

# Pronominal doubling under predicate topicalization

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## Abstract

This paper examines the behaviour of VP topicalization in two unrelated languages, Hungarian and Spanish. It will show that in spite of the superficial similarity between the elements involved in such topicalization, the two languages employ a fundamentally different strategy in the derivation of these sentences. Hungarian fronts the VP material and spells it out in the form of a resumptive pronoun in the left periphery, in a mechanism similar to that described in Grohmann (2003). Spanish on the other hand generates the resumptive pronominal as an argument internal to the clause. This difference in the two derivations correlates with other differences in VP topicalization in the two languages.

**Key words:** *topicalization, resumption, verb phrase, Hungarian, Spanish*

## 1. Introduction

In this article, we examine the syntax of sentences in which a topicalized verbal predicate is doubled by a demonstrative pronoun. We focus on data from Hungarian and Spanish, which are exemplified in (1) and (2) below. For the purposes of this paper, we will refer to the fronted phrase as the *topic*, and to the pronoun downstairs as the *double*.

- 1) *Hungarian*  
Annát meglátogatni, **azt** szokta Mari.<sup>1</sup>  
Anna-ACC PV-visit-INF that-ACC HABIT Mari  
'To visit Anna, Mari usually does that.'
- 2) *Spanish*  
Visitar a Ana, María suele hacer **eso**.  
visit-INF to Ana María HABIT do-INF that  
'To visit Ana, María usually does that.'

We will argue that, in spite of the superficial similarity in the elements involved in this construction, Hungarian and Spanish make use of fundamentally different derivations in this kind of predicate topicalization. The difference affects the syntactic role of the pronominal double, as well as the relation of the predicate to this double. In particular, we will show that the Hungarian double *azt* 'that' is the spell out of the trace left by predicate fronting, much as in Grohmann's (2003) analysis of Contrastive Left Dislocation in German. In contrast, the Spanish double *eso* 'that' is merged as a real argument of the verb, and takes the to-be-fronted VP as its predicate in a small clause configuration. When the VP is fronted, it strands the demonstrative, giving the appearance of resumption (cf. Boeckx's 2003). In the final section, we will show that, out of the two patterns, the Spanish type also occurs in West Germanic languages (Dutch and German). This article, we hope, will help lay the foundations for further cross-linguistic investigation in this domain.

## 2. Hungarian VP topicalization

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<sup>1</sup> The notation and abbreviations in the glosses are as follows: ACC = accusative case; CL = clitic; ; DAT = dative case; ; DEF = definite agreement; HABIT = habitual marker (auxiliary); INDEF = indefinite agreement; INF = infinitival ending; PV = preverb(al element); REL = relative morpheme; POSS = possessive morpheme; 1/2/3/SG/PL = person/number features, which are indicated only when relevant. Nominative case, verbal tense is only indicated when relevant. Small capitals indicate focus.

## 2.1. Verbal elements in the topic position

In Hungarian, there are two ways of topicalizing a verbal item. One type involves the verb in topic position, and features no pronominal double. We call this construction *V topicalization*. The other type involves a VP in topic position or an extended projection thereof, and is associated with an accusative pronominal double *azt* 'that'. We call the latter strategy *VP topicalization*. Our interest in this paper lies in the second type, which to our knowledge has not received any attention in the theoretical literature. To illustrate the differences between the two types, the paper starts by introducing V topicalization first before giving a detailed characterization of VP topicalization.

### 2.1.1. V topicalization

V topicalization in Hungarian involves the verb alone (with its preverb, if there is one) in the infinitival form.<sup>2</sup> This infinitival verb is the same verb as the finite verb that we find in the body of the sentence. The latter verb is usually adjacent to the topicalized infinitive (cf. (3)a) or is separated from that by a regular topic (cf. (3)b).

- 3) a. [Énekelni], énekelt Mari.  
           sing-INF sang Mari  
       b. [Énekelni], Mari énekelt.  
           sing-INF Mari sang  
           'As far as singing is concerned, Mari did sing yesterday (...but she did not play the piano, for example).'
- 4) [Elolvasni], elolvasta a Hamletet Kristóf.  
     PV-read-INF PV-read the Hamlet-ACC Kristóf  
     'As far as reading is concerned, Kristóf did read Hamlet (...but he did not write a review about it).'
- 5) (Tudom, hogy Péter foglalkozott az anyaggal) de [megérteni],  
     I know that Peter dealt the material-WITH but PV-understand-INF  
     megértette-e?  
     PV-understood-QY/N  
     '(I know that Péter studied the material...) but as far as understanding goes, did he understand it?'

As far as the meaning of the topicalized verb is concerned, it is that of a *contrastive* topic constituent, as can be seen from the translations: it implies contrast with respect to other possible elements (an example of which we spelled out in the bracketed material). Next to such a contrast, there is another obligatory ingredient of these sentences: focus. As the translations above indicate, the finite verb in the body of the sentence expresses *verum focus*, i.e. focus on the truth value of the proposition. In other words, these sentences emphasize or question whether the event did or did not happen. Verum focus in Hungarian is represented by heavy stress on the finite verb. In a somewhat more marked set of cases, V topicalization is also compatible with another kind of focus in the clause: focus on a lexical constituent.<sup>3</sup> Lexical focus in Hungarian indicates contrast with respect to other material and occurs to the immediate left of the verbal head.

- 6) [Elolvasni], a HAMLETET olvasta el Kristóf (és nem a MACBETHET).  
     PV-read-INF the Hamlet-ACC read PV Kristóf and not the Macbeth-ACC  
     'As far as reading is concerned, it was Hamlet that Kristóf read, and not Macbeth.'

<sup>2</sup> In our finding, preverbal material, such as PPs and incorporated (albeit case-marked) NPs cannot be fronted in V-fronting, regardless of the order we find in the finite clause (V-PP or PP-V):

- (i) \* Moziba menni, moziba ment tegnap Péter.  
       cinema-INTO go-INF cinema-INTO went yesterday Péter  
 (ii) \* Moziba menni, ment moziba Péter.  
       cinema-INTO go-INF went cinema-INTO Péter  
 (iii) \*% Moziba menni, ment tegnap Péter.  
       cinema-INTO go-INF went yesterday Péter

'As far as going to the cinema is concerned, Péter went to the cinema yesterday.'

Ürögdi (2006) on the other hand reports such examples to be grammatical.

<sup>3</sup> For reasons of completeness it must be mentioned that emphatic operator material, including quantifiers, can also be the focus of the clause, similarly to what we find with ordinary contrastive topics, as Gyuris (2002) has shown. We do not illustrate these cases.

The semantic surplus of contrastive focus is indicated by the 'Hamlet' vs. 'Macbeth' contrast in the translation. For a more detailed analysis of this construction, the reader is referred to Ürögdi (2006) and Vicente (2007).

### 2.1.2. VP topicalization

Unlike V topicalization, VP topicalization involves a larger string in topic position than just the verb: it contains the whole VP in topic position. VP topicalization is also different from V topicalization in that it involves a resumptive constituent pronominal double. This double is the distal demonstrative *az* 'that' invariantly in all cases, which shows up with accusative case and which can be optionally dropped. This demonstrative element also occurs with what is usually referred to as contrastive topicalization of DP or PP material (É. Kiss 1987).<sup>4</sup> Compare instances of DP (cf. (7)a) and PP (cf. (7)b<sup>5</sup>) contrastive topicalization with that of contrastive topicalization of a VP (8):

- 7) a. [Péter], az AJÁNDÉKOT kapott Maritól. [DP]  
 Péter that present-ACC got Mari-FROM  
 'As far as Péter is concerned, it was a present that he got from Mari (while other people might have got something else).'
- b. [Péter előtt], az előtt nem állt senki. [PP]  
 Péter in.front that in.front not stood no.one  
 'In front of Péter, there was nobody standing in front of him (while in front of others there might have stood someone).'
- 8) a. [Úszni], azt nem tud Péter. [VP]  
 swim-INF that-ACC not is.able Péter  
 'As far as swimming is concerned, Péter cannot do that (while other things he might be able to do).'
- b. [A Hamletet elolvasni], azt KRISTÓF akarta.  
 the Hamlet-ACC PV-read-INF that-ACC Kristóf wanted  
 'As far as reading Hamlet is concerned, it was Kristóf who wanted to do that (while some other activity might have been wanted by somebody else).'

In all these cases, the bracketed contrastive topic is typically pronounced with contrastive topic intonation, which involves optional stress and (fall)-rise intonation on the topic item, that can be optionally followed by a slight pause.

As far as the meaning of the topicalized verb phrase is concerned, its meaning is that of a *contrastive* topic constituent — as is indicated in the translations: contrast with respect to another element (spelled out in the bracketed material) is always present. Just like contrastively topicalized DPs/PPs, VP topics are also associated with some kind of focus in the finite clause: verum focus or lexical focus, as indicated by the translations in (8) (see also footnote 3 above). The examples in (8) illustrate the case with verum focus: the truth of the proposition that Péter can swim is denied. (8) shows a case where lexical focus is present.

The fronted material in VP topicalization is larger than in the case of V topicalization that was reviewed above. VP topicalization can include internal arguments, manner/time/frequency adjuncts next to the verb, or verbal complexes:

<sup>4</sup> Exceptionally, DP contrastive topics can make use of a proximate demonstrative *ez* 'this' double in cases when the DP contains a proximate demonstrative:

(i) [Ez a fiú], ez ajándékot kapott.  
 this the boy this present-ACC got  
 'This boy, he got a present (while others might have got something else).'

<sup>5</sup> When the postposition begins with a consonant, the form of the demonstrative double is *a* instead of *az* in the standard (literary) dialect of Hungarian:

(i) [Péter mellett], a mellett nem állt senki.  
 Péter next that next not stood no.one  
 'Next to Péter, there was nobody standing next to him (while next to others there might have stood someone).'

- 9) a. [Péterrel telefonon beszélni], azt szokott Mari.  
Péter-WITH telefon-ON talk-INF that-ACC HABIT Mari  
'To talk to Péter on the phone, Mari does that.'
- b. [Annát minden nap/gyakran meglátogatni], azt nem szokta Mari.  
Anna-ACC every day/often PV-visit-INF that-ACC not HABIT Mari  
'To visit Anna every day/often, Mari does not do that.'
- c. [Az újságot olvasás nélkül kidobni], azt nem szokta Mari.  
the newspaper-ACC reading without PV-throw-INF that-ACC not HABIT Mari  
'To throw away the paper without reading, Mari does not do that.'
- d. [Úszni akarni], azt szokott Mari.  
swim-INF want-INF that-ACC HABIT Mari  
'To want to swim, Mari does that.'

To some degree, even clausal complements can appear in the topicalized VP, preferably to the right of the infinitive:

- 10) ?[Bevallani, hogy tévedett], azt nem szokta Kálmán.  
admit-INF that was.wrong that-ACC not HABIT Kálmán  
'To admit that he was wrong, Kálmán does not do that.'

Overt subjects are marginally allowed in the topic VP — note that the subject in infinitivals always bears dative case:

- 11) ??[Zsófinak a postára mennie], azt kár volt.  
Zsófi-DAT the post-ONTO go-INF that-ACC no.use was  
'For Zsófi to go to the post office, that had no use.'

