + Agr].

(1) *Present Perfect in LS Sp*

        a. (Yo)   a-Ø   comido
          I.Nom   aux-1Ss eaten
          'I have eaten.'
        b. (Tu)   a-h   comido
          You.Nom   aux-2Ss eaten
          'You have eaten.'
        c. (El)   a-Ø   comido
          He.Nom   aux-3Ss eaten
          'He has eaten.'
        d. (Nosotros)   a-moh   comido
          We.Nom   aux-1Spl eaten
          'We have eaten.'
        e. (Ustedes/Ellos)   a-n   comido
          Y'all/They   aux-3pl eaten
          'Y'all/They have eaten.'

NOTES:
        i) /s/ is aspirated in the coda position (=[h]).
        ii) The pronoun *vosotros* (2nd person plural) has been replaced by *ustedes* (3rd person plural). This pronoun suppletivism has been carried over to subject agreement morphemes on the verb: there is no 2nd person plural, but 3rd person plural subject agreement.

The Prs Perfect of LS Sp still hides another surprise. The paradigm in (1) is affected by two different (apparently optional) processes:

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(2)　　　Auxiliary Duplication (*AuxDup*)
　　　　　a. (Tú)　　　　　　　a-h　　a　　comido.
　　　　　　　You　　　　　　aux-2Ss　aux　eaten
　　　　　b. (Ústedes/Ellos)　　a-n　　a　　comido.
　　　　　　　You/They　　　aux-3Spl　aux　eaten

(3)　　　Agreement Lowering (*AgrLow*)
　　　　　(Nosotros)　　　a　　　comido-moh.
　　　　　　We.Nom　　　aux　　eaten-1Spl
　　　　　'We have eaten.'

In AuxDup (2) the auxiliary HAVE surfaces twice; at the same time, it precedes and follows the subject agreement morpheme. In section 2, I will spell out the analysis of AuxDup as Partial Reduplication (Halle 2008, Harris&Halle 2005). In AgrLow (3), the subject agreement suffix [moh] is attached to the right of the past participle and not to the right of its 'canonical' host: the finite auxiliary HAVE (see 1d). Formally, I will model AgrLow under Distributed Morphology framework (Halle&Marantz 1993) as Local Dislocation (Embick&Noyer 2001).

Along section 2 it will be shown that both processes- AuxDup in (2) and AgrLow in (3)- are in complementary distribution. Or to be more precise, both processes do not overlap in their respective inputs. Each one applies to different phonological domains: *AuxDup* operates on syllables, but *AgrLow* on prosodic words. In section 2.3 I will make the first steps toward the proper characterization of the trigger for both processes: is there a single trigger for both processes? If the answer to this question turns out to be YES, the difference in distribution derives from having a different trigger. If the answer is NO, the next question one must addressee is why the same trigger gives rise to two different processes (or strategies). I will point out good reasons to believe that the trigger for both AuxDup in (2) and AgrLow in (3) is the same and has to be found in the algorithm assigning verbal stress in Spanish (Oltra-Massuet&Arregui 2005).

Finally, some tentative attempts to integrate both processes into a rich inflection theory of pro-drop (Müller 2005) or a suffix theory of EPP (Richards 2014) ends this paper.

2. *AuxDup* as Partial Reduplication.

I will adopt the formalism developed by Halle (2008) and Halle & Harris (2005) to account for three different types of reduplication: simple, partial and augmented reduplication. Augmented reduplication is not relevant to account for the verbal structure of the Present Perfect in LS Spanish and will be omitted so on from the discussion.

2.1 On Reduplication (Halle 2008; Harris and Halle 2005).

Reduplication consists on the repetition of a contiguous substring of segments. In fact, the only condition for a substring of segments to be the input of a reduplication process is that the repeated material be a contiguous substring. By definition, the ordered pair <B, C> in (4a) receives a value under the string in (4a) by the RED function f_{RED}, but the order pair <A,D> in (4b) is no in the domain of f_{RED} for the substring drawn in (4b). This contiguity condition restricting the possible arguments can enter the partial function f_{RED} constitutes the minimum that every theory of Reduplication must meet.

　　　　　　　　<B,C>　　　　　　　　　　　　　　<A,D>
　　　　　　　　　／\　　　　　　　　　　　　　　　　／\
(4)　　　a. A-B-C-D → A-B-C-B-C-D　　　b. A-B-C-D →* A-B-C-D-A-D
　　　　　a'. f_{RED} (<B,C>)={<B,C>, <B,C>}　　b'. f_{RED} (<A,D>), undefined for (4b).

Halle's (2008) model for Reduplication revolves around three main components:

(5)   i. Special junctures present in the (segment) sequence. These special junctures are non-interpretable by the S-M system and must be eliminated from the surface sequence.

ii. Readjustment rules inserting the special junctures in (5i).

iii. Special rules that eliminated special (non-interpretable) junctures in (5i) through the re-linearization of the (underlying) segment sequence.

Halle envisages two types of rules: (5ii) and (5iii). Readjustment rules in (5ii) are language-specific and must be learned[2]. Special Rules in (5iii) belongs to UG. The set of special junctures includes two square-brackets],[and two angle brackets >,<. These special junctures are inserted in the underlying representation by the Readjustment Rules in (5ii), as exemplified in (7) for plural reduplication in Agta (6).

(6)   Agta (Harris 2008: 329)
        a. pus   pus-pus-a   'cat(s)'
        b. bari bar-bar-i   '(my whole) body'

(7) Readjustment Rules for Agta (adapted from Harris 2008).
        i. Insert a [juncture to the left of the first segment of the word.
        ii. Insert a] juncture to the right of the consonant directly following the first vowel of the word.

The readjustment rules in (7) introducing square-bracket junctures apply to the underlying form of (6b) to deliver the intermediate representation in (8).

(8)   [b-a-r]-i

_____Figure 2_____

Extralinear concatenator LOOP (Raimy 2000)

% →b→a→r→i→#

The segment "r" precedes
two other segments: <r,b>, <r,i>.
It drives the SM crazy.

≈   Halle's square-brackets: [b-a-r]-i

Don't Panic
and
carry one!

% →b→a→r →b→a→r →i→#

the loop can be undone!!!

