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# Infinitive *Wh*-Relatives in Romance: Consequences for the Truncation-versus-Intervention Debate

Xavier Villalba

*Abstract.* Romance clitic left dislocation is widespread across all kinds of nonroot contexts, but it is forbidden in infinitive *wh*-relatives. This article investigates the extent and nature of this restriction and the consequences it raises for the truncation and intervention analyses of the left periphery of embedded sentences. We will show that current proposals cannot account for the whole gamut of data. In consequence, we will propose that infinitive *wh*-relatives display a maximally syncretic left periphery, whereas infinitive *wh*-interrogatives have a full-fledged left periphery, crucially involving ForceP, because they are selected by a higher predicate. This crucial difference between infinitive relatives and interrogatives will also be shown to be consistent with the existence of specialized complementizers for the former but not the latter.

## 1. Introduction

After the pioneering studies in the seventies (??), research on main-clause phenomena, also known as *root phenomena*, has seen a revival in recent years (???). A focus has been on the place of English topicalization and Romance clitic left dislocation (CLLD) within the realm of main-clause phenomena. In particular, Haegeman has defended the view that, whereas English topicalization is a true main-clause phenomenon, Romance CLLD is widespread across all kinds of nonroot contexts. However, beyond this widely accepted empirical generalization, theoretical explanations of the difference have divided into two camps. On the one hand, some approaches (??) have argued for a structural difference, namely that some functional projections are not available in certain nonroot contexts in certain languages (the *truncation* hypothesis). On the other hand, other approaches (????) have argued for an explanation in terms of the features of the elements in the left periphery of the sentence and their interactions (the *intervention* hypothesis).

This article brings new evidence to the fore that may help place the discussion on a different footing. We examine the behavior of Romance CLLD in infinitive *wh*-relatives (IWRs), like the following.<sup>1</sup>

*p4in@p0.25in@ > p2.25in@@p4in@p0.25in@ > p2.25in@124578*

As we are going to discuss at length, these sentences pose a problem for current views of the left periphery that are couched in the cartographic program (??), for they don't allow CLLD:

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<sup>1</sup> Throughout the text I follow the Leipzig Glossing Rules. I thus use the following abbreviations: 1, 2, 3 = first, second, third person, ACC = accusative, COND = conditional, DAT = dative, F = feminine, FUT = future, INF = infinitive, LOC = locative, PL = plural, PST = past, REFL = reflexive clitic, SG = singular, SBJV = subjunctive, and SUP = supine.

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

On the one hand, the ill-formedness of (2) seems to follow from the truncation hypothesis straightforwardly: infinitive clauses lack (part of) the space in the left periphery that hosts topics and foci. However, infinitive *wh*-interrogatives are compatible with CLLD:

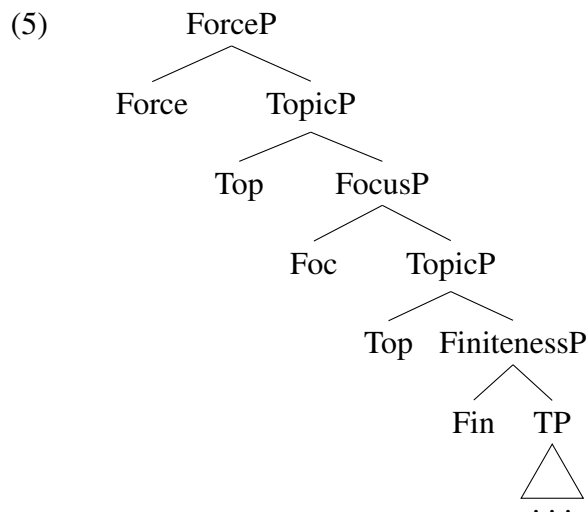
*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

This is unexpected if one assumes that infinitive sentences have a defective left periphery (note that in the case of *wh*-interrogatives, the *wh*-word must follow the dislocate, as we will discuss in sections ?? and ?? below). Obviously, if we follow ? :484 in assuming that infinitive clauses do not allow main-clause phenomena at all, the possibility of (3) remains mysterious.

On the other hand, if one considers the ill-formedness of (2) to be the result of the intervening role of the dislocate in the path of the *wh*-relative pronoun or adverb, the grammaticality of parallel finite relatives, as in (4), remains unexplained.

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

In this article I will investigate the extent and nature of the ban against CLLD in IWRs and explore its consequences for the structure of the left periphery commonly assumed since ? :



I will show that neither the truncation nor the intervention analysis can account for the whole gamut of facts, so that we must rethink our current assumptions about the left periphery of infinitive sentences and assume crucial structural differences between IWRs and infinitive *wh*-interrogatives.