When the verb has obligatory internal arguments, they all have to appear upfront, together with the verb. Leaving one or both arguments behind is ungrammatical:

- 12) a. \* [Tenni], azt nem szokta Mari a kulcsot az asztalra.  
put-INF that-ACC not HABIT Mari the key-ACC the table-ONTO  
'To put the key on the table, Mari does not do that.'
- b. \* [Tenni a kulcsot], azt nem szokta Mari az asztalra.  
put-INF the key-ACC that-ACC not HABIT Mari the table-ONTO  
'To put the key on the table, Mari does not do that.'
- c. \* [Tenni az asztalra], azt nem szokta Mari a kulcsot.  
put-INF the table-ONTO that-ACC not HABIT Mari the key-ACC  
'To put the key on the table, Mari does not do that.'
- d. [Az asztalra tenni a kulcsot], azt nem szokta Mari.  
the table-ONTO put-INF the key-ACC that-ACC not HABIT Mari  
'To put the key on the table, Mari does not do that.'

The same holds for clausal complements of the predicate as well. As we have mentioned above, they preferably occur fronted, in the topic (see (13)a). They cannot appear at the end of the sentence, as (13)b shows.

- 13) a. ?[Bevallani, hogy tévedett], azt nem szokta Kálmán.  
admit-INF that was.wrong that-ACC not HABIT Kálmán  
'To admit that he was wrong, Kálmán does not do that.'
- b. \*[Bevallani], azt nem szokta Kálmán [ hogy tévedett].  
admit-INF that-ACC not HABIT Kálmán that was.wrong  
'idem'

The facts in (9) through (13) suggest that the topic constituent in VP topicalization is minimally a full VP: it is not possible to leave a complement behind in the finite clause when the verb is topicalized in this pattern. How big is the topicalized chunk? Paradigms like (9)b and (9)c, where the topic contains a time/TP adverbial or a whole adjunct clause adjoined to the VP indicate that the topic can also be larger

than just a VP: it can possibly be a whole IP, if we take some of these adverbials to be tense-related modifiers. This conclusion is also in line with the results of Kenesei (2001), which shows that the infinitival marker *-ni* in Hungarian is outside the VP, it is the spellout of the tense head. The upper limit on the size of the topic is indicated in turn by the degradation of grammaticality that we get when we include left peripheral material in the topic, like focus or *wh*-elements for example. These cannot easily surface in the left dislocated VP for most speakers (cf. (14)a,b). Quantifiers fare somewhat better (cf. (14)c):

- 14) a.  $\text{?(?)}\%$  [Csak ANNÁT meglátogatni], azt nem szokta Mari.  
           only Anna-ACC PV-visit-INF that-ACC not HABIT Mari  
           'To visit Anna (and not someone else), Mari does that.'
- b. \* [Kit meglátogatni], azt szokott Mari?  
       who-ACC PV-visit-INF that-ACC HABIT Mari  
       'To visit whom, does Mari do that?'
- c. [Mindenkit meglátogatni], azt nem szokott Mari.  
      everybody-ACC PV-visit-INF that-ACC not HABIT Mari  
      'To visit everybody, Mari does not do that.'

This indicates that the topic presumably does not contain projections that pertain to the operator/high CP domain. Our conclusion then is that the fronted constituent can be an extended projection of the VP: an IP, and possibly the functional structure that hosts some operator material like quantifiers. In other words, we are dealing with topicalization phenomena that can apply to extended VPs. For convenience, though, we will keep referring to the phenomenon as VP topicalization and refer to the category of the topic as a VP/IP.

Turning now to the properties of the tail, we can observe that corresponding to the topicalized VP, we always find a gap in sentence internal position, as indicated by (15):

- 15) [<sub>contrastive topic</sub> VP/IP]<sub>i</sub>, [azt] ... **V** [<sub>VP/IP</sub> e<sub>i</sub>] ...

In the position of the boldface V we find predicates that can subcategorize for a verbal category. The VP/IP gap is licensed by predicates that are compatible with a VP/IP complement.<sup>6</sup> Some frequently occurring predicates are given in the following non-exhaustive list:

16) *Characteristic predicates that license VP topicalization*

Auxiliaries	fog	'will'
	szokott	'(habitually) do'
Volitional predicates	akar	'want'
	szeret(ne)	'(would) like'
	kíván	'wish'
	hajlandó	'willing'
Ability predicates	tud	'be able to'
	képes	'be able to, want to'
Modal predicates	kell	'must, have to, need to'
	lehet	'possible'
	lehetséges (adj)	'possible'

<sup>6</sup> Verbs which combine with an infinitive that has an adjunct role cannot give rise to VP topicalization, as the following example illustrates:

- (i) \* Időben megérkezni, azt igyekezett Péter.  
      time-IN arrive-INF that-ACC strove Péter  
      'Péter strove to arrive in time.' / 'Péter made an effort so that he would arrive in time.'

VP topicalization is thus restricted to complement VPs. Among these, exceptions are those predicates that are fully stress avoiding, like *látszik* 'seem' or *talál* 'happen (to)'. These cannot occur with VP topicalization:

- (ii) a. Beáta olvasni látszott.  
      Beáta read-INF seemed  
      'Beáta seemed to be reading.'
- b. \* [Olvasni], azt nem látszott Beáta.  
      read-INF that-ACC not seemed Beáta  
      'To read, Beáta did not seem to be doing that.'

Evaluative predicates	jó (adj)	'be good'
	butaság (n)	'be silly'

These predicates might differ as to whether their infinitival complement is a VP or an IP (see among others É.Kiss 1987, Kenesei 2001). Regardless of which complement they have, they can occur in VP topicalization as verb selecting the topicalized VP.

## 2.2. The syntax of VP topicalization I: locality

In this section we are going to illustrate the properties of Hungarian VP topicalization further. The aim of this section is to review arguments to the effect that VP topicalization is indeed a true topicalization strategy. Arguments to this effect will come from locality properties, which show that the VP topic behaves like ordinary contrastive topic elements: it can undergo (long distance) topicalization and just like ordinary contrastive topics, it reconstructs to the position of the gap internal to the finite clause.

Evidence for the topic nature of the VP phrase comes from locality properties that characterize multiply embedded constructions with these items. The behaviour VP topicalization shows is exactly the same as that of ordinary contrastive topicalization. First, let us consider the behaviour of ordinary DP contrastive topics in this domain. (17) illustrates that the topicalized item (marked with CT, short for contrastive topic) can occur higher than the clause which contains its pronominal double element if the intervening clause does not contain an island:

- 17) a. ? [CT A fiúkat], Péter hallotta, hogy azokat ingyen beengedik.  
           the boys-ACC Péter heard that those-ACC freely PV-admit-3PL  
           'The boys, Péter heard that they are admitted for free.'
- b. \* [CT A fiúkat], Péter hallotta a hírt, hogy azokat ingyen beengedik.  
           the boys-ACC Péter heard the news-ACC that those-ACC freely PV-admit-3PL  
           'The boys, Péter heard the news that they are admitted for free.'

The clear grammaticality contrast between the island-free (17)a example and the island-containing (17)b example shows that the topicalized phrase undergoes movement to the position it assumes in the higher clause.<sup>7</sup> The kind of movement it undergoes is topicalization, which can be shown by constructing an island configuration that is selective for topic constituents. So called presentational noun phrase islands are precisely this type: they are islands for A-bar moved constituents (focus or *wh*-items), but they let topics through (Lipták 2005). The fact that they let contrastive topic items through indicates that the this type of topics undergo movement across clauses.

- 18) ? [CT A fiúkat], volt koncert, [RC amire azokat ingyen beengedték].  
           the boys-ACC was concert REL-what-ONTO those-ACC freely PV-admitted-3PL  
           'The boys, there were concerts where they were admitted for free.'

When compared to these facts, VP topicalization behaves in a fully parallel manner in all respects. It can occur higher than the clause its resumptive double is found in, and it observes the same island constraints as DP contrastive topics. Observe the facts in (17) and (18) above, compared to the following examples:

- 19) a. ? [CT Gyorsan úszni], Péter hallotta, hogy azt nem tud Mari.  
           quickly swim-INF Péter heard that that-ACC not is.able Mari  
           'To swim quickly, Péter heard that Mari cannot do that.'
- b. \* [CT Gyorsan úszni], Péter hallotta a hírt, hogy azt nem tud Mari.  
           quickly swim-INF Péter heard the news-ACC that that-ACC not is.able Mari  
           'To swim quickly, Péter heard the news that Mari can do that.'
- 20) a. ? [CT Gyorsan úszni], volt uszoda, [RC ahol azt nem tudott Mari].  
           quickly swim-INF was swimming.pool REL-where that-ACC not was.able Mari  
           'To swim quickly, there were swimming pools where Mari could not do that.'

<sup>7</sup> The slightly marked nature of the sentences, indicated by ?, is due to the fact that the contrastive topic and the resumptive element are not adjacent. This effect characterizes all kinds of left dislocation constructions, including VP topicalization, in examples (18) and (20) as well.

This indicates that the VP topic can undergo topicalization across clauses, just like DP-topics in (17)-(18). The schematic structure of such topicalization is indicated in (21):

- 21)  $[_{CP2} [_{VP/IP}]_i (...)] [_{CP1} [\cancel{VP/IP}]_i azt \dots V [_{VP/IP} e_i ]]$

Is there a similar movement link between the gap position,  $[_{VP/IP} e_i]$  and the position the VP topic occupies in the lower clause? To find out, we have to turn to reconstruction effects. These are illustrated for Condition C effects in both simple and complex clauses:

- 22) a. \*  $[_{CT} János_i \text{ dícsérni } ]_i, azt \text{ szokta } pro_i [_{VP/IP} e_i ]$ .  
 János-ACC praise-INF that-ACC HABIT  
 'To praise János, he does that.'  
 b. \*  $[_{CT} János_i \text{ dícsérni } ]_i, azt \text{ } pro_i \text{ úgy gondolja, hogy szokta Mari}$ .  
 János-ACC praise-INF that-ACC so thinks that HABIT Mari  
 'To praise János, he thinks that Mari does that.'

In this respect, too, there is full parallel with normal DP contrastive topics, which also reconstruct in the same way:

- 23) a. \*  $[_{CT} Péter_i \text{ könyvét} ]_i, azt \text{ még nem } pro_i \text{ olvasta } e_i$ .  
 Péter book-POSS-ACC that-ACC still not read  
 'Péter's book, he did not yet read.'  
 b. \*  $[_{CT} Péter_i \text{ könyvét} ]_i, azt \text{ } pro_i \text{ úgy gondolja, hogy még}$   
 Péter book- POSS-ACC that-ACC so thinks that still  
 nem olvasta Mari  $e_i$ .  
 not read Mari  
 'Péter's book, he thinks that Mari did not yet read.'

While the simplex clause examples might not be very telling in the case of VP topicalization as the VP contains the trace/copy of the subject which can bind into the VP (Huang 1993), the example with complex clauses (22)b provides unambiguous evidence that the topic originates from the position of the gap indicated by  $e$  in (23). According to the evidence of locality effects, the topicalized VP originates from the position of the gap in the finite clause, where it reconstructs to at LF. Again, this behaviour is fully parallel to the observed behaviour of DP contrastive topics (cf. 23). DP and VP topicalization behave the same way when it comes to locality.

To summarize, this section has shown that the verb phrase in VP topicalization undergoes the same type of movement that takes place in contrastive topicalization of DP and PP material. This movement process is illustrated in (24). Here we marked the position of the VP topic as CT — the so-called contrastive topic phrase that accommodates contrastive topic constituents. This phrase is singled out in works by Molnár (1998) and Gyuris (2002, this volume, to appear) as a unique constituent in the left periphery:

- 24)  $[_{CT} [_{VP/IP}]_i \text{ azt } \dots V [_{VP/IP} e_i ]]$  [at LF]

### 2.3. The syntax of VP topicalization II: The syntactic role of the resumptive element

The structure we provided in (24) might serve as our final analysis of VP topicalization constructions, was it not for the pronominal double element *azt* 'that-ACC'. This element is standardly part of the structure of VP topicalization, and occupies a position to the right of the topicalized VP:

- 25)  $[_{Úszni}]_i, \{ \checkmark \text{ azt } \} \text{ nem tud } \{ * \text{ azt } \} \text{ Péter } \{ * \text{ azt } \}$ .  
 swim-INF that-ACC not is.able that-ACC Péter that-ACC  
 'To swim, Péter cannot do that.'