_____
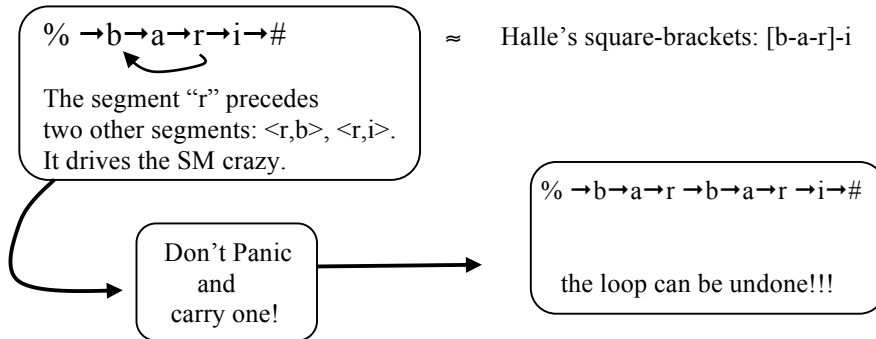
Square brackets are Halle's version of the extralinear concatenator LOOP in Raimy (2000) –see Figure 2-. Extralinear concatenators cannot be interpreted by the SM System and must be eliminated from the surface representation. Special rules in (5iii) are in charge of eliminating special junctures by realinearizing the sequence in (8) in the way shown in (9). That is the way cases of simple reduplication are derived in Halle's theory.

(9)   a. [b-a-r]-i   >>>   b-a-r-b-a-r-i

_____

[2] Readjustment rules in (5ii) over-generate. That is the reason Halle adds the following prohibition governing the free assignment of special junctures by rules in (5ii):

    i. Between a juncture internal to a reduplicated string and the square-bracket juncture of opposite direction that terminates the reduplicated string, there may be no intervening juncture of the same direction as the terminal juncture. [Halle 2008: (16)]

b. A-[B-C]-D >>> A-B-C-B-C-D

Harris & Halle (2005) make use of angle-brackets junctures >,< to account for partial reduplication in some American Spanish dialects.

(10)   a. sírva-[n]-se
           serve-PL-Refl
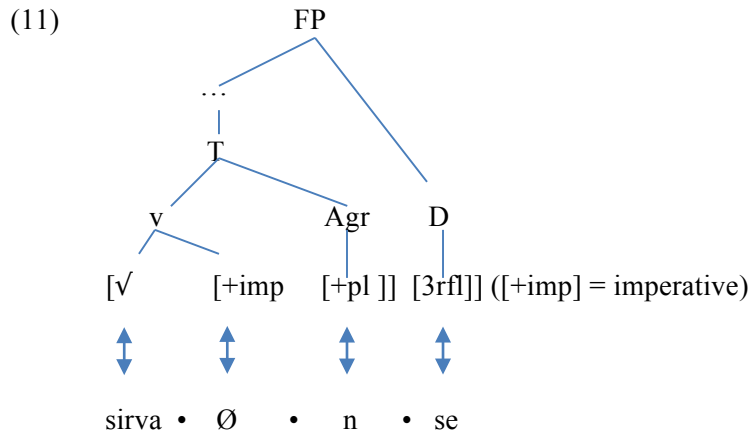   b. sírva-[n]-se-[n]
           serve-PL-Refl-PL
           'Serve yourselves!'

(11)   FP
                             / \
                           ...   \
                            | \
                            T   \
                          /   \   \
                         v   Agr   D
                        / \
              [√   [+imp   [+pl]] [3rfl]] ([+imp] = imperative)

              ↕   ↕   ↕   ↕

              sirva • Ø   •   n   • se

They assume imperative verbal forms to be generated by successive head movement of the verbal root to a higher functional category F. After syntactic computation, syntax feeds the morphological component with the complex head whose structural description is represented in (11). Once the complex head in (11) is targeted by Vocabulary Insertion (Halle&Marantz 1993), the readjustment rules in (12) applies to the phonological representation of the terminal nodes that constitutes the complex head in (11), and finally it gives (12') as output.

(12) In a string of the form $X/n/_{Agr} \bullet /Cl/_D Y$
        insert: [to the immediate left of $/n/_{Agr}$
                  ] to the immediate right of $/Cl/_D$
                  < to the inmediate right of $/n/_{Agr}$

(12') sirva-[n-<se]

Special rules in (5iii) relinearize the intermediate sequence in (12') as shown in (13a).

(13)   a. sirva-[n-<se]   >>>   sírva-n-se-n
        b. A-[B-<C]-D   >>>   A-B-C-B-D
        c. A-[B>-C]-D   >>>   A-C-B-C-D

Regarding (13b-c) –and quoting Halle (2008:333)- "a good way of visualizing partial reduplication is to view it as a two-step procedure: in the first step the string delimited by the (external) square brackets is copied in its entirety, and in the second step the sub-string delimited by the angle bracket is deleted."

(13)   b. A-[B-<C]-D   >>>   A-B-C-B-C-D   >>> A-B-C-B-C-D
        c. A-[B>-C]-D   >>>   A-B-C-B-C-D   >>> A-B-C-B-C-D

Harris&Halle (2005) analysis of partial reduplication in American Spanish Dialects was included for two reasons: (i) partial reduplication seems not to be –after all- an "exotic" or isolated property
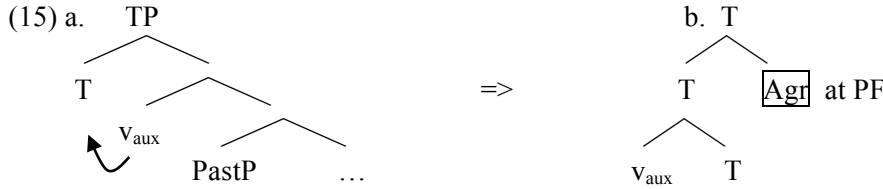
of LS Sp and (ii) the readjustment rules in (12) provided by Harris&Halle (2008) make reference to syntactic terminals and not to pure phonological properties of the underlying segment sequence.

2.2 AuxDup in LS Sp

Reduplication takes place at MS (Harris&Halle 2005): a specific module located -under the particular implementation of the Y-model of grammar adopted by DM (Halle & Marantz 1993)- after the syntactic component, but prior to Phonology (14).