The structure of the article is as follows. In section 2 I will present some basic properties of IWRs, which clearly support treating them as *wh*-relatives. In section 3, I will briefly review the general assumptions about the structure of infinitive sentences. Then, in section 4, I will consider the possibility of extending the truncation analysis of infinitive clauses to IWRs. Section 5 will present the limits of the intervention analysis, while offering clear support for analyzing CLLD as movement. Then, in section 6, I will present a new proposal, which argues for a maximally syncretic left periphery for IWRs but a full-fledged one for selected *wh*-interrogatives; this contrast will be linked to the nonselected nature of IWRs. Finally, I will close the article with the main conclusions and theoretical consequences.

## 2. Description of IWRs

IWRs are widely attested across the Romance landscape (see, among others, [1]):

*p4.25in@p0.25in@ > p2in@@p4.25in@p0.25in@ > p2in@124578*

These relatives involve the same relative-gap configuration as their finite counterparts and are formed with the same relative pronouns and adverbs. Moreover, just as happens with their finite counterparts, extraction from IWRs is impossible, as the following Catalan and Spanish examples illustrate.

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Since the effect is very strong and affects arguments, we can conclude that it is also a standard complex-NP-constraint effect ([2]).

Since we can establish beyond doubt that IWRs are bona fide *wh*-relatives, in the next section I will briefly consider the particular properties of infinitive sentences in general, as a necessary introduction to the discussion of truncation in section [3].

## 3. The Structure of Infinitive Clauses

The internal structure of nonfinite clauses in general and of infinitive clauses in particular hasn't been pursued in much detail; it has been assumed to be similar to that of finite clauses. For example, even though [3] showed that root transformations didn't apply in infinitive clauses, [4] firmly defended the view of infinitive clauses in English as nondefective, involving, they argued, a full CP in which the particle *to* was the morphological realization of nonfinite inflection. However, this work came prior to the explosion of functional projections following the work of [5] and particularly [6], who developed the now classical split CP already depicted in [7].

Rizzi is not particularly explicit about infinitives, but he distinguishes the cases of control and raising complements:

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Even though Rizzi acknowledges that [8]a is "slightly marked" in Italian in comparison with its finite counterpart and is impossible in French (fn. 24: "Speakers of French are reluctant to accept CLLD with infinitives"), he interprets the contrast in [8] in structural terms: in the control case, we have a full-fledged CP, hence there is a TopP to host the dislocate, whereas in the raising case, we have a TP without any trace of the CP area, hence no room for topics. Since Rizzi considers the prepositional complementizer to be realized in Fin, we derive the following structure, in which it is a priori possible that the CLLD dislocate occurs in either TopP.

(9) Mi sembra [<sub>ForceP</sub> [<sub>TopicP</sub> (il tuo libro) [<sub>FocusP</sub> [<sub>TopicP</sub> (il tuo libro) [<sub>FinitenessP</sub> di [<sub>TP</sub> PRO conoscerlo bene]]]]]].

In contrast, the raising structure lacks any projection above TP, which leaves no room for CLLD. (On the categorial status of infinitive complements, the reader can consult [9], among others.) Obviously, if we take CLLD as a hallmark of a rich CP periphery, we can conclude that IWRs are TPs or, at least, defective CPs without TopP, whereas infinitive interrogatives must be full-fledged CPs. If we maintain the structure in [8], the defective infinitive structure would involve at most FinP, which would syncretically realize both [finiteness] and [force]:

- (10) un lloc [<sub>FinP</sub> on [<sub>Fin'</sub> Fin [<sub>TP</sub> PRO descansar]]]  
 a place where rest.INF  
 'a place to rest'

In the following section, we discuss the details of this proposal.

#### 4. Truncation

The *truncation hypothesis* (??) was originally formulated to account for the possibility of using infinitives as main-clause predicates in initial stages of child language, but it soon found its way into adult-grammar studies (????), as a means to account for the limited variety of discourse-oriented material (i.e. topic, focus) in certain infinitive clauses. Let us consider the main facts.

##### 4.1. Empirical Support

Romance CLLD is found in many subordinate contexts, as in the following Spanish examples from ? (see ?? and ? for similar examples in Italian and Catalan, respectively):

- (11) a. Juan niega que **a María** le hayan dado el premio.  
 John deny.3SG that to Mary to.her have.SBJV.3PL given the prize  
 'John denies that Mary was given the prize.'
- b. Pepe no se acordaba de que **esta novela** ya la había leído.  
 Pepe not REFL remind.PST.3SG of that this.F novel already it.F have.PST.3SG  
 read  
 'Pepe did not remember that he had already read this novel.'