As (25) shows, *azt* needs to be left peripheral, in a position which we believe is an ordinary topic position, evidenced also by matters of pronunciation: *azt* is pronounced as an ordinary (non-contrastive) topic. Topics, just like contrastive topics are known to undergo movement in Hungarian (see, among others, É.

Kiss 1987, 1992), which must mean for the case at hand that *azt* is moved into the position it occupies in overt syntax. The question is, where does this movement originate from?

As we have established in section 2.2 above, the VP/IP in VP topicalization moves from its internal position to the left periphery of the clause, leaving behind a trace in the complement of the finite verb that selects the VP/IP. It lands in the left peripheral position, where we find it in overt syntax. The movement of the VP is thus well argued for. Let us see what the possible options for locating the pronominal double *azt* 'that-ACC' are.

Resumptive elements are associated with gaps in general (for a good overview of this kind of aspects of resumption see the article by Gervain this volume). A priori, their association with the gap can be of two kinds. In cases where the element they double is base-generated in a high position, the double can "stand in" its place and undergo movement, as shown in (26):

- 26) [XP] [ double<sub>i</sub> ... t<sub>i</sub>] base-generation of XP + movement of double

The other option is that their associate undergoes movement. In this case the doubles themselves are the spell-out of the trace that the moving element leaves behind:

- 27) [XP]<sub>i</sub> [ ... t<sub>i</sub>=double<sub>i</sub>] movement of XP + trace-spell-out by a double

The two structures differ in the way the XP comes to occupy its overt position: in the first scenario the XP is base-generated in a high position, in the second scenario, it undergoes movement.

As section 2.2 has shown, the facts of Hungarian VP topicalization are compatible with the second scenario only, as topicalized VPs are not base-generated in the left periphery. As was shown in examples (19)-(20), they undergo movement, according to the evidence of locality effects. This rules out the structure in (26) and leaves us with structure (27) for the analysis of VP topicalization. Next to locality effects, one finds a number of other arguments in support of (27), against (26). In a structure like (26), the double is generated in the gap position, the position where XP "belongs" internal to the clause. In Hungarian VP topicalization, however, *azt* cannot originate from such a structure, for various reasons. We will now review these in turn.

The first argument to the effect that the demonstrative double is not generated as complement of the verb comes from selectional properties of the verbs that allow for VP topicalization. As we mentioned above, the gap in VP topicalization is licensed by predicates that select for a verbal complement (an infinitive). A subset of predicates that allow for infinitival complements cannot take an accusative nominal complement, regardless of its size (full DP or pronominal).<sup>8</sup> Consider for example the predicate *hajlandó* 'willing':

- 28) a. Péter nem hajlandó együttműködni.  
Péter not willing co-operate-INF  
'Péter is not willing to co-operate.'
- b. Együttműködni, azt nem hajlandó Péter.  
co-operate-INF that-ACC not willing Péter  
'To co-operate, Péter is not willing to do that.'
- c. \* Péter nem hajlandó együttműködést / azt.  
Péter not willing co-operation-ACC / that-ACC  
'Péter is not willing to co-operate / do that.'
- d. \* Péter nem hajlandó együttműködni azt.  
Péter not willing co-operate-INF that-ACC  
'Péter is not willing to co-operate.'

<sup>8</sup> Another subset of these verbs can take a nominal, but only with another meaning, not the meaning they have when they take an infinitive:

- (i) a. Péter akar úszni.  
Péter wants swim-INF  
'Péter wants to swim.'
- b. Péter akar egy biciklit.  
Péter wants a bike-ACC  
'Péter wants a bike.'



The fact that such predicates as *hajlandó* cannot select an accusative DP complement, rules out an analysis in which the pronominal *azt* 'that-ACC' originates from the complement position of the predicate in the clause. As (28)d shows, such a nominal cannot originate from next to an infinitival, either, since a nominative complement cannot be selected together with the infinitival one, in the manner of the following subcategorization property:

29) \* V, [\_\_\_ VP/IP, DP]

This rules out any VP-internal position for the *azt* 'that-ACC' double, militating against the analysis of doubling as shown in the scenario of (26).

For reasons of completeness it has to be mentioned that while accusative DPs are excluded in the complement of predicates like *hajlandó*, DP complements with other, non-structural cases do exist with some of these predicates. *Hajlandó* for example can take a DP complement with sublativ case, as (30) shows:

- 30) Péter nem hajlandó az együttműködésre / arra.  
 Péter not willing the co-operation-ONTO / that- ONTO  
 'Péter is not willing to co-operate / to do that.'

Interestingly, some speakers find cases of VP topicalization involving a sublativ-marked demonstrative double also good:

- 31) %Együttműködni, arra nem hajlandó Péter.  
 co-operate-INF that- ONTO not willing Péter  
 'To co-operate, Péter is not willing to do that (while he might be willing to do something else).'

Other speakers, however, find these examples degraded. It seems that we are dealing with a dialectal or idiolectal split here: while the pattern with the accusative double (28) exists in the grammar of all speakers we consulted, (31) is more restricted.<sup>9</sup> Due to the varied judgements, we leave the analysis of these cases for further research.

A similar line of argumentation can be put forward about verbs that are compatible with both an infinitival and a nominative nominal complement. These verbs never select accusative marked objects. Consider for example the predicate *kell* 'must, have to, need to' or *jó* 'be good', which can both select an infinitival or a nominal complement:

- 32) a. Nem kell bíztatni Jánost. [infinitival complement]  
 not need encourage-INF János-ACC  
 'János does not need encouragement.'  
 b. Bíztatni Jánost, azt nem kell. [VP topicalization]  
 encourage-INF János-ACC that-ACC not need  
 'To encourage János, that is not needed.'  
 c. Nem kell a bíztatás / \*a bíztatást / \*azt. [nominal complement]  
 not need the encouragement-NOM / the encouragement-ACC / that-ACC  
 'Encouragement is not needed.'
- 33) a. Jó volt úszni. [infinitival complement]  
 good was swim-INF  
 'It was good to swim.'  
 b. Úszni, azt jó volt. [VP topicalization]  
 swim-INF that-ACC good was  
 'To swim, that was good to do.'

<sup>9</sup> Something that might influence the judgments is prosody. Speakers who do not find (31) grammatical with the prosody of ordinary topicalization find that the example improves if there is a pause between the infinitive and the resumptive element, a pause that is longer than the usual slight pause that might accompany contrastive topics in Hungarian:

(i) Együttműködni, # arra nem hajlandó Péter.  
 co-operate-INF that-ONTO not willing Péter  
 'To co-operate, Péter is not willing to do that (while he might be willing to do something else).'

Possibly, this kind of structure instantiates a different topicalization pattern, that of hanging topic dislocation.

- c. Jó volt az úszás / \*az úszást / \*azt. [nominal complement]  
 good was the swimming-NOM / the swimming-ACC / that-ACC  
 'Swimming was good.'

These examples show that the accusative marked *az* 'that' pronominal does not have its source as the complement of these verbs. If it did, it would have to show up with nominative case, contrary to facts. In VP topicalization this pronoun is always in the accusative.

Another argument against generating the pronominal as the argument in the finite verb concerns agreement properties. In Hungarian verbs that select a nominative object, always agree with this item in definiteness (cf. (34)a, (34)b). When a verb selects an infinitive, agreement morphology is indefinite (cf. (34)c):

- 34) a. Zsolt akart-Ø egy biciklit.  
 Zsolt wanted-INDEF a bike-ACC  
 'Zsolt wanted a bike.'  
 b. Zsolt akart-a azt / azt a biciklit.  
 Zsolt wanted-DEF that-ACC that-ACC the bike-ACC  
 'Zsolt wanted that / that bike.'  
 c. Zsolt akart-Ø úszni.  
 Zsolt wanted-INDEF swim-INF  
 'Zsolt wanted to swim.'

Some verbs that select a transitive infinitive obligatorily agree with the object of their infinitive complement: if the object of the infinitive is indefinite, we obligatorily get indefinite conjugation on the finite verb that selects the infinitive (cf. (35)a); if the object of the infinitive is definitive, we get definite conjugation on the selecting verb (cf. (35)b):

- 35) a. Zsolt nem akart-Ø meglátogatni egy beteget.  
 Zsolt not wanted-INDEF PV-visit-INF a patient-ACC  
 'Zsolt did not want to visit a patient.'  
 b. Zsolt nem akart-a meglátogatni Bélát.  
 Zsolt not wanted-DEF PV-visit-INF Béla-ACC  
 'Zsolt did not want to visit Béla.'

Interestingly, the agreement pattern in (35) remains the same under VP topicalization as well. The finite verb shows agreement with the object within the infinitival chunk that appears to be topicalized:

- 36) a. [Meglátogatni **egy beteget**], azt nem akart-Ø Zsolt.  
 PV-visit-INF a patient-ACC that-ACC not wanted-INDEF Zsolt  
 'To visit a patient, Zsolt did not want that.'  
 b. [**Bélát** meglátogatni], azt nem akart-a Zsolt.  
 Béla-ACC PV-visit-INF that-ACC not wanted-DEF Zsolt  
 'To visit Béla, Zsolt did not want that.'

This rules out a structure in which the pronominal double, *azt*, is itself the argument of the finite verb. If it were, the finite verb would have to agree with this item, just like it does with its own object argument in (34). The fact that the verb instead agrees with an object inside its complement shows that the pronominal *azt* is not one of its complements.<sup>10</sup>

<sup>10</sup> Marcel den Dikken (p.c.) has pointed out to us that these facts provide argument against an analysis that treats agreement in (35)a,b as indicative of restructuring in Hungarian — as does e.g., den Dikken (2004). The reason is that restructuring is known to be unavailable with displaced infinitives in languages, as is evidenced by the lack of IPP effects in Dutch, for example. IPP (*infinitivus pro participio*) stands for cases in which an expected participle in the perfect is replaced with a bare infinitive (marked with bold) (i)a, in restructuring constructions. When the VP is topicalized, the IPP effect is no longer present, compare (i)b and (i)c:

- (i) a. Jan heeft nog niet **proberen** te slapen.  
 Jan has yet not try-INF to sleep-INF  
 'Jan has not tried to sleep yet.'  
 b. \*[**Proberen** te slapen], dat heeft Jan nog niet.

To take stock, the facts reviewed in this section, taken together with the argumentation in section 2.2 provide unambiguous evidence that the representation in (26) cannot be on the right track for Hungarian VP topicalization:

26) \*[VP/IP]<sub>i</sub> [ *azt*<sub>i</sub> ... *t*<sub>i</sub> ]

The pronominal double *azt* 'that-ACC' does not originate in argument position in these structures. This favours the other scenario instead, as in the following:

37) [VP/IP]<sub>i</sub> [ ... [ ... V ... *t*<sub>i</sub>=*azt*<sub>i</sub> ] ]

According to this analysis, the VP/IP constituent undergoes movement to the left peripheral position of contrastive topics and its trace is spelled out as the pronominal double *azt*. The only modification we have to make to this is the position where the resumptive element spells out the trace of the VP/IP. Since in Hungarian we never find this pronominal double in the original position of the VP/IP, trace spell-out affects a trace within the topic domain:

38) [VP/IP]<sub>i</sub> [<sub>TopP</sub> *t*<sub>i</sub>=*azt*<sub>i</sub> [ ... V ... *t*<sub>i</sub> ] ]

This is a reasonable claim since the lower copy in the position of the gap is never spelled out by any overt material. The question that remains to answer is why it is the higher copy that spells out in the topic domain. The answer to this question comes from Grohmann (2003), who argues that in some left dislocation constructions this is indeed the case and for a reason. We turn to this in the next section.