(14) Syntax

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        Syntax
        /    \
      MS      LF
      |
  Phonology              DM Model (Marantz &Halle 1993)
```

I will assume –quite conventionally- that in the Pres and Past Perfect of LS Sp the head v_{aux} – hosting the auxiliary HAVE- moves to T in Syntax (15a). Additionally, I will assume –following (Marantz 1993) - that there is adjunction of Agr node to T node at MS (15b), after Spell-Out. This Agr node must reflect the φ-features of the Subject.

(15) a. TP   b. T

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(15) a.      TP                          b.    T
           /    \                             /  \
          T      /\              =>          T   [Agr]  at PF
         /\     /   \                       /\
        |  v_aux /\                       v_aux  T
        |  /    /    \
        \_/  PastP   …
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Finally, I follow Oltra-Massuet's (1999) analysis on theme vowels and assume that all syntactic functional heads require a theme position, at MS.

(15')   [F] → [F Th]   at MS

Putting all these assumptions together, one arrives to the morphological representation in (16b) for the Pres Perfect in LS Sp. Certain aspect of the morphological analysis offered in (16b) for the Pres Present in LS Sp (e.g. the auxiliary HAVE gets a null spell-out in the Pres Perfect) will be clarified when arriving at section 2.2.1 –where the Past Perfect is analyzed.

(16)   a.   T