In contrast, CLLD cannot appear in similar infinitive clauses:

- (12) a. \*Juan niega **a María** haberle dado el premio.  
 John deny.3SG to Mary have.to.her given the prize  
 Intended: 'John denies having given the prize to Mary.'
- b. \*Pepe no se acordaba de **esta novela** haberla ya leído.  
 Pepe not REFL remind.PST.3SG of this.F novel have.it.F already read  
 Intended: 'Pepe did not remember having already read this novel.'

If we consider a wider set of elements, Hernanz's point is confirmed in full. For instance, fronting of non-D-linked elements like negative-polarity items is impossible in Catalan and Spanish IWRs, as shown in ?? and ??, in sharp contrast with their finite counterparts in ?? and ??.

- (13) a. \*Conec bancs on **mai** no guardar-hi els diners.  
 know.1SG banks where never not save-LOC the.PL money.PL  
 Intended: 'I know about banks to never put my money in.'
- b. Conec bancs on **mai** no hi podria guardar els diners.  
 know.1SG banks where never not LOC could.1SG save the.PL money.PL  
 'I know about banks that I could never put my money in.'
- (14) a. ??Conozco bancos en los que **nunca jamás** guardar mi dinero.  
 know.1SG banks in the.PL that never never save my money  
 Intended: 'I know about banks to never put my money in.'

- b. Conozco bancos en los que **nunca jamás** podría guardar mi dinero.  
 know.1SG banks in the.PL that never never could.1SG save my money  
 ‘I know about banks that I could never put my money in.’

This sharp contrast between finite and infinitive clauses with respect to CLLD and other types of fronting suggests that there is no room for topics or foci in the left periphery of infinitival sentences. In other words, infinitive sentences have a truncated left periphery. Hence, if we adopt the original CP domain proposed in ? (though, for developments, see ?? and section ?? below), we obtain the truncation representation in table ??.

	ForceP	TopP	FocP	TopP	FinP	TP
Normal	✓	✓	✓	✓	✓	✓
Truncated					✓	✓

**Table 1: Radical-truncation analysis**

However, this analysis must face two problems. First, from a theoretical point of view, since truncation is the absence of structure above FinP, we are forced to assume that the *wh*-relative pronoun/adverb lands in ForceP in finite clauses but in FinP in infinitive clauses:

- (15) un lloc [<sub>FinP</sub> on [<sub>Fin'</sub> Fin [<sub>TP</sub> PRO descansar]]]  
 a place where rest.INF  
 ‘a place to rest’
- (16) un lloc [<sub>ForceP</sub> on [<sub>Force'</sub> Force [<sub>TopP</sub> [<sub>FocP</sub> [<sub>FinP</sub> [<sub>TP</sub> la Maria descansar]]]]]]]  
 a place where the Mary rest.3SG  
 ‘a place where Mary is resting’

In answer to this theoretical problem, we can, as originally suggested by ?, conceive of truncation as a case of syncretism: the features associated with Fin and Force are realized under the same functional projection, FinP in the case at hand (see section ?? and ? for a similar proposal):

- (17) un lloc [<sub>Fin/ForceP</sub> on [<sub>Fin/Force'</sub> Fin/Force [<sub>TP</sub> PRO descansar]]]  
 a place where rest.INF  
 ‘a place to rest’

If we adopt this solution, the theoretical problem simply fades away.

The second problem we must face is empirical, and a harder bullet to bite: generalized truncation of infinitive clauses doesn’t extend to infinitive *wh*-interrogatives, which do allow CLLD in some Romance languages, as we have shown for Catalan in ??, repeated here along with a parallel Spanish example.

*p4.5in@p0.25in@ > p1.75in@@p4.5in@p0.25in@ > p1.75in@124578*

In contrast to Catalan and Spanish, the case of Italian is more restricted. The following sentences, kindly provided by Bettina Capello, are judged as marginal or plainly bad by several informants.

- (19) a. ??Non so, **tuo fratello**, quando chiamarlo.  
 not know.1SG your brother when call.INF.him

- Intended: ‘I do not know when to call your brother.’  
 b. ??Non so, **il pane**, dove comprarlo.  
 not know.1SG the bread where buy.INF.it  
 Intended: ‘I do not know where to buy the bread.’

The contrast with finite *wh*-interrogatives is clear (? :33):

- (20) Hanno chiesto **questi libri** chi li ha spostati.  
 have.3PL asked these books who them have.3SG moved  
 ‘They have asked who has moved these books.’

This contrast would support a radical-truncation approach to infinitive *wh*-interrogatives in Italian.<sup>2</sup>

Hence, whereas the left periphery of interrogatives allows CLLD with much variation across Romance, relative clauses are strikingly homogeneous: CLLD must follow the relative word in finite relatives but is forbidden altogether in IWRs.