#### 2.4. The analysis of Hungarian VP topicalization: copy spell out due to anti-locality

The structure we arrived at in (38) is the only logical possibility for the analysis of VP topicalizations in Hungarian. Interestingly, structures like this one have been proposed for left dislocation constructions, most notably by Grohmann (2003) and other works in its wake.<sup>11</sup> The original proposal in Grohmann (2003) provided the structure in (38) for German contrastive left dislocation constructions, like the one in (39).<sup>12</sup>

39) Diesen Satz, den mag ich besonders.  
       this-ACC sentence that-ACC like I especially  
       'This sentence, [it] I like especially.'

According to Grohmann, the high topic *diesen Satz* 'this sentence' undergoes movement (evidenced by locality effects, not illustrated here). During its movement it raises from the argument domain (from its IP/TP-internal position) into the discourse domain, targeting two positions in a split CP system: that of TopP and later, an even higher position, which we can call the left dislocated position (marked as LD):

40) [<sub>LD</sub> [DP]<sub>i</sub> [<sub>TopP</sub> [DP]<sub>i</sub> ... [<sub>IP</sub> ... [DP]<sub>i</sub> ] ] ]

This movement is welcome to leave the gap in the IP-internal position, but it cannot leave the trace in its phonetically empty form in TopP, Grohmann argues. This is because both the copy in TopP and that in LD fall in the same prolific domain, where prolific domain is understood as a partitioning of the sentence

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try-INF to sleep that has Jan yet not  
 'To try to sleep, Jan has not done that yet.'  
 c. [**Geprobeerd** te slapen], dat heeft Jan nog niet.  
    tried to sleep-INF that has Jan yet not  
    'To try to sleep, Jan has not done that yet.'

<sup>11</sup> See, among others, Grohmann and Haegeman (2003) on possessor doubling in the DP, Grohmann and Panagiotidis (2004) on determiner doubling in the DP, Grohmann and Nevins (2005) on echo-reduplication in the left periphery, and Ticio (2003) on the structure of DPs.

<sup>12</sup> This analysis is most presumably also the right one for Hungarian DP left dislocations. In those, as we have shown in section 2.2 above, the DP undergoes reconstruction to the gap position inside the clause at LF. This rules out an analysis in which it is the resumptive element that originates from this gap position. We leave the details of this for further research.

according to its function. There are three prolific domains in a clause: a theta domain (VP and its arguments), and agreement domain (licensing agreement properties) and a discourse domain (pertaining to discourse information). Any syntactic object that occurs in one or the other domain needs to be exclusively represented in that domain at both PF and LF, according to the *Condition on Domain Exclusivity*.<sup>13</sup> This condition rules out multiple occurrences of the same item in a given domain. This has as its consequence that movement, understood in terms of copy and deletion (Chomsky 1995, Nunes 2004), is ruled out if it is too local, i.e. if it takes place within the same domain.

With this theory in mind, we can understand what the source of the pronominal double is in the German (39). Both TopP and LD being in the same discourse domain, movement from one position to the other is ruled out unless a PF-driven well-formedness operation applies to the lower copy. This PF operation changes the lower of the two copies thereby saving the derivation from crashing. The result is that the copy in TopP is spelled out as a pronominal and not a full copy of the DP:

- 41) [LD [DP]<sub>i</sub> [TopP [DP]<sub>i</sub> ⇒ **den** ... [IP ... [~~DP~~]<sub>i</sub> ]]]

We want to argue that the same kind of copy-spell-out mechanism is also available in VP topicalization structures and this is exactly what we find in Hungarian. In the Hungarian case, the topicalized VP undergoes movement, and it lands twice in the higher discourse domain. Due to the violation of domain exclusivity, the derivation needs to be salvaged by a copy-spell out process that changes the form of the VP into a pronoun. The whole derivation is shown in (42):

- 42) [CT [VP]<sub>i</sub> [TopP [VP]<sub>i</sub> ⇒ **azt** ... [IP ... [~~VP~~]<sub>i</sub> ]]]

While such a Grohmann-type analysis fits the Hungarian facts of VP topicalization like a glove, it leaves some questions to be answered. Why is it a (pro)nominal constituent that doubles the topicalized VP as the spell-out of the lower copy of the VP in TopP? Second, why does it have accusative case?

Concerning the category status of the double, the nominal nature of this constituent is far from strange. First of all, Hungarian, like many other languages, lacks non-nominal *pro*-VPs and other *pro*-predicates. Instead it uses nominal ones. Next to verbal predicates, adjectival predicates also associate with pronominals like *az* in Hungarian (cf. 43).

- 43) Álmos, *az* nem szokott lenni Béla.  
sleepy that not HABIT be Béla  
'As for being sleepy, Béla is usually not sleepy.'

This recalls the behaviour of topicalized predicative constituents, which also take demonstrative doubles in other languages, too (cf. 44), (Rullman & Zwart 1996):

- 44) Een echte soldaat, *dat* doet zoiets niet. [Dutch]  
a real soldier that does something.like.that not  
'A real soldier, he does not do such kind of things.'

These *az/dat* pronominals are nominals that resume predicates. For the case of VP topicalization, we can find even further pieces of evidence for the nominal nature of the double, when we consider the fact that Hungarian infinitives are nominal in nature (É.Kiss 2002, Tóth 2000): they have features associated with nominal constituents, for example, they can be inflected with the same inflectional morphology as possessed nouns. For this reason it is to be expected that the double of an infinitive is instantiated by a (pro)nominal category.

Given the nominal nature of the double, the presence of some kind of case morphology is expected: nominals have to have case. Concerning the type of case that appears on the pronominal double, things are a bit less evident. The question is why this morphology is accusative case morphology, and why we do not find nominative, dative or some inherent case morphology for example. We believe the accusative case on the double of VP topics is an instantiation of *default* case. It shows up as a default case

<sup>13</sup> The precise definition is given in (i):

(i) Condition on Domain Exclusivity

For a given Prolific Domain, an object in the phrase marker must receive an exclusive interpretation at the interfaces unless duplicity of the object yields a drastic effect on the output of that Prolific Domain.

morphology of *az*, an item in the high left periphery. We believe this default accusative case characterizes elements that are base-generated (also in the sense of spelled-out) in the left periphery. Interestingly, the *az* pronominal associated with topicalized VPs is not the only instance of such default case marking. In another context we also find such a default accusative case on a left peripheral item: the *wh*-form of rhetorical/exclamative questions illustrated in (45).

- 45) a. Mit érdekli ez Pétert?  
       what-ACC interests-DEF this Péter-ACC  
       lit. What does this interest Péter? 'This doesn't interest Péter at all!'  
       b. \*Érdekli ez Pétert mit?  
           interests-DEF this Péter-ACC what-ACC

The *wh*-item *mit* is the spell-out of the rhetorical question operator that provides the sentence with a rhetorical meaning. As such, *mit* 'what' can only appear in the left periphery (in the focus position of the sentence), shown in (45)b. This item, just like the pronominal double *az* in VP topicalization can only appear with accusative case morphology. Next to being necessarily left peripheral and having obligatory accusative case, there is one further important parallel between the *mit* of rhetorical questions and the *azt* of VP topics. Neither shows definiteness agreement with the main predicate (cf. section 2.3. above). Definiteness agreement in (45) obtains with the real object argument of the verb, *Pétert* 'Péter-ACC', and not with *mit* 'what-ACC', which, being an indefinite phrase, should trigger indefinite conjugation on the verb. On the basis of these parallels we argue that — as far as case morphology is concerned — we are dealing with default accusative case in both cases. We adduce that this kind of default accusative case is available in the left periphery only.<sup>14,15</sup>

### 3. Spanish VP topicalization

The previous section established that the Hungarian double *azt* is actually the spell out of the trace of the moved element, motivated by anti-locality reasons. In what follows, we will see that this analysis is not extensible to Spanish. The properties of doubling in this language suggest that *eso* 'that' is generated as a constituent together with the topic, and then stranded when the latter is fronted.

#### 3.1. Pied-piping and stranding

In Spanish, it is necessary to front a full VP. It is not possible to front only the verb and leave its complements behind. This is shown in (46) for a regular transitive verb and in (47) for a ditransitive predicate.<sup>16</sup>

- 46) a. \* Visitar, María suele hacer eso a Ana.

<sup>14</sup> Hungarian does not have constructions of the type (ia-d), which were argued to contain default case on the underlined constituents in (Schütze 2001).

- (i) a. Her cheat on you? Never!  
       b. Her in New York is what we must avoid.  
       c. Him tired, they decided to camp for that night.  
       d. Me, I like beans.

Similar data can thus not be provided for the default nature of accusative in Hungarian.

<sup>15</sup> There is yet another context in Hungarian where accusative case shows up in a configuration where it seems to have no syntactic source. It can be found on measure phrases, consider (i):

- (i) Mari olvasta egy kicsit a könyvet.  
       Mari read-DEF a bit-ACC the book-ACC  
       'Mari read the book a bit.'

The accusative marked measure phrase does not agree with the verb in definiteness either as can be seen in the glosses. Measure phrases are distinct from pronominal *az* VP-doubles in that they need not be left peripheral elements. Due to their cross-linguistically wide-spread nature (see Csirmaz 2006 and references cited there) this case morphology is presumably not default.

<sup>16</sup> This restriction contrasts with the predicate clefting construction (aka verb copying), in which both V and VP fronting are possible. In this article, though, we will not deal with this type of sentences. The interested reader is referred to Vicente (2007) for a detailed analysis.

- (i) a. Leer, Juan suele leer ciertos libros  
       read Juan HABIT read certain books  
       'As for reading, Juan usually reads books.'  
       b. Leer ciertos libros, Juan suele leerlos  
       read certain books Juan HABIT read-CL  
       'As for reading certain books, Juan usually reads them.'

- visit María HABIT do-INF that to Ana  
'To visit Anna, María usually does that.'
- b. \* Leer, Juan suele hacer eso libros.  
read Juan HABIT do-INF that books  
'To read books, Juan usually does that.'
- 47) a. Regalarle libros a María, Juan suele hacer eso.  
give-CL books to María Juan HABIT do-INF that  
'To give books to María, Juan usually does that.'
- b. \* Regalarle, Juan suele hacer(le) eso libros a María.  
give-CL Juan HABIT do-INF-CL that books to María  
'To give books to María, Juan usually does that.'
- c. \* Regalarle a María, Juan suele hacer(le) eso libros.  
give-CL to María Juan HABIT do-INF-(CL) that books  
'To give books to María, Juan usually does that.'

The ban against stranding seems to be falsified by data like the following, in which a verbal complement is left behind.

- 48) a. ? Visitarla, Juan suele hacerle eso a María.  
visit-INF-CL Juan HABIT do-INF-CL that to María  
lit. 'To visit (her), Juan usually does that to María.'
- b. ✓ Regalarle libros, Juan suele hacerle eso a María  
give-INF-CL books Juan HABIT do-INF-CL that to María  
lit. 'To give (her) books, Juan usually does that to María.'

We don't think, though, that (48) are genuine counterexamples. Our claim here is that the 'stranded' argument is not associated to the fronted predicate, but rather to the higher, embedding verb. Thus, in both examples in (48), *a María* is an argument of *hacer* 'to do', which can independently select for an optional dative argument. This analysis is confirmed by the observation that such stranding is not possible with other embedding verbs (such as *permitirse* 'to afford') that do not select dative arguments.