```
(16)  a.                   T
                         /   \
                        T     Agr
                       / \
                   v_aux   T
                   /  \    / \
               v_aux  Th  T   Th
```

       b.   [[v_aux   Th] [T   Th]] Agr]
                   Ø   Ø   Ø   a   {h/n}
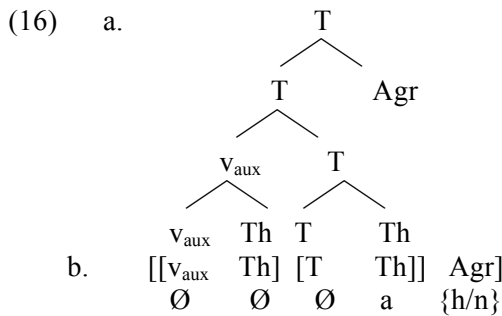
(17) *Readjustment Rules for Partial Reduplication in LS Sp*

        In the string of the form X/a/$_T$•/φ/$_{Agr}$Y   (where φ= person/number features)
        i. Insert a [juncture to the left of T
        ii. Insert a] juncture to the right of Agr
        iii. Insert a < juncture to the right of the nucleus.

After the application of readjustment rules in (17), we get the intermediate representation in (18a-b). Finally, Special rules in (5iii) target the intermediate representation of (18a-b) and realinearize them as partial reduplication.

(18)   [[v$_{aux}$ Th]   [T Th]] Agr]
          a. Ø   Ø   [Ø a <   h] >>> a h a h   >>>   a h a
          b. Ø   Ø   [Ø a <   n] >>> a n a n   >>>   a n a

(18a-b) shows Partial Reduplication for 2nd person singular and 3rd person plural slots in the paradigm in (1). Partial Reduplication is subject to the generalization in (19). It means that Partial Reduplication does not apply to the slot occupied by the 1st person plural in (1). It is worth recalling that 1st person plural agreement is subject to AgrLow (see 3).

(19)   Generalization 1:
          For every slot x in (1), if x is subject to AgrLow, then x is not subject to PartRed.

All the outputs shown in (20) for Partial Reduplication applied to the auxiliary HAVE inflected for 1st person plural subject agreement in the Pres Perfect are unattested[3].

(20)   Generalization 1: *AgrLow* $\rightarrow$ ¬ *PartRed*

          [[v$_{aux}$ Th]   [T Th]] Agr]   [PastPart …
           Ø   Ø   Ø   a   moh   comído

          a. *a moh a   comido.   [a < moh] $\rightarrow$ a moh a moh $\rightarrow$ a moh a
          b. *a m   aoh comido.   [a < m]oh $\rightarrow$ a m a m $\rightarrow$ a m a oh
          c. *a m   oah comido.   [a < mo]h $\rightarrow$ a mo a mo $\rightarrow$ a mo a oh

(20b-c) are straightforwardly ruled out by (17). In (20b-c) it has been inserted a wrong] juncture in the intermediate representation, according to the rule in (17ii). Or in crash-proof terms, (20b-c) are simply not generated. More difficult seems to rule out (20a).

Before answering why (20a) is ruled out, it is important to notice that 2nd person singular and 3rd person plural morphemes are spelt out as single consonants: [h] and [n] respectively. This implies that they obligatorily form a single syllable with the theme vowel *a* in Tense. On the contrary, the 1st person plural morpheme corresponds to a tautosyllabic cluster of consonants: [moh]. In fact, every well-formed syllabic parsing of (20) gives rise to at least two syllables, as shown in (21). (21b) reproduces the scenario where the final consonant [h] in [moh] has been re-syllabified as the onset of the following syllable.

(21)   a. ($_\sigma$ a) ($_\sigma$ moh)   b. ($_\sigma$ a) ($_\sigma$ mo) ($_\sigma$ h…)

Crucially, two syllables entails two nucleus. The rule in (17iii) is undefined if more than one nucleus is present in the underlying representation. Alternatively, one can substitutes (17iii) for (17'iii). In any event, the output continues to be ill-formed under Halle's theory (see fn 2).

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[3] I want to be precise about the criteria I employed to judge certain forms as ungrammatical in LS Sp. I am not a native speaker of LS Sp, but Lorenzo Ramos is. The linguistic description contained in Lorenzo Ramos (1976) is particularly fine-grained. When I prefix the mark * to a certain linguistic form β in the text, *β has to be interpreted as follows: "β is not reported as grammatical by Lorenzo Ramos". I infer from this fact that β is ungrammatical or β is statistically much lower than related forms actually reported by Lorenzo Ramos. In any case I have tried to be as conservative as possible and to minimize the use of ungrammatical forms along my argumentation. I trust on the field researcher and assume that he has been as much informative as possible. But the reader must keep this caveat in mind.

(17')   iii. Insert a < juncture to the right of each nucleus
        [a < m < oh]

Whatever it turns to be the proper characterization of the ungrammatical status of (20a), it must account for the Nucleus Condition in (22) restricting the application of Partial Reduplication in LS Sp.

(22)   *Nucleus Condition for AuxDup in LS Sp.*
         The input of Partial Reduplication must contain at most one nucleus.
        * $[(_\sigma) \ldots (_\sigma)]$

Summarizing, what readjustment rules in (17) are intended to grasp is the generalization in (20), i.e. that Partial Reduplication targets the exponents of T and Agr nodes only if T and Agr turn to form a single syllable.

2.2.1 A note on the stem of the auxiliary HAVE in LS Sp.
The existential HAVE and the auxiliary HAVE each are spelt-out by an etymologically related, but clearly differentiated stem in LS Sp. The existential HAVE is spelt out as √*ab-,* but the auxiliary HAVE as √*b-* or *Ø-.*

(23)   él bia   llegado de Cuba abía   poco tiempo.   Lorenzo Ramos (1976: 110)
        he had$_{AUX}$ arrived from Cuba had$_{EX}$ few time
        'He had arrived from Cuba few time ago.'

Regarding the auxiliary HAVE, the rule in (24) accounts for its allomorphic variants: √*b-* and *Ø-*. The rule in (24) says that the node v$_{AUX}$ surfaces as $\varnothing$ when the T node carries a [-Past] feature, but gets pronounced as the bilabial consonant *b* elsewhere.

(24)
        $[v_{aux}] \Leftrightarrow$ $\begin{cases} \text{i. } \varnothing / \_\_ [_T \text{[-Pst]}] \\ \\ \text{ii. } b, \text{ elsewhere} \end{cases}$

2.2.1 A step further: Past Perfect in LS Sp.
(25)   *Past Perfect in LS Spanish*
        a. (Yo)   bía-Ø   comido
           I.Nom   aux-1Ss eaten

        b. (Tu)   bía-h   comido
           You.Nom   aux-2Ss eaten

        c. (El)   bía-Ø   comido
           He.Nom   aux-3Ss eaten

        d. (Nosotros)   bía-moh comido
           We.Nom   aux-1Spl eaten

        e. (Ustedes/Ellos)   bía-n   comido
           Y'all/They   aux-3pl eaten

The Past Perfect in (25) gets a similar morphosyntactic derivation than the Pres Perfect in (16). After head-movement of v$_{AUX}$ to T in Syntax, the complex head [$_T$ v$_{AUX}$ T] is enriched at MS with theme vowels (see 15') and the adjunction of the Agr node, reflecting subject φ-features –as shown in (26).

7

(26) M-structure of the Past Perfect in LS Sp.

    [[v$_{aux}$ Th]   [T Th]] Agr]   [PastPart …

    ↕   ↕   ↕ ↕   ↕

    b   í   Ø a   {h/n}   comído
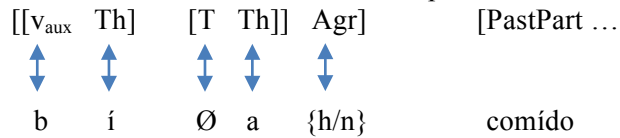
Mysteriously enough, ParRed does not seems to apply to (26).

(27)   *2nd person singular agreement.*
    a.*bía-h   bía   comido
       aux-2Ss   aux   eaten
    b. *bía-h   a   comido
       aux-2Ss   aux   eaten

(28)   *3rd person plural agreement.*
    a.* bía-n   bía   comido
       aux-3Spl   aux   eaten
    b. *bía-n   a   comido
       aux-3Spl   aux   eaten

The readjustment rules offered in (17) predicts verbal forms in (27a) and (28a) to be ungrammatical because the square-bracket juncture [has been plugged into the wrong place: into the left of v$_{AUX}$ instead of the left of T, misapplying in this way the rule in (17i). So -leaving aside (27a) and (28a)-, the readjustment rules proposed for LS Spanish in (17) predict –in principle- (27b) and (28b) to be grammatical, contrary to fact.

(29)   [[v$_{aux}$ Th]   [T Th]] Agr]

      ↕   ↕   ↕ ↕   ↕

      b   í   [Ø a < h]   >>>   (27b)
      b   í   [Ø a < n]   >>>   (28b)
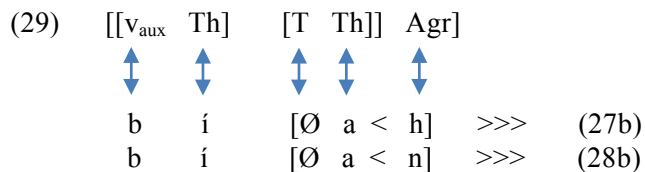
In next section I will suggest that the difference between the Prs Perfect (18) and the Past Perfect (25) concerns the locus of verbal stress. The vowel before the Tense morpheme receives stress in the Past Perfect (25), but not in the Prs Present (18).

2.3 Stress-by-Reduplication in LS Spanish.
Why should the locus of verbal stress be relevant at this point? Oltra-Massuet&Arregui (2005) ground their verbal stress algorithm in Spanish on the following generalization[4]:

(30)   *Verbal Stress in Spanish*
    In Spanish stress falls on the vowel preceding the T node.

Formally (cf Idsardi 1992), Oltra-Massuet&Arregui' (2005) algorithm runs as follows:

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[4] As a matter of fact, verbal stress in Spanish does not always falls on the vowel preceding the T node. Oltra-Massuet & Arregui (2005) add special readjustment rules to handle these special cases. In any event, the algorithm in (31) has not to be changed to account for those special cases.

(31)

Line 0: -stressable elements project an abstract mark * to the Line 0.
         -a Right bracket is inserted to the left of T.
         - The rightmost * in each foot is projected to Line 1.

Line 1: -put a Right bracket at the end of the word.
         -project the Righmost * of each foot to line 2

I show in (32) how Oltra-Massuet&Arregui' (2005) algorithm runs for the Imperfect of the verb *temer* 'fright' in both Iberian and LS Sp and the auxiliary HAVE in the Past Perfect of LS Sp[5].
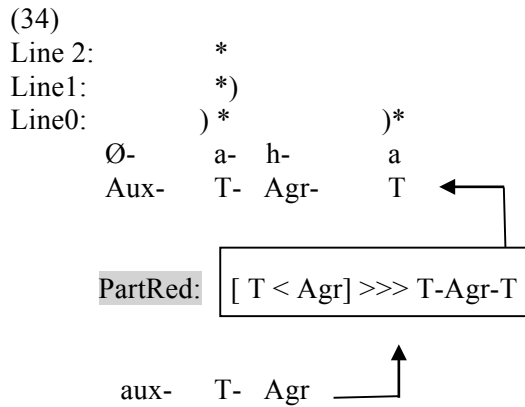
```
(32)   Line 2:         *                              *
       Line1:         *)                             *)
       Line0:    *    *)     *      *           *)     *      *
                Tem   í      a     mos      b    í      a     moh
                verb- v-     T-    Agr     aux-  v-     T-    Agr
```

As desired, the Past Perfect auxiliary HAVE gets the stress placed to the left of T. The question is what happens if the verbal stress algorithm applies to the Pres Perfect auxiliary HAVE in LS Sp. I envisage two options. The options shown in (33). In Option 1, the verbal stress algorithm fails to return a stressed auxiliary. In Option 2, the verbal stress algorithm returns a stressed auxiliary HAVE at the cost of inserting an exceptional rightmost bracket at the end of the word in Line 0.

(33)