#### 4.2. *An Even Finer Left Periphery*

We have shown how relatives and interrogatives fit into the ? proposal for the left periphery; however, we must consider a further development with consequences for our study.

Along with a lower position for *wh*-elements in FocP, ? and ? argue for a higher dedicated Int(errogative)P that hosts Italian *se* ‘whether’ and *perché* ‘why’, which is crucially surrounded by TopPs:

- (21) Mi domando, a mio figlio, se, la macchina, gliela compreremo quest’anno.  
 me ask.1SG to my son si the.F car to.him.it.F buy.1PL.FUT this.year  
 ‘I wonder if we will buy the car for my son this year.’

Rizzi argues that *wh*-words in Italian have the complex distribution given in table ?? . Note that CLLD can in principle target any of the topic projections, but particular restrictions apply, as in the case of *dove/cosa* ‘where/what’, which doesn’t allow a CLLD to its right, in contrast to *se/perché* ‘whether/why’. Moreover, in the latter case, we have no empirical evidence for deciding the exact position of the CLLD to the right of the *wh*-word, but one would expect that the same restrictions would hold which apply in the case of *dove/cosa*. On the interaction between topics and *wh*-elements see section 5.2.

	ForceP	TopP*	IntP	TopP*	FocP	TopP	FinP	TP
OK		CLLD	<i>se/perché</i>	CLLD		CLLD?		
OK		CLLD		CLLD	<i>dove/cosa</i>	CLLD		

**Table 2: Left periphery according to ??**

The special behavior of *se* ‘whether’ and *perché* ‘why’ in Italian is widespread across Romance and beyond (????). For instance, Catalan shows a rigid CLLD–*wh*-interrogative order but allows the reverse *wh*-interrogative–CLLD order with *si* ‘whether’ and *per què* ‘why’ (? :224):

<sup>2</sup> As ? :49 reports, the CLLD–*wh*-interrogative order is entirely unavailable in French and European Portuguese, even in finite sentences, so these languages are even stricter than Italian.

- (22) a. No sé (en Joan) quan (\*en Joan) el veuré.  
 not know.1SG the Joan when the Joan him see.FUT.1SG  
 ‘I don’t know when I’ll see Joan.’  
 b. No sé (en Joan) si (en Joan) el veuré.  
 not know.1SG the Joan whether the Joan him see.FUT.1SG  
 ‘I don’t know whether I’ll see Joan.’

?:269 reports a similar behavior for Spanish *si* ‘whether’ and *por qué* ‘why’:

- (23) a. No saben (al gobernador) cuándo (?al gobernador) lo  
 not know.3PL ACC.the governor when ACC.the governor him  
 destituyeron.  
 dismiss.PST.3PL  
 ‘They don’t know when they dismissed the governor.’  
 b. Dudaba (el cordero) si (el cordero) lo haría al horno.  
 doubt.PST.3SG the lamb whether the lamb it do.COND.3SG at.the oven  
 ‘(S)he wasn’t sure whether (s)he would cook the lamb in the oven.’

Now, let us consider infinitive interrogatives. With most *wh*-elements, we only find the CLLD–*wh*-interrogative order, and with ‘whether’ the reverse order seems much more restricted than with finite interrogatives (if possible at all): compare (22) with (24) and (23) with (25).

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*  
*p4.5in@p0.25in@ > p1.75in@@p4.5in@p0.25in@ > p1.75in@124578*

Let us see how Rizzi’s expanded schema in table ?? applies to these cases. In the case of lower *wh*-interrogatives, which are hosted in Spec,FocP, we can assume a structure like the following, where after the movement of *wh*-word and the infinitive to the specifier and head of FocP, respectively, and the restriction on the lower TopP already commented, we correctly expect the CLLD–*wh*-interrogative order only.

- (26) No sé [<sub>ForceP</sub> [<sub>TopP\*</sub> [<sub>IntP</sub> [<sub>TopP\*</sub> en Joan [<sub>FocP</sub> quan visitar-lo [<sub>TopP</sub> en-Joan [<sub>FinP</sub> TP]]]]]]].

However, in the case of the interrogative complementizer *si* ‘whether’, we obtain a different configuration, which allows both orders in principle, depending on the position of the CLLD either in the TopP immediately below IntP or in the highest one:

- (27) a. No sé [<sub>ForceP</sub> [<sub>TopP\*</sub> [<sub>IntP</sub> si [<sub>TopP\*</sub> en Joan [<sub>FocP</sub> visitar-lo [<sub>TopP</sub> en-Joan [<sub>FinP</sub> TP]]]]]]].  
 b. No sé [<sub>ForceP</sub> [<sub>TopP\*</sub> en Joan [<sub>IntP</sub> si [<sub>TopP\*</sub> [<sub>FocP</sub> visitar-lo [<sub>TopP</sub> en-Joan [<sub>FinP</sub> TP]]]]]]].