- 49) a. Regalarle libros a María, Juan no puede permitirse eso.  
give-INF-CL books to María Juan not can afford-INF that  
'To give books to María, Juan cannot afford that.'
- b. \* Regalarle libros, Juan no puede permitirse eso a María.  
give-INF-CL books Juan not can afford-INF that to María  
lit. 'To give books to María, Juan cannot afford that to María.'

In fact, this type of 'stranding' is possible for *any* argument of the fronted VP, but only as long as it can be introduced by a suitable preposition as a dependent of the embedding verb.

- 50) Leer, Juan suele hacer eso **con** los libros.  
read-INF Juan HABIT do-INF that with the books  
'To read, Juan usually does that with the books.'

The same restriction holds for adverbials. At first sight, it might appear as though they can be stranded, as in the examples in (51). However, under closer examination, it turns out that these examples are analogous to (48) and (50) above — i.e., the adverb is constructed as modifying the upper verb *hacer* 'to do', rather than the fronted one. Again, confirmation for this position comes from example (52)b, where the only possible interpretation is one in which the embedding verb *permitir* 'to allow' is modified by the adverbial *sin modales* 'without manners'. This contrasts with (52)a, which does allow the 'sensible' reading in which it is the eating (and not the allowing) that is done without manners.

- 51) a. Escribir cartas, Juan suele hacer eso con pluma.  
write-INF letters Juan HABIT do-INF that with fountain pen  
'To write letters, Juan usually does that with a fountain pen.'
- b. Comer, Juan suele hacer eso sin modales.  
eat-INF Juan HABIT do-INF that without manners

'To eat, Juan usually does that without table manners.'

- 52) a. Comer sin modales, Juan nunca nos permitiría eso.  
eat-INF without manners Juan never CL allow that  
'To eat without table manners, Juan would never allow us to do that.'
- b. Comer, Juan nunca nos permitiría eso sin modales.  
eat-INF Juan never CL allow that without manners  
'To eat, Juan would never allow us to do that without table manners.'

The same point can be illustrated with idioms. If the verb and the optional modifier form an idiom, the idiomatic reading is only preserved if the modifier is pied-piped along with the verb. This follows if we take the 'stranded' part of the idiom to be composed with the embedding verb, rather than with the fronted part of the idiom.<sup>17</sup>

- 53) a. Levantarse con el pie izquierdo, Juan suele hacer eso.  
get.up-INF with the foot left Juan HABIT do-INF that  
✓ 'Juan usually gets up on his left foot first.'  
✓ 'There are a lot of days when nothing comes out right for Juan.'
- b. Levantarse, Juan suele hacer eso con el pie izquierdo.  
get.up-INF Juan HABIT do-INF that with the foot left  
✓ 'Juan usually gets up on his left foot first.'  
\* 'There are a lot of days when nothing comes out right for Juan.'

Finally, the ban on stranding also accounts for the fact that example (54)a, which cannot be interpreted as Juan using the oven to cook salmon. It only has the odd reading in which Juan himself is inside the oven while cooking the salmon. This sentence is compatible with a situation in which the salmon is not actually oven-cooked (but, for instance, grilled, if the grill happens to be located inside the oven as well). The missing 'sensible' reading would be present if (54) were a *bona fide* case of stranding — compare to (54)b and (54)c, where such reading is allowed. However, since stranding is not possible, the only way to derive (54) is to construct the adverbial *en el horno* 'in the oven' as a modifier of the upper verb *hacer* 'to do'. Consequently, it takes scope over the lower (fronted) predicate, resulting in the observed odd reading.

- 54) a. # Cocinar salmón, Juan suele hacer eso en el horno.  
cook-INF salmon Juan HABIT do-INF that in the oven  
'To cook salmon, Juan usually does that in the oven.'
- b. Cocinar salmón en el horno, Juan suele hacer eso.  
cook-INF salmon in the oven Juan HABIT do-INF that  
'To cook salmon in the oven, Juan usually does that.'
- c. Juan suele cocinar salmón en el horno.  
Juan HABIT cook-INF salmon in the oven  
'Juan usually cooks salmon in the oven.'

To summarize, we propose to capture the paradigms above under the following generalization.

55) *No stranding*

In the Spanish doubling construction, no constituent internal to the fronted predicate may be stranded. Apparent cases of stranding are actually derived by merging the 'stranded' constituent to the upper predicate.

Why should this generalization hold? It is also interesting to note that the fronted extended predicate can contain *wh*-words. Note that these necessarily appear at the edge of the predicate, suggesting that they

<sup>17</sup> This difference between VP and V topicalization characterizes the parallel Hungarian cases as well:

- (i) Bakot löni, azt szokott Péter.  
goat-ACC shoot-INF that-ACC HABIT Péter  
✓To shoot a goat, Péter does that sometimes. / ✓ To make a mistake, Péter does that sometimes.'
- (ii) Löni, Péter bakot lött.  
shoot-INF Péter goat-ACC shot  
✓To shoot a goat, Péter did that. / \* To make a mistake, Péter did that.'

have undergone movement. Further, these examples require that the fronted predicate be selected by a verb that independently selects for an embedded interrogative (we will return to this last point in the next subsection).

- 56) a. Cómo colarse en el tren, Juan quiere saber eso.  
 how smuggle-INF in the train Juan wants know-INF that  
 'How to get in the train without getting a ticket, Juan wants to know that.'  
 b. \* Colarse en el tren cómo, Juan quiere saber eso.  
 smuggle-INF in the train how Juan wants know-INF that  
 'How to get in the train without getting a ticket, Juan wants to know that.'
- 57) a. Qué vino llevar a la fiesta, Juan no pudo decidir eso.  
 what wine take-INF to the party Juan not can decide-INF that  
 'Which wine to bring to the party, Juan couldn't decide that.'  
 b. \* Llevar a la fiesta qué vino, Juan no pudo decidir eso.  
 take-INF to the party what wine Juan not can decide-INF that  
 'Which wine to bring to the party, Juan couldn't decide that.'
- 58) a. Cuando irse de vacaciones, Juan no pudo decidir eso.  
 when go-INF of holiday Juan not can decide-INF that  
 'When to go on holiday, Juan couldn't decide that.'  
 b. \* Irse de vacaciones cuándo, Juan no pudo decidir eso.  
 go-INF of holiday when Juan not can decide-INF that  
 'When to go on holiday, Juan couldn't decide that.'

However, what is *not* possible is for a *wh*-expression to move out of the lower predicate, and then for the latter to undergo remnant topicalization. An example of this type of derivation is given in (59)a, which is ungrammatical even though its non-fronting counterpart (59)b is fine. This restriction is captured in the generalization in (60), which subsumes (55):

- 59) a. \* [Llevar a la fiesta *t*] ¿qué vino decidió Juan eso?  
 take-INF to the party what wine decided Juan that  
 'Which wine did Juan decide to take to the party?' [intended]  
 b. ✓ ¿Qué vino decidió Juan [llevar a la fiesta *t*]?  
 what wine decided Juan take-INF to the party  
 'Which wine did Juan decide to take to the party?'

60) *Islandhood in the doubling construction*

Predicates doubled by a pronoun are islands for movement.

### 3.2. Embedding verbs

In section 2.2, we saw that Hungarian fronted predicates had to be selected by a higher verb (an auxiliary or a modal), which we refer to as the embedding verb. At first sight, this also seems to be the case for Spanish. Nonetheless, an immediate complication comes from the fact that the range of embedding verbs in Spanish is much larger than in Hungarian: all sorts of lexical verbs can function as embedding verbs, as we shall see below. The question is what the common property of all these verbs is. The idea we want to defend here is that all of them can take a nominal complement. Thus, we propose the following descriptive generalization (which will nonetheless be refined in section 3.3).

61) *Spanish doubling under VP fronting (first version)*

A fronted predicate in Spanish can be doubled by a demonstrative iff the embedding verb can independently select for a nominal complement.

This is a rather surprising generalization, since it implies that the doubling demonstrative is the actual internal argument of the finite verb. Nonetheless, we shall see in the rest of this section that there is quite some evidence in support of it. The great majority of embedding verbs are rather uninformative in this respect, since they can select for both an embedded VP and a nominal constituent. We exemplify this ambiguity here with *permitirse* 'to afford'. Other verbs that behave in the same way are *probar* (a) 'to try



out', *decidir* 'to decide', *obsesionarse (con)* 'to get obsessed (with)', *saber* 'to know', *preguntarse* 'to wonder', or *preocuparse (de)* 'to worry (about)'.<sup>18</sup>

- 62) a. Irse de vacaciones al Caribe, Juan no puede **permitirse** eso.  
go-INF of holiday to.the Caribbean Juan not can afford-INF that  
'To go on holiday to the Caribbean, Juan cannot afford that.'  
b. Juan no puede **permitirse** eso / irse de vacaciones al Caribe.  
Juan not can afford-INF that go-INF of holiday to.the Caribbean  
'Juan cannot afford that / going on holiday to the Caribbean.'

The interesting cases are those verbs that select for one category but not the other. As shown below, *hacer*, 'to do', *pasar* 'to happen', and *cometer* 'to carry out' can all select for a DP complement, but not for a VP.<sup>19</sup>

- 63) a. Juan quiere **hacer** eso.  
Juan wants do-INF that  
'Juan wants to do that.'  
b. \* Juan quiere **hacer** leer un libro.  
Juan wants do-INF read-INF a book  
'Juan want to read a book.'  
64) a. Juan no quiere que le **pase** eso.  
Juan not wants that CL happens that  
'Juan doesn't want that to happen to him.'  
b. \* Juan no quiere que le **pase** suspender el examen.  
Juan not wants that CL happens fail the exam  
'Juan doesn't want to fail the exam.'  
65) a. Juan no ha **cometido** ese crimen.  
Juan not has carried.out that crime  
'Juan hasn't carried that out.'  
b. \* Juan no ha **cometido** robar el banco.  
Juan not has carried.out rob-INF the bank  
'Juan hasn't robbed the bank.'

In spite of this restriction, these verbs are perfectly licit in the doubling construction.

- 66) a. Leer un libro, Juan quiere **hacer** eso.  
read-INF a book Juan wants do-INF that  
'To read a book, Juan wants to do that.'  
b. Suspender el examen, Juan no quiere que le **pase** eso.  
fail-INF the exam Juan not wants that CL happens that  
'To fail the exam, Juan doesn't want that to happen to him.'  
c. Robar el banco, Juan no ha **cometido** ese crimen.  
rob-INF the bank Juan not has carried.out that crime  
'To rob the bank, Juan hasn't carried that out.'

The reverse effect also holds. Modals like *poder* 'can/be able' and *soler* 'habitual' select a VP, but not a nominal complement.

- 67) a. Juan **puede** irse de vacaciones.  
Juan can go-INF of holiday  
'Juan can go on holiday.'

<sup>18</sup> Note that this is by no means an exhaustive listing.

<sup>19</sup> An idiosyncrasy of *cometer* is that it requires its nominal complement to denote a criminal or immoral activity. For that reason, sentences with a bare demonstrative are generally judged odd, unless the context clearly supplies the demonstrative with the appropriate denotation. We ignore this aspect, since it is a matter of selectional restrictions at the semantic, not syntactic, level (i.e., it would be parallel to the deviance of sentences in which *think* takes a non-sentient subject). To avoid this inference, we have used full DPs instead of demonstrative, even though this disrupts the exact minimal pairs.

- b. \* Juan **puede** eso.  
 Juan can that  
 'Juan can do that.'
- 68) a. Juan **suele** ir al cine los domingos.  
 Juan HABIT go-INF to the cinema the Sundays  
 'Juan usually goes to the movies on Sundays.'
- b. \* Juan **suele** eso.  
 Juan HABIT that  
 'Juan usually does that.'