```
┌──────────────────────────────┐
│       Option1: No stress            Option2: Exceptional rightmost bracket.
│ Line 2:                                         *
│ Line1:                                          *)
│ Line0:          ) *                            ) *      )
│            Ø-       a-   h               Ø-       a-    h
│            aux-     T-   Agr             aux-     T-    Agr
└──────────────────────────────┘
```

Instead of adopting Option 2 in (33), let me explore Option 1 in (33) more in depth. Let's look at the facts. On the one hand, we already know that LS Sp displays a mechanism of Partial Reduplication triggered only in the Pres Perfect. On the other hand, we also know that the verbal stress algorithm set up by Oltra-Massuet&Arregui (2005) predicts that the auxiliary HAVE in the Pres Perfect will lack stress –unless something exceptional prevents it. It seems at this point that we have the ingredients to stablish a causal relation between these two facts. Without further ado, let's wonder what happens if Partial Reduplication comes about before the verbal stress algorithm takes a chance to apply or – even better- that Partial Reduplication takes place when the verbal stress algorithm is running Line 0. The immediate consequence of this ordering on the application of these two operations (basically, ParRed feeds Stress-Assignment) should be that shown in (34).

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[5] I want to make the reader notice that Oltra-Massuet & Arregui (2005) do not provide an analysis of verbal compound forms in Spanish. The extensión of their analysis to verbal compound forms in LS Sp rests with me.

(34)

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Line 2:          *
Line1:            *)
Line0:        ) *              )*
            Ø-       a-  h-        a
            Aux-     T-  Agr-      T   ←┐
                                       │
                                       │
        PartRed:  ┌──────────────────┐ │
                  │ [ T < Agr] >>> T-Agr-T │
                  └──────────────────┘
                              ↑
            aux-     T-  Agr ──┘
```

When the auxiliary HAVE is partially reduplicated in (34), Line 0 of the verbal stress algorithm ends up with two Ts or two theme vowels *a* each projecting a * mark and a foot boundary to its left. This time the verbal stress algorithm supplies the auxiliary HAVE in the Pres Perfect with stress. We have been looking for a trigger to Partial Reduplication and it seems we get a winner: (lack of) verbal stress. However, we still have to account for AgrLow in (3). The primary strategy for us to pursue would be to optimize resources and wondering whether the trigger that gives rise to Partial Reduplication is also responsible for triggering AgrLow.

3. Agreement Lowering: the other party.

The 1st person plural morpheme /mos/ (pronounced as [moh] in LS Sp) is a suffix. It means that needs to be attached to a stressed host. We saw in the previous section that the auxiliary HAVE in the Prs Perfect lacks stress. The next suitable host for the subject agreement suffix /mos/ is the PastParticiple.

(35)   a.   ($_w$… +a) ($_w$ comido+moh)
        b.   ($_w$ a+comido+moh)

Local Dislocation is the movement operation taking place at MS after linearization of the terminal nodes. What differentiates Local Dislocation from other movement operations at MS is that Local Dislocation operates in terms of linear adjacency (Embick&Noyer 2001)[6].

(36)   Local Dislocation
        X * Y → Y+X

(37)   Local Dislocation in LS Spanish.
        [T * Agr] * [PastP] → T * [PastP+Agr]

It is time for the second Generalization regarding the interplay of AuxDup and AgrLow to show up.

(38)   Generalization 2:
        For every slot x in (1), if x is subject to AuxDup, then x is not subject to AgrLow.

---

[6] I didn't find any case of AgrLow with passives in Lorenzo Ramos (1976). However, the prediction would be that Local Dislocation places the 1st person plural suffix to the right of the first past participle, as shown in (ia).

(i)   a. A sido-moh acusado-h   (Prediction: OK)
           aux been-1plS accused-pl
        b. A sido acusado-h-moh   (Prediction: *)
           aux been accused-pl-1plS
           'We have been accused'

a. * a   comido-h
     aux eaten-2sgS
   'You have eaten'
b. * a   comido-n
     aux eaten-3plS
'{Y'all/They} have eaten'

Why may AgrLow not apply to 2nd person singular and 3rd person plural agreement markers? There is no principled reason for Local Dislocation not to apply to them. Before answering this question, let me notice that what Generalization 1 in (20) and Generalization 2 in (38) are revealing is precisely that AgrLow and AuxDup are in complementary distribution.
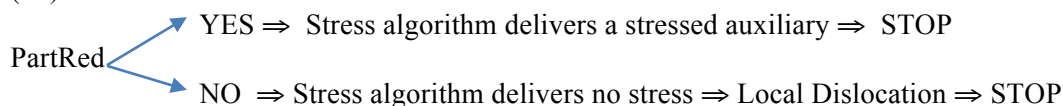
(39)   Generalization 1+2
        For ever slot x in (1) the following two statements hold:
              a. if x is subject to AgrLow, then x is not subject to AuxDup (=20), and
              b. if x is subject to AuxDup, then x is not subject to AgrLow(=38).

To account for Generalization 1+2, one needs carefully review the timing of events leading to the murder: who killed who and when. Let's go thorough the sequence of events ending in murder to figure out who is the killer. If the verbal stress algorithm is doomed to fail, then Partial Reduplication is invoked before the algorithm applies. If Agr is 3rd person plural or 2nd person singular, there will be no impediment for Partial Reduplication in (17) to apply and the verbal stress algorithm will be 'safe'. However, if Agr is 1st person plural, the Nucleus Condition in (22) will prevent Partial Reduplication to apply and the verbal stress algorithm will not be able to provide a suitable value (=stress). Yet the 1st person plural marker is a suffix and need a stressed host. No problem. Local Dislocation will places it to the right of the next suitable host: the past participle.

(40)
                        YES $\Rightarrow$ Stress algorithm delivers a stressed auxiliary $\Rightarrow$ STOP
PartRed
                        NO $\Rightarrow$ Stress algorithm delivers no stress $\Rightarrow$ Local Dislocation $\Rightarrow$ STOP

Rank of Operations: PartRed >> Stress >> Local Dislocation

It seems we catch the killer, guess who. Nothing original here. The killer uses to be the butler. A version of Lasnik's Stranded Affix Filter in (41) seems to be a good candidate to account for the motivation for both AuxDup and AgrLow to come about.