However, we have seen in ?? and ?? that the *wh*-interrogative–CLLD order is far from perfect and, in any event, worse than the CLLD>*wh*-interrogative order, against expectations. Note that since the higher TopP is activated, we cannot expect truncation to account for the impossibility of a lower dislocate. This pattern remains unexplained in cartographic studies, particularly under proposals like ??, which explicitly “assume that topicalisation and focalisation depend on the presence of Force” (?:335). If so, Romance IWRs would be special in lacking Force, unlike their finite counterparts and infinitive *wh*-interrogatives.

To end this section, we can conclude that the truncation analysis offers a simple solution for



IWRs, since it forbids focus or topic material in the left periphery, but it cannot be extended to infinitive interrogatives, which do allow CLLD. In the next section, we consider an alternative that tries to derive these structural restrictions from general intervention effects between different kinds of constituents.

## 5. Intervention

An alternative to the cartographic truncation analysis is to derive the restrictions on CLLD from intervention effects (????), in fact from a version of Rizzi's Relativized Minimality (??). ? discusses in some detail a particular intervention effect involving discourse linking (D-linking; see ? for the original idea and ??? for several approaches). She considers the following standard *wh*-island effects (I mark the offending *wh*-element with boldface).

*p4.75in@p0.25in@ > p1.5in@@p4.75in@p0.25in@ > p1.5in@124578*

The extracted *wh*-element crosses over a similar *wh*-element, resulting in a typical minimality effect. However, Haegeman notes that enrichment of the extracted *wh*-element with a D-linking feature breaks the minimality effect:

*p3.5in@p0.25in@ > p2.75in@@p3.5in@p0.25in@ > p2.75in@124578*

For Haegeman, these violations of the *wh*-island effect are possible due to the extra D-linking feature in the extracted *wh*-element. This extra feature makes the *wh*-word different enough to cross over the intervening *wh*-element felicitously.

Even though conceptually appealing, Haegeman's approach is problematic in several respects, particularly when applied to relatives. First of all, she extends the original notion of D-linking in an unconstrained and disputable way. ? originally applied this concept to *wh-interrogatives*, for D-linking is crucially grounded on *a closed salient set of possible answers*. To my knowledge, ?:18 was the first to connect relatives with D-linking. He suggests that the asymmetry noted by ?:50–51 between relatives and interrogatives with regard to extraction from *wh*-islands is due to referentiality. Rizzi's Italian examples are reproduced in (30) and (31): the relatives in (30) are fine but the interrogatives in (31) are not. Cinque writes that “[t]he relative *wh*-phrase can plausibly be referential more easily than the interrogative *wh*-phrase, which behaves more typically like a nonreferential operator.”

- (30) a. Il solo incarico che non sapevi a chi avrebbero affidato è poi  
 the only task that not knew.2SG to whom have.SBJV.3PL entrusted is then  
 finito proprio a te.  
 ended exactly to you  
 ‘\*The only task that you didn't know to whom they would entrust has been entrusted  
 exactly to you.’
- b. Tuo fratello, a cui mi domando che storie abbiano raccontato, era  
 your brother, to whom REFL wonder.1SG which stories had.3PL told was  
 molto preoccupato.  
 very troubled  
 ‘\*Your brother, to whom I wonder which stories they told, was very troubled.’
- (31) a. \*Chi ti domandi chi ha incontrato?  
 who you ask.2SG who has.3SG found

- ‘\*Who do you wonder who met?’  
 b. ??Chi non sai che cosa ha fatto?  
 who not know.2SG which thing has.3SG done  
 ‘\*Who don’t you know what did?’

One might expect a parallel between interrogatives and relatives with respect to the complexity of the *wh*-phrase: D-linking should be more easily available with nominally restricted *wh*-phrases. However, ? :164 even maintains his claim for (32), with a clearly nonreferential antecedent and a null operator.

- (32) I know of nobody that I really know how to talk to.

This extension of D-linking to relative pronouns and adverbs has been particularly defended for those languages where an overt determiner is necessary to form complex *wh*-relatives, such as Bulgarian and most Romance languages (see, e.g., ? :277–278). Whether such a move is theoretically motivated is unclear, but different predictions follow regarding the particular choice of features (see, for instance, ???). In any event, what defenders of the D-linking analysis typically assume is a connection between the D-linked phrase and some TopP in the left periphery. ? entertains two possibilities for a D-linked interrogative like the following.