However, in spite of selecting for a VP, these verbs *cannot* appear in the VP doubling construction.

- 69) a. \* Irse de vacaciones, Juan **puede** eso.  
 go-INF of holiday Juan can that  
 'To go on holiday, Juan can do that.'
- b. \* Ir al cine los domingos, Juan **suele** eso.  
 go-INF to.the movies the Sundays Juan HABIT that  
 'To go to the movies on Sundays, Juan usually does that.'

The only way in which these examples can be salvaged is by having these verbs select another verb that can itself embed a nominal.

- 70) a. Irse de vacaciones, Juan **puede** hacer / decidir / permitirse eso.  
 go-INF of holiday Juan can do-INF decide-INF afford-INF that  
 'To go on holiday, Juan can do/decide/afford that.'
- b. Ir al cine, Juan **suele** hacer / pensar en / apuntarse a eso.  
 go-INF to.the cinema Juan HABIT do-INF think-INF in join-INF to that  
 'To go to the movies, Juan usually does/thinks about/joins in that.'

In short, all these data show that doubles are only allowed in places where regular DPs are also allowed. Thus, we find support for the generalization in (61), and its theoretical implication: in the doubling construction, it is the doubling demonstrative — and not the fronted VP — that is the real argument of the verb. As a final indication that the double is a real argument, consider verbs whose complement is headed by a preposition. For these verbs, *eso* can only replace the complement of the preposition (71)a/(71)b. As shown in (71)c, it is ungrammatical for the preposition to be pied-piped. This follows if *eso* is not the spell out of a trace (as in Hungarian), but an actual DP selected by a higher head. This restriction follows from our hypothesis, since *soñar* 'to dream' does not select a DP: it is the preposition that can select a DP and, by extension, the pronominal double.<sup>20</sup>

- 71) a. Juan ha soñado \*(con) irse de vacaciones.  
 Juan has dreamed with go-INF of holiday  
 'Juan has dreamed with going on holiday.'
- b. Irse de vacaciones, Juan ha soñado con eso.  
 go-INF of holiday Juan has dreamed with that  
 'To go on holiday, Juan has dreamed about that.'
- c. \* Con irse de vacaciones, Juan ha soñado eso.  
 with go-INF of holiday Juan has dreamed that  
 'About going on holiday, Juan has dreamed that.'

### 3.3. More on embedding verbs

The conclusion of the previous section was that the fronted VP is not a real argument of the verb. Rather, the double is the argument and (as we shall argue in section 3.7) it associates with the doubled VP as its predicate. However, as already put forward in the previous section, this does not mean that *any* verb that

<sup>20</sup> Intriguingly, it is marginally possible to repeat the preposition, as in (i). We do not have anything interesting to say about this example.

i) ? Con irse de vacaciones, Juan sueña con eso  
 with go-INF of holiday Juan dreams with that

can take a nominal complement can also appear in the doubling construction.<sup>21</sup> For instance, *comer* ‘to eat’ does take a nominal complement, but in spite of this, it cannot appear in the doubling construction.

- 72) a. Juan ha comido eso.  
       Juan has eaten that  
       ‘Juan has eaten that.’  
       b. \* [Ponerse gordo], Juan ha comido eso.  
           put-INF fat Juan has eaten that  
           ‘To put on weight, Juan has eaten that.’

Intuitively, (72)b is ungrammatical because there is no way in which *to put on weight* can be interpreted at LF as the complement of *to eat*. In order to formalize this idea, we want to build on the observation that fronted VPs consistently denote propositions. If so, (72)b is out simply because *to eat* does not take proposition-denoting complements. Thus, we propose to augment (61) to (73), whose second clause correctly excludes (72)b.<sup>22</sup>

73) *Pronominal doubling in Spanish (final)*

A fronted verbal predicate in Spanish can be doubled by a demonstrative pronoun iff both

- a. the embedding verb can select for a nominal complement
- AND
- b. the embedding verb can select for a propositional complement

There are other cases in which the semantic restrictions of the embedding verb are reflected in the fronted predicate. For instance, *decidir* ‘to decide’ selects for a non-stative predicate. The contrast below shows that this requirement is preserved in the doubling construction.

- 74) a. Juan ha decidido aprender / \* saber francés.  
       Juan has decided learn-INF know-INF French  
       ‘Juan has decided to learn/know French.’  
       b. Aprender / \* saber francés, Juan ha decidido eso  
           learn-INF know-INF French Juan has decided that  
           ‘To learn/know French, Juan has decided that.’

Similarly, the verb *preguntarse* ‘to wonder’ selects for an interrogative complement. Again, this contrast is preserved in the doubling construction.

- 75) a. Juan se pregunta quién se ha bebido el vino.  
       Juan SE wonders who SE has drunk the wine  
       ‘Juan wonders who has finished the wine.’  
       b. \* Juan se pregunta que María ha leído un libro.  
           Juan SE wonders that María has read a book  
           ‘Juan wonders that María has read a book.’  
       c. Quién se ha bebido el vino, Juan se pregunta eso.  
           who SE has drunk the wine Juan SE wonders that  
           ‘Who has drunk the wine, Juan wonders (about) that.’  
       d. \* Que María ha leído un libro, Juan se pregunta eso.  
           that María has read a book Juan SE wonders that  
           ‘That María has read a book, Juan wonders (about) that.’

Cases like these can be seen as refinements of the second clause of (73) — namely, since the double is anaphoric to the fronted predicate, the derivation will crash if the fronted predicate (and, by extension, the double) is not semantically compatible with the embedding verb. In (73)b, we make reference to propositionality as an overarching prerequisite in the doubling construction, but, as (74) and (75) show, it also holds for more specific requirements (stativity, illocutionary force...). This hypothesis is supported

<sup>21</sup> We would like to thank Judit Gervain (p.c.) for bringing this issue to our attention.

<sup>22</sup> Note that this generalization is independent of the specific way in which this type of selection should be implemented (i.e., the Grimshaw/Pesetsky debate in the 1980s, based on *wonder* vs. *ask*, on the role of c-selection and s-selection).

by the observation that such restrictions hold also in cases when the embedding verb does not select a VP. As we saw earlier, *hacer* 'to do' is one such verb (63). In the doubling construction, though, *hacer* behaves like *decidir* in that it requires the doubled predicate to be non-stative.

- 76) Aprender / \* saber francés, Juan quiere hacer eso.  
 learn-INF know-INF French Juan wants do-INF that  
 'To learn/know French, Juan wants to do that.'

This looks like a paradox, since *hacer* itself does not select for an embedded VP, so it is implausible that it should impose any requirements on fronted VPs. Yet the requirement exists, and it can be made sense of if we accept that the double is anaphoric to the fronted predicate. In (76), *saber* 'to know' is a stative verb, therefore, the double is also interpreted as stative. Given that *hacer* 'to do' cannot take a stative complement, the ungrammaticality of the *saber* version follows, in exactly the same way as the ungrammaticality of (72), (74), and (75).

### 3.4. Agreement on the double

In Spanish, doubling with *eso* is not restricted to VPs and finite clausal complements. DPs can also appear in this construction. Some examples are given below. Note that there are no definiteness/specificity restrictions. Bare plurals and generics are also fine.

- 77) a. La bicicleta, me han robado eso.  
 the bike CL have stolen that  
 'My bike, I've had that stolen.'  
 b. Un billete de 100 euros, a nadie le gustaría perder eso.  
 a bill of 100 euro to nobody CL like lose-INF that  
 'A 100 euro bill, nobody would like to lose that.'  
 c. Libros de historia, Juan quiere leer eso.  
 books of history Juan wants read-INF that  
 'History books, Juan wants to read that.'  
 d. La carne de vaca, a los perros les gusta eso.  
 the meat of cow to the dogs CL like that  
 'Cow meat, dogs like that.'

Doubling of DPs is intriguing, in that the demonstrative can agree in gender and number with the fronted DP, unlike what happens with VPs. Thus, both the agreeing and the non-agreeing form in the examples below are grammatical.

- 78) a. La torre de Pisa, eso / esa nos gustó mucho.  
 the tower of Pisa that.NEUT that.FEM us liked a lot  
 'The tower of Pisa, we liked that a lot.'  
 b. El libro de Juan, he comprado eso / ese.  
 the book of Juan have bought that.NEUT that.MASC  
 'Juan's book, I've bought that.'  
 c. Las rimas de Bécquer<sup>23</sup>, eso / esas nos gustaron mucho.  
 the rhymes of Bécquer that.NEUT those.FEM us liked a lot  
 'Bécquer's rhymes, we liked those a lot.'  
 d. Los sonetos de Shakespeare, eso / esos nos gustaron mucho.  
 the sonnets of Shakespeare that.NEUT those.MASC us liked a lot  
 'Shakespeare's sonnets, we liked those a lot.'

The examples have different interpretations, though, depending on whether the agreeing or non-agreeing form is used. In (78)a, if the non-agreeing form is used, the tower of Pisa can be contrasted with anything (say, French wine, Stonehenge, etc). On the other hand, if it is the agreeing form that is used, then the

<sup>23</sup> Becquer, Gustavo Adolfo (1836-1870), one of the top exponents of Spanish romantic poetry. He is also known as a writer of short stories.

tower of Pisa can only be contrasted with other towers. As an example, consider the follow-ups in (79)b and (79)c.

- 79) a. La torre de Pisa, esa nos gustó mucho.  
       the tower of Pisa that.FEM us liked a lot  
       'The tower of Pisa, we liked that a lot.'
- b. En cambio, la torre Eiffel no.  
       on the other hand the tower Eiffel not  
       'On the other hand, the Eiffel tower wasn't so great.'
- c. # En cambio, la Capilla Sixtina no.  
       on the other hand the chapel Sistine not  
       'On the other hand, the Sistine Chapel wasn't so great.'

We would like to claim that this effect is linked to the way in which one can determine what real world entity the pronominal double refers to. Note, to begin with, that the examples above are given without any context. In contrast, the equivalent examples in (80) are given in a context that establishes 'Italian architecture' as the referent of the double. Under these conditions, (79)c becomes felicitous.

- 80) a. ¿Qué pensáis de las [obras arquitectónicas]<sub>FEM</sub> de Italia?  
       what think of the works architectonic of Italy  
       'What is your opinion about Italy's architecture?'
- b. La torre de Pisa, esa nos gustó mucho.  
       the tower of Pisa that.FEM us liked a lot  
       'The tower of Pisa, we liked that a lot.'
- c. En cambio, la Capilla Sixtina no.  
       on the other hand the chapel Sistine not  
       'On the other hand, the Sistine Chapel wasn't so great.'
- d. En cambio, el Coliseo no.  
       on the other hand the Coliseum not  
       'On the other hand, the Coliseum wasn't so great.'

Intuitively, what appears to be happening here is that the question in (80)a establishes the set of things that the double may refer to — namely, Italian architecture. Thus, any fronted predicate that qualifies as such will be felicitous. In contrast, in (79), no context is provided, other than the fact that the double refers to a feminine entity. However, given that the fronted predicate refers to a tower, speakers may accommodate towers as the topic under discussion. Thus, when a subsequent utterance refers to a non-tower (such as a chapel), an infelicitous sentence results.

Coordinations of VPs and finite clauses also show how the form of the double may affect the interpretation of the fronted predicate. The facts are the following: if such a coordinate structure is fronted, the double can be either the usual singular *eso* or the plural *esas cosas* 'those things'.<sup>24</sup> The two variants, however, have different readings. In the *eso* version (81), what Juan enjoys to do is the *combination* of reading books and drinking beer: doing either thing without the other will not (necessarily) result in an enjoyable activity. This is not so in the *esas cosas* version, in which it is possible for Juan to enjoy reading books without drinking beer at the same time, and vice versa. The same difference holds for (82).