(41)   Stranded affix filter.
        A morphologically realized affix must be a syntactic dependent of a morphologically
        realized category, at surface structure. (Lasnik 1981)

I model Lasnik's Stranded affix filter in terms of stress as in (42).

(42)   (Stress-based) stranded affix filter.
        A morphologically realized affix must be a morphological dependent of a stressed
        realized category, at MS.

Summarizing so far, in the Prs Perfect the verbal stress algorithm does not deliver a stressed auxiliary. In this case, if subject agreement is not morphologically realized (i.e. 1st person and 3rd person singular subject agreement markers –see (1)-), the filter in (43) is trivially not violated. However, if subject agreement is morphologically realized, Partial Reduplication and Local Dislocation is the response of the system to overcome the filter in (42). Just making two

11

assumptions: the Nucleus Condition in (22) and ordering PartRed before Stress-assignment (40), we can predict which agreement marker would be subject to either Partial Reduplication (2nd person singular and 3rd person plural subject markers) or Local Dislocation (1st person plural subject marker).

3.1 Something is rotten in the state of Denmark.

Appealing as it sounds, the explanation I offered in the previous subsection cannot be on the right track. Firstly, if Partial Reduplication feeds the verbal stress algorithm –as shown in (34)-, verbal stress is predicted to fall on the first theme vowel of the auxiliary HAVE in the Pres Perfect in (2). However, there is reason to believe that verbal stress actually falls on the second theme vowel. In Partial Reduplication contexts, the first theme vowel *a* used to be deleted when preceded by another vowel. If verbal stress would fall on the first theme vowel *a,* the fact that this vowel is often deleted would be quite bizarre.

(43)   a. ya   te   caíhte: bastante me   ha   robado.
            already 2sgO fall   enough 1sgO 2sgS.aux stealen
            'You already fell. You have stolen me enough (money)'

        b. fuerte baladrona ha   sido tú   ehta noche!
          Strong imp   2sgS.aux been you this night
          'What an imp has you been last night!'

        c. tú no ha querido.
          You not have wanted
          'You haven't wanted to do so'   [Lorenzo Ramos 1976: 108-9]

Secondly, the verbal stress algorithm in (32) for the auxiliary HAVE in the Past Perfect predicts that verbal stress to fall on the theme vowel *i,* giving raise to a hiatus. Even if it is true that the auxiliary HAVE sometimes surfaces with a hiatus, diphthongization of the auxiliary HAVE in the Past Perfect is at large the most common strategy in LS Sp, as reported by Lorenzo Ramos (1976: 110).

(44)   a. si yo bía sabido mah…   [bí.a]
          if I had known more…
          'I I had known more.'
        b. él bia   llegado de Cuba   [bia]
          he had   arrived from Cuba
          'He had arrived from Cuba'

There is independent evidence showing that the auxiliary HAVE in the Past Perfect is defective in terms of stress. If there is no hiatus in the auxiliary HAVE in the Past Perfect, the object clitic fails to climb to the finite auxiliary HAVE –as shown in (45). A natural assumption here is that the object reflexive clitic in (45) is not able to climb to the finite auxiliary due to the lack of stress of the auxiliary.

(45)   ¡láhtima no bia ehtrellado-se
          pitty   not had crash-3refl
          'What a pitty that he hadn't crashed!'

Conclusions, the title of this paper is a fraud and there is a killer lose still out there.

3.2 Weak and Strong auxiliaries in LS Sp.

What seems to be clear at this point is the existence of two (versions of) the auxiliary HAVE: a strong and a weak one. These two 'flavours' of the auxiliary HAVE can be easily detected in the Past Perfect. A strong auxiliary HAVE with hiatus -as shown in (44a)- and a weak auxiliary HAVE with diphthong (see 44b). I will assume that the same distinction is carried over to the auxiliary HAVE in the Prs Perfect of LS Sp.

3.2.1 The derivation of strong auxiliaries.

I maintain the derivation for the strong auxiliary HAVE in the Past Perfect I offered in (32), repeated below as (46).

```
(46)    Line2           *                       *
        Line1           *)                      *)
        Line0           *)    *      *          *)      *
                b       í     a      moh    b   í       a       {h/n/∅}
                V_aux-  Th-   T-     Agr    V_aux- Th-  T-      Agr
```

In the Prs Perfect I propose that the strong auxiliary HAVE triggers stress shifting to the end of the world. A simple way to achieve stress shifting in the Prs Perfect is allowing an exceptional rightmost foot boundary to be inserted in Line 0, as shown in (47).

```
(47)    Line2                   *               *
        Line1                   *)              *)
        Line0           )*      *)              *       )
                ∅       ∅  a moh        ∅       ∅ a {h/n/∅}
                V_aux-  Th-T-Agr        V_aux-  Th-T-Agr
```

It is worth pointing out that (47) predicts that verbal stress falls on the agreement marker [moh] in the strong auxiliary HAVE. This prediction seems to be borne out. In the sentence in (48) the theme vowel *a* has been deleted[7].

(48) así lo   mo   quedao   con siete.
     So 1plO 1plS remained with seven.
     'In this way we have remained with seven.'   [Lorenzo Ramos 1976: 108]

3.2.2 The derivation of weak auxiliaries.

I want to propose that the weak auxiliary HAVE both in the Prs and the Past Perfect requires the insertion of an exceptional rightmost foot boundary at the end of the word during the running of Line 0 of the verbal stress algorithm.

3.2.2.1 The weak auxiliary HAVE in the Past Perfect.

The insertion of an exceptional rightmost foot boundary at the end of the world during the running of Line 0 makes verbal stress in the weak auxiliary HAVE in the Past Perfect to be always final, as shown in (49).

```
(49)
Line2                           *                       *
Line1           *               *)          *       *       )
Line0           *)      *       *)          *       )*      )
        b       i       a       moh     b   i       a       {h/n/∅}
        V_aux-  Th-     T-      Agr     V_aux- Th-  T-      Agr
```

---

[7] It has to be noticed that the nasal consonant *n* in the 1st person plural clitic *nos* is systematically replaced by the lateral consonant *l* in LS Sp (Lorenzo Ramos 1976: 85-87).

Even if verbal stress is final, secondary stress systematically falls on the auxiliary. This fact offer us the possibility of linking the lack of AgrLow and AuxDup in the Past Perfect to the existence of secondary stress. It has to be assumed that secondary stress is enough to get the 1st person plural suffix /mos/ attached to the finite auxiliary, but secondary stress is not enough to trigger clitic climbing to the weak finite auxiliary (or at least it makes clitic climbing optional, in order to explain cases of absence of otherwise obligatory clitic climbing as in (44)). As I will show in the next subsection, the presence of secondary stress potentially allows us to account for the lack of Partial Reduplication in the Past Perfect.