- (33) Quanti problemi non sai come risolvere?  
 how.many.PL problems not know.2SG how solve.INF  
 ‘How many problems do you not know how to solve?’ (?:25a)

The first possibility is moving the whole *wh*-phrase to FocP, then moving the presupposed nominal part to a higher TopP:

- (34) [<sub>TopP</sub> problemi Top [<sub>FocP</sub> quanti problemi Foc [<sub>FinP</sub> [<sub>TP</sub> non sai come risolvere  
 quanti problemi]]]]

The alternative is moving the D-linked *wh*-phrase to TopP and then moving the *wh*-word to FocP (note that ? assumes a lower TopP between FocP and FinP):

- (35) [<sub>FocP</sub> quanti Foc [<sub>TopP</sub> quanti problemi Top [<sub>FinP</sub> [<sub>TP</sub> non sai come risolvere  
 quanti problemi]]]]

Obviously, if D-linking involves a [top] feature, some kind of Relativized Minimality effect will be expected with a dislocate in TopP. Consider both alternatives:

- (36) [<sub>TopP</sub> problemi Top [<sub>FocP</sub> quanti problemi Foc [<sub>TopP</sub> CLLD [<sub>FinP</sub> [<sub>TP</sub> non sai come risolvere  
 quanti problemi]]]]]]

- (37) [<sub>TopP</sub> CLLD Top [<sub>FocP</sub> quanti Foc [<sub>TopP</sub> quanti problemi Top [<sub>FinP</sub> [<sub>TP</sub> non sai come  
 risolvere quanti problemi]]]]]]

In (36), the D-linked *wh*-phrase would cross over the dislocate in the lower TopP, and since both share the [top] feature, we predict a bad result, which is correct. In (37), the D-linked *wh*-phrase moves to the lower TopP, where it should provoke the same minimality effect for the movement of the dislocate to the higher TopP, contrary to fact.

In the case of *wh*-relatives, ? argues that the relative pronoun/adverb is hosted in the specifier of ForceP, so we would expect two options as well:

(38) [<sub>ForceP</sub> a cui [<sub>TopP</sub> CLLD Top [<sub>FocP</sub> a cui Foc [<sub>TopP</sub> a cui Top [<sub>FinP</sub> [<sub>TP</sub> . . . a cui . . . CLLD]]]]]]]

(39) [<sub>ForceP</sub> a cui [<sub>TopP</sub> a cui Top [<sub>FocP</sub> a cui Foc [<sub>TopP</sub> CLLD Top [<sub>FinP</sub> [<sub>TP</sub> . . . a cui . . . CLLD]]]]]]]

In (38), the relative *wh*-phrase would cross over the dislocate in the highest TopP, and since both share the [top] feature, we predict a bad result, contrary to fact. In (39), regardless of whether it moves to FocP or to TopP, the D-linked relative *wh*-phrase must cross over the dislocate in the lower TopP, where it should provoke the same minimality effect for the movement of the dislocate to the higher TopP, again contrary to fact. As ? discusses, in Italian, a relative pronoun may cross over a dislocate, but not conversely (to help the reader, I will mark dislocates with boldface):

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Abels's technical solution to this quandary is to develop Rizzi's idea that relative pronouns/adverbs are akin to topics and to specify them as both operators and topics. Crucially, since relative pronouns are a subclass of topics, by the Elsewhere Condition they will be allowed to cross over the less specific element (the dislocate), but not conversely.

However, even though ingenious, Abels's solution is problematic on empirical and theoretical grounds. On the one hand, while this prediction might be correct for Italian finite relative clauses (40), it is incorrect for Spanish and Catalan relatives regardless of tense and for IWRs across the board, Italian included, as we have demonstrated at length in section ?? (see also section ??). On the other hand, assuming a topic-like nature for *wh*-relatives in IWRs is counterintuitive, for they are typically associated with nonspecific indefinite antecedents, and we know that topics are preferably definite and specific NPs (?).

Hence, as it stands, the Relativized Minimality-based proposals of ? and ? make the wrong prediction that CLLD and *wh*-relatives are incompatible regardless of finiteness. To overcome this problem, ?:ch. 4 follows ? in defending the view that Romance CLLD is base generated, so it *never* creates intervention effects. She supports his claim with examples like ??, for *wh*-interrogatives, and ??, for *wh*-relatives.

*p4.5in@p0.25in@ > p1.75in@@p4.5in@p0.25in@ > p1.75in@124578*

*p4.5in@p0.25in@ > p1.75in@@p4.5in@p0.25in@ > p1.75in@124578*

This proposal overcomes the problems that, as we saw, plague Rizzi's and Abels's analyses: since CLLD doesn't involve movement, we expect no intervention effects altogether with *wh*-movement.