- 81) Leer libros y beber cerveza, a Juan le gusta hacer eso / esas cosas.  
       read-INF books and drink-INF beer to Juan CL likes do that those things  
       'To read books and to drink beer, Juan likes to do that/those things.'
- 82) Que vengas a almorzar y que le cuentes un cuento,  
       that come.2SG to lunch and that CL tell.2SG a story  
       María disfruta mucho con eso / esas cosas.  
       María enjoys a lot with that those things  
       'That you come for lunch and that you tell her a story, María has a lot of fun with that/those things.'

<sup>24</sup> It is not possible to use *esos* 'those' as the plural form of the plural. Plausibly, the reason is that *esos* is not the plural of *eso* (neuter) but of *ese* (masculine). If verbal predicates are finite clauses have neuter gender (as evidenced by the impossibility of using masculine or feminine demonstratives as a singular doubles), then the impossibility of using *esos* reduces to a gender mismatch.

The intuition is the same as above: whenever the double is singular, it forces the conjunction to be interpreted as a unit. In contrast, when the double is plural, the conjunction can be interpreted as a set of events independent of the other. These paradigms show that the double and the fronted predicate form a very tight unit in semantic terms.

### 3.5. Distribution and form of the pronominal double

The doubling demonstrative need not always appear in the complement position of the embedding verb. Given the right discourse context, it can be freely topicalized or clefted, in which case it itself is doubled by a clitic. Regular objects show the same behaviour.

- 83) a. Leer libros, eso lo quiere hacer Juan.  
 read-INF book that CL wants do-INF Juan  
 'To read books, Juan wants to do that.'  
 b. Los libros, Juan los quiere leer  
 the books Juan CL wants read-INF  
 'The books, Juan wants to read (them).'
- 84) a. Leer libros, eso es lo que Juan quiere hacer.  
 read-INF books that is CL that Juan wants do-INF  
 'To read books, that is what Juan wants to do.'  
 b. Los libros es lo que Juan quiere leer.  
 the books is CL that Juan wants read-INF  
 'The books are what Juan wants to read.'

As happens with regular clitic doubling, there is no requirement either that the fronted predicate and the demonstrative be clausemates. As shown below, the demonstrative can stay in a lower clause, or even surface in an intermediate landing site. Note that the clitic doubling the topicalized demonstrative always stays in the lower clause. This is expected, given that clitic climbing cannot cross finite clause boundaries.

- 85) a. Leer libros, creo que Juan quiere hacer **eso**.  
 read-INF books think that Juan wants do-INF that  
 'To read books, I think that Juan wants to do that.'  
 b. Leer libros, creo que **eso lo** quiere hacer Juan.  
 read-INF books think that that CL wants do-INF Juan  
 'To read books, I think that Juan wants to do that.'  
 c. Leer libros, **eso** creo que **lo** quiere hacer Juan.  
 read-INF books that think that CL wants do-INF Juan  
 'To read books, I think that Juan wants to do that.'

Most usually, the demonstrative used is a distal one. However, the proximate demonstrative *esto* 'this' can also be used. *Esto* is usually employed where the topicalized predicate appears at the right periphery of the sentence. In these situations, *eso* is dispreferred. Given this complementarity (and the fact that this generalization can be overridden, given the appropriate context), we will assume that this is simply a discourse effect.<sup>25</sup>

- 86) a. Leer libros, Juan quiere hacer ✓eso / ??esto.  
 read-INF books Juan wants do-INF that this  
 'To read books, Juan wants to do that/this.'  
 b. Juan quiere hacer ✓esto / ??eso, leer libros.  
 Juan wants do-INF this that read-INF books  
 'Juan wants to do this/that, to read books.'

<sup>25</sup> Interestingly, one anonymous *Lingua* reviewer points out that Catalan has the opposite distribution. We have nothing relevant to say about this.

i) Parlar amb la Maria, en Joan no vol fer aixó / ??alló.  
 talk-INF with the Maria the Joan not wants do-INF this that  
 'To talk to Maria, Joan doesn't want to do this/that.'

Nonetheless, there is no requirement for the doubling element to be a demonstrative. It may also be a full DP like *esas cosas* ‘those things’, *algo así* ‘such a thing/something like that’ or more colourful expressions (87)d.

- 87) a. Leer libros, Juan quiere hacer **algo así**.  
 read-INF books Juan wants do-INF something such  
 'To read books, Juan wants to do something like that.'
- b. Leer libros y beber cerveza, Juan quiere hacer **esas (dos) cosas**.  
 read-INF books and drink-INF beer Juan wants do-INF those two things  
 'To read books and to drink beer, Juan wants to do those things.'
- c. Leer libros y beber cerveza, Juan quiere hacer **ambas cosas**.  
 read-INF books and drink-INF beer Juan wants do-INF both things  
 'To read books and to drink beer, Juan wants to do both things.'
- d. Ver la tele, Juan no suele hacer **esa bobada**.  
 watch-INF the TV Juan not HABIT do-INF that nonsense  
 'To watch TV, Juan isn't usually up to such nonsense.'

Such substitution is also possible for CPs and DPs (examples for the latter adapted from Escobar 1995).

- 88) a. Que Juan iba a venir, nadie ha dicho **nada así**.  
 that Juan went to come nobody has said nothing such  
 'That Juan was going to come, nobody ever said such thing.'
- b. Que iba a nevar en verano, Juan se creyó **esa tontería**.  
 that went to snow in summer Juan SE believed that silly thing  
 'That it was going to snow during summer, Juan believed that nonsense.'
- 89) a. Tu hermano, **ese mentiroso** me va a oír.  
 your brother that liar me goes to listen  
 'Your brother, the liar will listen to what I have to say.'
- b. La sopa, ya estás tirando **esa guarrada**.  
 the soup already are throwing away that filthy thing  
 'The soup, please throw that gruel away!'
- c. Juan, aún no he hablado con **el pobre infeliz**.  
 Juan yet not have spoken with the poor unhappy  
 'Juan, I still haven't talked to the poor devil.'

### 3.6. Reconstruction effects

Material contained in the fronted predicate can be bound by constituents in the main part of the clause. This suggests that the fronted predicate is not base generated in its surface left-peripheral position. Rather, it starts off in a low position and then it moves higher up. This is exemplified below for Condition C and variable binding.

- 90) a. \* Visitar a Juan<sub>i</sub>, él<sub>i</sub> piensa que María quiere hacer eso.  
 visit-INF to Juan he thinks that María wants do-INF that  
 'To visit Juan, he thinks that María wants to do that.'
- b. Reirse de sus<sub>i</sub> chistes, todo<sub>i</sub> humorista espera que el público haga eso.  
 laugh-INF of his jokes every comedian hopes that the audience does that  
 'To laugh at his jokes, every comedian expects the audience to do that.'

Note that, in these examples, the binder and the demonstrative (which is plausibly the position the fronted predicate starts off from) are separated by a finite clause boundary. This is to control for Huang's (1993) observation that fronted VPs contain a trace/copy of the subject, which can bind material inside VP. Thus, it is necessary to have the binder in a different (finite) clause altogether. Unfortunately, this means that we are introducing an extra binding domain, which makes Condition A and B uninformative in this respect. The only relevant reconstruction effects are the ones for Condition C and variable binding, which can apply across binding domains.

NPIs are not allowed in the fronted VP, even if the matrix clause contains an NPI licenser. This is possibly related not to lack of reconstruction, but to the topic status of fronted VPs. It seems to be a

universal property of NPIs that they cannot be topicalized. Hence, it is expected that they cannot appear inside a larger topicalized phrase.

- 91) a. \* Leer nada, Juan no quiere hacer eso.  
 read-INF anything Juan not wants do-INF that  
 'To read anything, Juan doesn't want to do that.'  
 b. \* Nada, Juan no quiere hacer.  
 anything Juan not wants do-INF  
 'Anything, Juan doesn't want to do.'

Reconstruction effects are also present when the fronted part is a finite clause, as shown below. Since the fronted phrase constitutes a binding domain by itself, we can only test for Condition C and variable binding.

- 92) a. Que el publico se ría de sus<sub>i</sub> chistes, todo<sub>i</sub> humorista espera eso.  
 that the audience SE laugh of his jokes every comedian hopes that  
 'That the audience will laugh at his jokes, every comedian hopes that.'  
 b. \* Que Juan<sub>i</sub> va a venir a la fiesta, él<sub>i</sub> nos ha prometido eso.  
 that Juan goes to come to the party he us has promised that  
 'That Juan is coming to the party, he has promised us that.'

For nominals, it is not easy to test binding under reconstruction in doubling constructions. The main problem is that *eso* needs to be interpreted as anaphoric with the topicalized object. However, *eso* is a pronoun, not an anaphor. Thus, if it doubles an anaphoric object, the derivation would result in a Condition B violation, since the subject would be binding a coindexed pronoun (93). This can be circumvented by embedding the anaphor inside the fronted DP, as in the examples in (94).

- 93) \* [<sub>DP</sub> anaphor]<sub>i</sub>, [<sub>DP</sub> binder]<sub>i</sub>, ..... [<sub>DP</sub> pronoun]<sub>i</sub>  
 94) a. Juan siente [vergüenza de sí mismo].  
 Juan feels shame of him self  
 'Juan is ashamed of himself.'  
 b. [Vergüenza de sí mismo]<sub>i</sub>, Juan siente eso.  
 shame of him self Juan feels that  
 'Ashamed of himself, Juan feels like that.'

In this same context, Conditions B and C show the expected results, and so does variable binding.

- 95) a. \* Juan<sub>i</sub> siente [vergüenza de él<sub>i</sub>].  
 Juan feels shame of him  
 'Juan is ashamed of him.'  
 b. \* [Vergüenza de él<sub>i</sub>]<sub>i</sub>, Juan<sub>i</sub> siente eso.  
 shame of him Juan feels that  
 'Ashamed of him, Juan feels like that.'  
 96) a. \* El<sub>i</sub> siente [vergüenza de Juan<sub>i</sub>].  
 he feels shame of Juan  
 'He is ashamed of Juan.'  
 b. \* [Vergüenza de Juan<sub>i</sub>]<sub>i</sub>, él<sub>i</sub> siente eso.  
 shame of Juan he feels that  
 'Ashamed of Juan, he feels like that.'  
 97) a. Todo<sub>i</sub> padre siente [vergüenza de su<sub>i</sub> hijo] en algún momento.  
 every father feels shame of his son in some moment  
 'Every father feels ashamed of his son at some point.'  
 b. [Vergüenza de su<sub>i</sub> hijo]<sub>i</sub>, todo<sub>i</sub> padre siente eso en algún momento.  
 shame of his son every father feels that in some moment  
 'Ashamed of his son, every father feels like that at some point.'



### 3.7. Analysis

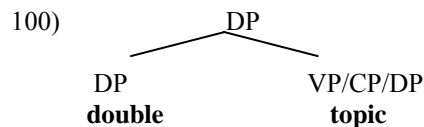
As the previous discussion shows, Spanish doubling differs from Hungarian doubling in important respects, such as distribution of the double (strictly left-peripheral vs. free), subcategorization environment (VP-embedding vs. DP-embedding verbs), morphology of the double (strictly non-agreeing vs. agreeing), and complexity of the double (strictly atomic vs. phrasal). All these differences can be made sense of under the hypothesis that Spanish *eso* is not the spell out of a trace, as we proposed in section 2 for Hungarian. Rather, our claim is that Spanish doubling makes use of the structure in (98), which we originally discarded for Hungarian. That is, one in which the fronted element and the double start off as one constituent, and the double gets stranded under XP fronting. Such a structure has been proposed previously in the literature to account for similar phenomena: e.g., Sportiche (1988) for quantifier float, Uriagereka (1995) for clitic doubling, and Boeckx (2003) for resumption. This structure accounts for the fact that the double behaves in all respects like a regular DP because it *is* a regular DP.