3.2.2.2 The weak auxiliary HAVE in the Prs Perfect.
I will assume that the derivation of the weak auxiliary HAVE in the Prs Perfect is similar to that of the Past Perfect I eschewed in (49) with one exception. I will assume that the weak auxiliary HAVE in the Prs Perfect does not systematically project a foot boundary to the left of T. The only way to achieve this result in a systematic way consists on making the projection of the foot boundary to the left of T dependent on the eventual projection of some * mark to its left[8].

(50)   *Foot Condition on Line 0*
        Project a foot boundary to the left of T iff there is some * mark projected to the left of T.

What prevents the Foot Condition in (50) to apply in other Spanish Dialects? As far I known, it has not been proven the existence of weak and strong auxiliaries in other Spanish Dialects. Thus it is likely that the activation of the Foot Condition in (50) depends on the existence of weak/strong oppositions in the verbal domain. Unfortunately, I have to leave the evaluation of this hypothesis for further research.

I begin with the derivation of verbal stress for 2nd person singular and 3rd person plural inflected auxiliaries. If nothing happens, the verbal stress will fall on the only theme vowel making up the auxiliary, as shown in (51).

(51)   Line 2   *
        Line 1   *)
        Line 0   *   )
                  a   h/n

However, I want to propose that this is not the end of the story. One needs to consider the condition in (50) as a sort of marked condition that the system tries to avoid whenever possible. Again, if Partial Reduplication applies prior to the verbal stress algorithm or during the running of Line 0, the application of the Foot Condition in (50) would be- in a sense- *spurious*, as shown in (52). And what is even more important, the verbal stress algorithm in (52) delivers an auxiliary HAVE with primary and secondary stress. This means that Local Dislocation has not to apply to Agr (if Agr= 2nd sg or 3rd pl) in order for Agr to be placed in a host carrying stress, in the assumption that secondary stress is enough for blocking Local Dislocation to apply.

(52)   Line 2   *
        Line 1   *   *)
        Line 0   *   )   *)   *)
                  [a < h] >>>   a   h   a
                  [a < n] >>>   a   n   a

But what happens when Agr is 1st person plural? We already know that, due to the Nucleus Condition in (22), Partial Reduplication does not apply if Agr is 1st person plural

---

[8] The only way to overcome a look-ahead effect consists on assuming that the projection * markers precedes the projection of foot boundary at Line 0.

(53)   Line 2   *
         Line 1   *)
         Line 0   * *)
             a moh

Crucially, the algorithm in (53) supplies an auxiliary HAVE with no secondary stress. It has to be assumed at this point that the lack of secondary stress in the weak auxiliary HAVE triggers Local Dislocation. It is important to notice that the sequence of events I previously eschewed in (40) can be maintained with minor changes. It would be no the lack of verbal stress that triggers both Partial Reduplication and Local Dislocation but the lack of secondary stress.

(54)

                         Yes ⇒ Secondary stress
weak aux ⇒ PartRed   STOP
                         No ⇒ Local Dislocation
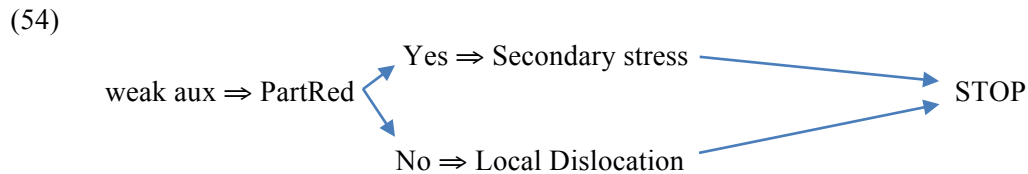
It seems that the title of this paper wasn't a complete fraud after all.

4. Behind Partial Reduplication.
In this section I present a hypothesis and a conjecture about the impact of Partial Reduplication in other aspects on the grammar of LS Sp.

4.1. The Palindrome Mutation.
It is worth noticing that the consonants /s/ and /n/ are subject to phonological weakening in LS Sp when they surface in coda positions. As Lorenzo Ramos (1976: 70) notices, the nasal consonant /n/ is lost when preceding a fricative consonant and –as consequence- the vowel preceding the nasal is nasalized. However, as Lorenzo Ramos (1976: 70) observes, this nasalization is often lost.

(55)   a. [masaníλa] 'manzanilla'   (chamomile)
        b. [unah naráha] 'unas naranjas' (some oranges)

The consonant /s/ is always aspirated in the coda position (there are few exceptions where aspiration is blocked in the coda position but they only take place in the nominal system, never in the verbal domain –see Lorenzo Ramos (1976:70) for further details-). Crucially, the aspiration is lost when the consonant /s/ in coda precedes a fricative consonant.

(56)   a. [lo hitano] 'the gypsis'
        b. [lo sercado] 'the fences'

The impact of these phonological processes in the Prs Perfect of LS Sp is illustrated in (57).

(57) *Present Perfect in LS Sp with a Past Participle beginning with a fricative*

        a. (Yo)   [a]   yuntado
          I.Nom   aux-1Ss eaten
          'I have eaten.'
        b. (Tu)   [a]   fornicado
          You.Nom   aux-2Ss
          'You have eaten.'
        c. (El)   [a]   fornicado
          He.Nom   aux-3Ss
          'He has eaten.'

15

   d. (Nosotros)   [a-mo]   fornicado
      We.Nom   aux-1Spl
     'We have eaten.'
   e. (Ustedes/Ellos)   [a]   fornicado
      Y'all/They   aux-3pl
     'Y'all/They have eaten.'

As can be observed in (57), the inflectional system has been strongly (even if only phonologically) impoverished. It is important to notice that this impoverishment has not – in principle- the ability to turn off the pro-drop parameter. Müller (2005) contends that the lack of pro-drop and the inflectional poverty of the verbal paradigm are only related if inflectional poverty derives from impoverishment rules in Morphology (Noyer 1992; Bonet 1990). Yet this is not the case of LS Sp. All the inflectional impoverishment we observe in LS Sp is phonologically, but not morphologically derived. However, it should strike us as suspicious that the effect of Partial Reduplication is to place the consonants /n/ and /s/ from coda to onset positions, preventing the application of certain phonological processes weakening these specific segments.