However, Haegeman's analysis of CLLD in Romance is untenable. I will briefly show that CLLD not only does involve movement (section ??) but also shows intervention effects (section ??).

Then I will come back to IWRs and show that intervention analyses, like truncation analyses, cannot account for the data (section ??).

### 5.1. *Romance CLLD as Movement*

The most compelling reason for analyzing Romance CLLD as movement is its sensitivity to strong islands (see ?:6.2 and ?:ch. 2 for additional arguments). Leaving aside French (?), where the

boundary between CLLD and hanging-topic left dislocation is less clear than elsewhere, we have undisputed examples of CLLD affected by strong islands in all Romance languages, as originally pointed out by ? :408 for Italian:

- (43) a. \*A Giorgio, ieri ho conosciuto la ragazza che gli ha scritto  
to Giorgio yesterday have.1SG known the.F girl that to.him has written  
quelle insolenze.  
those insolent.words  
Intended: ‘Yesterday I met the girl who wrote those insolent words to Giorgio.’
- b. \*A Giorgio, chi può credere alla calunnia che gli abbiano  
to Giorgio who can.3SG believe.INF to-the slander that to.him have.PST.3PL  
dato dei soldi?  
given of.the money  
Intended: ‘Who can believe the slander that they gave Giorgio money?’
- c. \*Di quel libro, mi son seduto in poltrona e ne ho letta una metà,  
of that book REFL be.1SG sit in armchair and of.it have.1SG read a half  
ieri.  
yesterday  
Intended: ‘I sat in the armchair and read half of that book yesterday.’
- d. \*A Giorgio, che tu gli abbia scritto vuol dire che sei ancora  
to Giorgio that you to.him have.PST.2SG written want.3SG say that be.2SG still  
innamorata.  
in.love  
Intended: ‘That you wrote to Giorgio means that you’re still in love.’

Similar effects are well documented for Spanish by ? and for Catalan by ? :ch. 3 and ?. Indeed, this behavior extends beyond Romance, for example to CLLD in Greek (? :18), to contrastive left dislocation in German (? :143) and Dutch (? :156–157), and to English topicalization (? :91, ? :175).

Moreover, CLLD can easily skip *wh*-islands, just as happens with *wh*-movement, as the following examples from Spanish show:

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Interestingly, as ? :223 remarks, when CLLD lacks the referential content associated with D-linking (for instance with predicate or bare nominals dislocates), extraction becomes more difficult:

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

So, CLLD is sensitive to islands in ways quite similar to *wh*-movement: it cannot skip strong islands, and it skips *wh*-islands under the same conditions as *wh*-movement. Crucially, CLLD clearly contrasts with a nonmovement construction, hanging-topic left dislocation (??), which strongly suggests that CLLD is a species of movement—indeed, this was the original conclusion of ?.

## 5.2. *CLLD and Intervention Effects*

We have seen that island effects clearly point towards the movement nature of CLLD. Another set of evidence concerns the interaction of CLLD with *wh*-movement, which forms a particularly



*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Secondly, most of the evidence against the intervention effects of CLLD suffers from a basic shortcoming: it involves *local* CLLD, which, as discussed in ? and ?:ch. 2, displays a mixture of A and A' properties, which renders standard tests inadequate. When CLLD is nonlocal and thus clearly A' movement, intervention effects become apparent.<sup>5</sup> Consider the following Spanish examples:<sup>6</sup>

- (54) a. ??El lingüista al que reconozco que **el libro** se lo robé  
 the linguist to.the that acknowledge.1SG that the book to.him/her it steal.PST.1SG  
 es Coseriu.  
 is Coseriu  
 Intended: 'The linguist who I acknowledge that I stole the book from is Coseriu.'
- b. ??¿A quién admitió que **el libro** se lo robó?  
 to who admit.PST.3SG that the book to.him/her it steal.PST.3SG?  
 Intended: 'Who did (s)he admit that (s)he stole the book from?'

These effects become even stronger when the two interveners belong to different clauses:

- (55) a. \*¿De quién<sub>i</sub> admites que **al profesor**<sub>k</sub> le denunciaste *t<sub>k</sub>* que se  
 of who admit.2SG that to.the teacher to.him denounce.PST.3SG that REFL  
 burlaba *t<sub>i</sub>*?  
 mock.PST.3SG  
 '\*Who do you admit that you reported to the teacher that (s)he made fun of?'
- b. \*La persona a quien<sub>i</sub> **a Juan**<sub>k</sub> le ordenaron *t<sub>k</sub>* que matara *t<sub>i</sub>*  
 the person ACC who to John to.him order.PST.1SG that kill.SBJV.3SG  
 era un espía ruso.  
 be.PST.3SG a spy Russian  
 Intended: 'The person whom they ordered John to kill was a Russian spy.'