Further, the fact that the doubled category is merged to the double in the base position of the latter accounts for the reconstruction effects. Extra evidence in favour of merging the doubled VP so low comes from the observation that it is possible to have the double and the topic together, as in the example below. Note that variable binding is possible, showing that we are indeed dealing with one single sentence.

- 99) Todo<sub>i</sub> humorista espera eso, que el público se ría de sus<sub>i</sub> chistes.  
 every comedian hopes that that the audience SE laughs of his jokes  
 'Every comedian expects that, that the audience laughs at his jokes.'

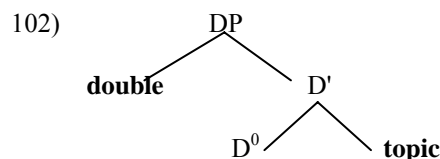
So far we have remained silent as to the nature of the relation between the double and the topic. An initially plausible proposal is that the topic is an adjunct to the double as in (100). This hypothesis would account for the islandhood of fronted predicates, discussed at the end of section 3.1.



However, this hypothesis essentially treats fronted predicates as adjuncts, and therefore predicts that they should be sensitive to weak islands. This prediction is falsified by the example below, where a predicate originating in a lower clause can be moved without trouble across a matrix negation.

- 101) ✓ [Leer un libro], no creo que a Juan le guste hacer eso  
 read-INF a book not think that to Juan CL.DAT likes do-INF that  
 'To read a book, I don't think Juan likes to do that.'

Instead, we want to propose that the topic and the double form a small clause headed by a (null) D head, with the double as its subject and the topic as its predicate. The postulation of this head (which can be thought of as a relator, after den Dikken's 2006 analysis of predication and small clauses) accounts for the fact that the doubling construction requires an upper verb that selects for a nominal (cf. section 3.2). This is schematically shown below.



In this structure, the topic is actually an argument, which predicts its insensitivity to weak islands (101). Furthermore, the strong island effect in (60) can be analysed as CNPC violation. Finally, it also provides a way to incorporate the agreement effects discussed in section 3.4. This would not be possible under an adjunction analysis, since agreement between a phrase and an adjunct is generally thought not to be possible.

The proposed structure is somewhat based on the presupposition that VPs and CPs can combine with determiners. In fact, in other contexts (e.g., when VPs and CPs act as subjects), this can be seen overtly.<sup>26</sup>

- 103) a. [El leer un libro de Chomsky] te da un aire de intelectual.  
           the read-INF a book of Chomsky CL.DAT gives an air of intellectual  
           'To read one of Chomsky's books makes you look like a smart guy.'  
       b. [El que llueva en otoño] entristece a mucha gente.  
           the that rains in autumn saddens to many people  
           'The fact that it rains in autumn makes many people sad.'

Let us also point out a paradigm that seems to support this hypothesis. In Spanish, one can also topicalize adverbs and adjectives. In this case, however, the double is not *eso* or a full DP. Rather, one finds *así* 'so' or *de esa manera* 'in such a way', or various equivalent expressions with an adverbial/adjectival meaning.

- 104) a. Rápidamente, Juan ha leído Hamlet así / de esa manera / \*eso.  
           quickly Juan has read Hamlet so in such a way that  
           'Quickly, that's the way Juan has read Hamlet.'  
       b. Caliente, a Juan le gusta tomar la sopa así / de esa manera / \*eso.  
           warm to Juan CL likes have the soup so in such a way that  
           'Warm, that's the way Juan likes his soup.'

These data could be interpreted as follows: VPs, CPs, and obvious nominals can combine with a D head, hence the double is a pronoun or a DP. In contrast, this is not possible for adjectives<sup>27</sup> and adverbials, and consequently, one cannot use a pronominal as the double. Instead, an adjectival or adverbial expression must be used. While this analysis is somewhat sketchy, it seems to us that it captures our core intuition about Spanish, namely, that the double and the topic are merged together as a constituent and then separated. In addition, the various paradigms reviewed in this subsection make the complementation structure in (102) more plausible than the adjunction structure in (100).

#### 4. Conclusions and further direction of research

In this paper, we studied VP topicalization in two unrelated languages. The purpose of the paper was to show that although languages might look similar in VP topicalization on the surface, they can employ very different structures and derivations. The Hungarian cases of VP topicalization prove to be instances of VP fronting from the complement position of the licensing verb. The pronominal double that associates with such fronted VPs spells out a high trace position in the structure. The Spanish cases on the other hand, feature VP fronting from a marked configuration in which the VP is a complement to a null determiner, which hosts the double as its specifier.

The existence of these strategies provides important addition to recent theorizing in the domain of VP topicalization (Landau 2006, 2007) as well as that of resumption. Concerning the latter, substantial amount of research has recently dealt with the configurations that underlie resumptive strategies. One important result is the recognition that these strategies can involve appositive configurations. Most importantly, Aoun *et al* (2001) claim that resumptive elements can be linked to their associate through an appositive configuration like (105).

- 105) lexical DP<sub>i</sub> ... [DP lexical DP<sub>i</sub> [ double ]]

<sup>26</sup> Also, Torrego & Uriagereka have argued on independent grounds that VP and CP complements to epistemic predicates are introduced by a null determiner. See also Jouitteau (2005), who claims that *v*P has nominal features, at least in some languages.

<sup>27</sup> In Spanish, it is sometimes possible to have [D Adj] strings, e.g., *el viejo* 'the old'. However, this is best analysed as involving noun ellipsis (i.e., *el* [elided N] *viejo*) — cf. Ticio (2003). Since adjectives require the local presence of a noun to be appropriately inflected, it must be the case that these examples involve unpronounced nouns that provide the required gender and number specifications.

'Certain constructions that appear to involve resumption by a pronoun [...] actually involve movement from a position within the maximal projection containing the pronoun [...]. The relation between the launching site and the apparent resumptive pronoun is apposition.'

We hope to have shown that resumption can also consist of a structure in which the associate and the double are respectively the complement and the specifier of a head.

106) lexical DP<sub>i</sub> ... [DP double [ D [lexical DP<sub>i</sub> ]]]

While this is an important result, our analysis of Hungarian and Spanish VP topicalization brings up many important questions, some of which we could not yet dedicate enough attention to. First and foremost, are these two strategies of resumption the only strategies available for VP topicalization in a language, or are there other strategies?<sup>28</sup> Secondly, what determines whether a language employs one or the other mechanism of VP topicalization? Does the presence of the Hungarian- or Spanish-type mechanism follow from some other, independent property of language?

While we hope to address the second set of questions in future research, the first question needs a great deal of research in the empirical domain with the involvement of many more languages. Initial explorations in this domain suggest to us that the Spanish pattern is by all means attested in other European languages as well, including Dutch and German, for example. As Zwart (1997) already mentions, Dutch/German predicate topicalization is licensed by predicates that select for a nominative complement, just as we have seen to be the case in Spanish.

We illustrate this with the case of Dutch.<sup>29</sup> A verb like *doen* 'to do' cannot occur with infinitive complements, but can with nominal ones. As a result, it can also occur with predicate topicalization:

- 107) a. \* Ik doe niet boeken lezen. [VP/IP complement]  
       I do not book read-INF  
       'I don't read books.'  
       b. [Boeken lezen], dat doe ik niet. [VP topicalization]  
           books read-INF that do I not  
           'To read books, I don't do that.'  
       c. Ik doe dat niet. [DP complement]  
           I do that not  
           'I don't do that.'

*Placht* 'used to' on the other hand, can only occur with infinitivals, and not with nominal complements. As a result, it is excluded from the doubling construction:

- 108) a. Jan placht destijds misdaadromans te lezen. [VP/IP complement]  
       Jan used.to then crime.stories to read-INF  
       'Jan used to read crime stories then.'  
       b. \* [Misdraadromans lezen], dat placht Jan destijds. [VP topicalization]  
           crime stories read-INF that used.to Jan then  
           'To read crime stories, Jan used to do that then.'

<sup>28</sup> For instance, Källgren & Prince (1989) point out that in Swedish it is possible to left-dislocate a VP containing a finite verb, optionally doubling it with *det* 'it'. Downstairs we find the dummy verb *göra* 'to do', which is also inflected. This pattern is also present in VP topicalization, where no *det* doubling is present. At present, we have no account of this pattern.

(i) [Läser boken], det gör han.  
       read-3SG book-DEF it do-3SG he  
       'Reads the book, he does that.'  
       (ii) [Läser boken] gör han nu.  
           read-3SG book-DEF do-3SG he now  
           'Reading the book he is now.'

Let us nonetheless point out two interesting differences between the two options. First, a *det*-doubled VP does not count as "first" for V2 purposes (i), whereas a non-*det*-doubled one does (ii). Second while the non-*det*-doubling variant does not allow stative predicates, the *det*-doubling one does (iii). Källgren & Prince conclude from this data that both constructions have a different source, and we agree with them.

(iii) [Kan svenska] \*(det) gör Kari.  
       know-3SG Swedish it do-3SG Kari  
       'Knows Swedish, Kari does that.'

<sup>29</sup> German appears to behave in the same way. Our thanks to Martin Salzmann for his judgements.

- c. \* Jan placht dat destijds. [DP complement]  
 Jan used.to that then  
 'Jan used to do that then.'

Dutch also patterns with Spanish in the availability of reconstruction and full DP doubles. Where Dutch differs from Spanish is the syntactic position and discourse role of the pronominal double: this element is mostly confined to the left periphery. It only occurs in internal positions of the clause for a subset of speakers we consulted:

- 109) % [Marie kussen], Jan heeft *dat* niet geprobeerd.  
 Marie kiss-INF Jan has that not tried  
 'To kiss Marie, Jan has not tried that.'

Having the VP to the right of the double results in full ungrammaticality in Dutch, as opposed to Spanish:

- 110) \* Jan heeft *dat* niet geprobeerd, [Marie kussen].  
 Jan has that not tried Marie kiss-INF  
 'Jan has not tried that, to kiss Marie.'

This shows that while languages might employ the same underlying strategy, they can differ in the particular details. Unfortunately, a detailed comparison between Spanish, Hungarian, and Dutch goes beyond the scope of this paper, and we must defer it for future work. It is our hope, though, that our contribution inspires further comparative research in this area.

### Acknowledgements

We would like to thank Lisa Cheng, Marcel den Dikken, Judit Gervain and two anonymous *Lingua* reviewers for useful criticism, as well as the audiences of our seminar talks at ZAS Berlin (January 2006) and Oxford University (February 2006) for feedback and suggestions. All remaining mistakes are our own. For judgements, we are indebted to Judit Gervain, Beáta Gyuris, and Veronika Hegedűs (Hungarian); Susana Huidobro and Carmen Martínez (Spanish); Jeroen van Craenenbroeck, Marcel den Dikken, Hilke Reckman and Erik Schoorlemmer (Dutch); and Martin Salzmann (German). This research was supported by the Netherlands Organisation for Scientific Research (NWO), under number 048.011.045 and the Hungarian Scientific Research Fund (OTKA) under number N 37276, in a grant entitled "Syntax, Semantics and Phonology of the Left Periphery". The second author also benefitted from a predoctoral scholarship (BFI03.277) from the Department of Education and Research of the Basque Government.

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