Under this suspicion, we can conceive of Partial Reduplication as a sort of mutation. Partial Reduplication happens for whatever reason happens (see section 3). This reason is clearly independent from the pro-drop parameter. Yet this mutation –so to speak- helps not to postulate morphological impoverishment rules to deliver the paradigm in (57). In this sense, Partial reduplication (the mutation) success –or is selected, if we want to continue employing the biological metaphor- because it causes an overall benefit on the grammar of LS Sp. However, I believe this hypothesis is not on the right track. The reason is simple. If the 'facilitation' of the pro-drop parameter was at stake here, we expect Partial Reduplication to apply everywhere the consonants /n/ and /s/ are lost as inflectional subject markers, and not only in the Prs Perfect. Yet Partial Reduplication takes place only in the Prs Perfect and this fact cannot be explained by this hypothesis.
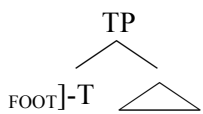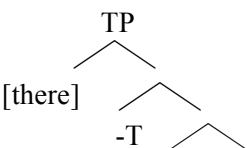
4.2 The EPP conjecture (Richards 2014).
It is time for syntax to show up. In this closing section I want to suggest that the morpho-phonological processes (AuxDup and AgrLow) I have studied in this paper constitute only the tip of the ice-berg; the actual and massive body of the ice-berg sinks under syntax. I name the suggestion that AgrLow and AuxDUp phenomena in LS Sp have their roots in syntax as the EPP Conjecture.
Richards (2014) has recently developed a radical reinterpretation of the syntax-phonology interface, what he calls The Contiguity Theory. Under this theory, "grammar begins the construction of phonological structure earlier in the derivation than previously thought" [Richards 2014: 2][9]. In narrow syntax, then, it is already constructed a kind of 'rough draft' of the final phonological representation. I will focus on the predictions Richards' theory makes regarding the distribution of EPP effects in different languages. Richards (2014) claims that EPP effects in a given language follows from the rules for morphology and stress assignment for its verbs. Richards notices that in Spanish (also in Catalan and Italian; both of them EPP-effect free languages) verbal stress falls typically to the left of Tense. We already know that this generalization is grasped by Oltra-Massuet&Arregui' (2005) algorithm by means of projecting a foot boundary to the left of T when verbal stress is running Line 0. On the contrary, no verbal stress algorithm has been proposed by English making reference to T when verbal stress is being computed. Richards' theory revolves around this difference between Spanish and English. He contends that the condition in (58) works during the syntactic computation of both English and Spanish.

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[9] It seems to me that Richard's theory is not so 'lonely' at this particular regard as he initially thinks. As far I know, the first attempts to explore the possibility that phonological rules are interspersed by syntactic transformations can be tracked back at least to Bresnan (1971).

(58)   T-Support
        If T is a suffix it must follow a metrical boundary.   [Richars 2014: (9)]

T-support in (58) determines that English will show EPP effects due to the fact that the verbal stress algorithm does not provide T with a metrical boundary to its left. In English, T must relays on the metrical boundary projected by the DP in its Specifier –as shown in (59b). This not the case of Spanish. In Spanish, the verbal stress algorithm always guarantees the presence of a metrical boundary to the left of T -as schematically represented in (59a)- and no EPP effects are expected to show up. In this way, Richards derives the parameterization of EPP effects. EPP is universal: variation regards the way metrical boundaries are introduced in syntax to support the node T[10].

(59)   a. Apareció un hombre   b. There was arrived a man
                    TP   TP

        FOOT]-T   △   [there]   △
                                               -T   △

Recall that I have proposed in section 3.2.2 to identify the trigger for Partial Reduplication with the systematic absence of a foot boundary to the left of T. If Partial Reduplication arises as a response of avoiding the Foot Condition in (50) (The Foot condition under the Contiguity Theory is a trigger for EPP effects), we can conceive Partial Reduplication as a sort of Subject Clitic (at least in a broad sense, i.e. a way to overcome EPP effects by means of an agreement marker). Indeed, if AuxDup and AgrLow are modeled under the Contiguity Theory, they have to be considered as processes triggered by the absence of a metrical boundary to the left of T. The EPP Conjecture for AuxDup and AgrLow in LS Sp makes two predictions: (i) Local Dislocation does trigger EPP effects, but (ii) Partial Reduplication does not.

(60)   *EPP Conjecture for LS Sp*
        Partial Reduplication in LS Sp is an EPP effect.
        a. (Tu) ah a venido   EPP effects: NO
        b. (Ustedes/Ellos) an a venido.   EPP effects.: NO
        c. *(Nosotros) a venido-moh.   EPP effects: YES

Unfortunately, the EPP Conjecture in (60) has still to be borne out. The data I have at my disposal is not enough to issue a verdict. However, I believe this Conjecture to be easy to falsify. If the EPP Conjecture turns out to be confirmed, I propose to re-title this paper as *EPP-by-Reduplication in Los Silos Spanish*, a more appropriate one with the desired (even if no actual) conclusions of the paper. Until now the only thing I can offer to you is some room for hope.

If EPP Conjecture in (60) is eventually confirmed, the similarity of the Prs Perfect in LS Sp and the Subject Clitic paradigm in certain Northern Italian Dialects (Poletto 2000), would have a chance to be accounted for.

(61)   a. Borgo di Terro (Manzini&Savoia 2005 I: 89)
        a   dorme   'I sleep'
        a   ta   dorme   'You sleep'
        a   la   dorme   'He sleeps'
        a   na   dorma   'We sleep'

---

[10] It is worth pointing out that Richards' theory is a virus version of the Stranded Affix Filter in (41), at least for the part of his theory concerning the derivation of EPP effects.

a   durmi   'You seep'
a   I   dorma   'They sleep'

b. Lugano (Swiss Lombard) [Vassere 1993]
a   vegni   mi
a   ta   vegnat   ti
a   vegn   luu
a   vegnum
a   vegnuf
a   vegn   lur

Recall that Partial Reduplication in LS Sp applies to 2nd singular and 3rd person plural. It is curious that the order in which Subject Clitics in Northen Italian Dialects come about is that of (62):

(62)   a. If a variety has only one SCL, this is the the 2nd person singular.
         b. If a variety has two SCLs, these are the 2nd persons singular and the 3rd person.
         c. If a variety has three SCLs, these are the 2nd person singular and the 3rd person singular and plural.   Poletto (2000: (64)).

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