Finally, note the effect that CLLD adds to *wh*-islands. Whereas *wh*-movement is quite insensitive to *wh*-islands in Romance, the addition of a dislocate results in a stronger effect, as the following Spanish examples show.

- (56) a. \*¿A quien no sabéis **el libro** cuándo se lo dieron?  
 to who not know.2PL the book when to.him/her it give.PST.3PL  
 '\*Whom don't you know when they gave the book to?'

<sup>5</sup> In a similar vein, ?:189, n. 26 notes that whereas local CLLD lacks weak-crossover effects, nonlocal CLLD does show them:

*p5.25in@p0.25in@ > p1in@@p5.25in@p0.25in@ > p1in@124578*

She suggests that the contrast may follow from local CLLD being A movement, which typically lacks weak-crossover effects, while nonlocal CLLD is A' movement.

<sup>6</sup> The intervention effects discussed in this section are unexpected for ?, who crucially build on the availability of the specifier of TP as a landing site for CLLD. For them, null-subject discourse-configurational languages like Spanish and Japanese allow the lowering of the feature [top] from the C domain to T, hence making the preverbal subject position available for CLLD/scrambling (an idea pursued before: ???). As a consequence, it is predicted that operator movement to the C domain will not be affected by the dislocated or scrambled constituent. Our examples clearly call this prediction into question.

- b. \*La persona a quien no sabía **el libro** quién se lo dio  
 the person to who not know.PST.3SG the book who to.him/her it give.PST.3SG  
 era un espía ruso.  
 be.PST.3SG a spy Russian  
 ‘\*The person who (s)he didn’t know who gave the book to was a Russian spy.’

Certainly, this cumulative effect would be mysterious if CLLD didn’t create intervention effects.

To sum up, once we control for the disturbing factors associated with local CLLD, we can safely conclude that CLLD displays intervention effects in Spanish and Catalan, in accordance with the movement approach to this construction defended in ??.

### 5.3. *IWRs and CLLD*

Now that we have offered compelling evidence that CLLD is formed by means of movement (sec. ??) and that it displays intervention effects (sec. ??), we can return to IWRs and consider what predictions the intervention account makes for this construction in Romance. We have seen that finite relatives admit CLLD in all Romance languages:

*p4.75in@p0.25in@ > p1.5in@@p4.75in@p0.25in@ > p1.5in@124578*

However, their infinitive versions are impossible altogether, as we have already shown in ??:

*p4.75in@p0.25in@ > p1.5in@@p4.75in@p0.25in@ > p1.5in@124578*

This is a serious problem for Haegeman’s (?) claim that CLLD doesn’t yield intervention effects. If the problem is not the presence of an intervening dislocate, we are forced to conclude that the ungrammaticality of these examples must follow from structural deficiencies linked to the nonfinite character of the construction, namely from truncation, which is precisely what the intervention approach wants to avoid.

It must be remarked that these new data involving relative sentences and CLLD are not a problem for Haegeman’s intervention approach alone but for Rizzi’s (??) and Abels’s (?) analyses as well, as we have shown in section ??.

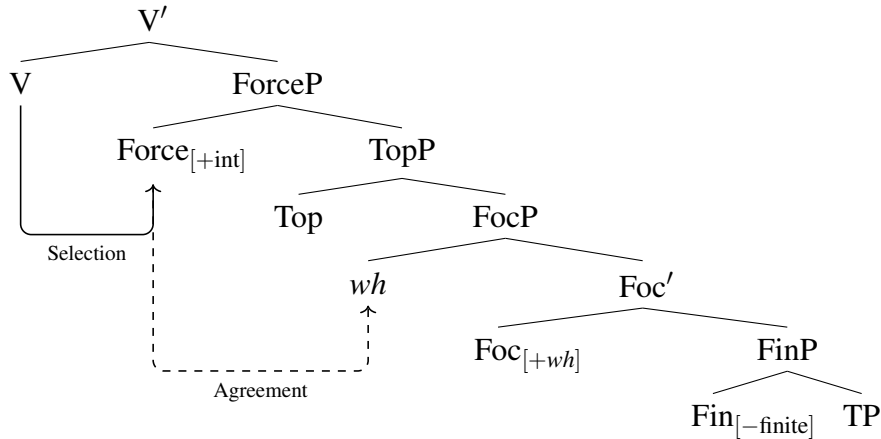
To sum up, the resultant picture is certainly discouraging for intervention approaches, which must assume ad hoc assumptions or empirically dubious generalizations, at least for Spanish and Catalan. Such a negative conclusion does not mean that intervention effects between *wh*-elements and CLLD do not exist—we have shown throughout this section that they do—nor that they don’t play a role in syntax, but rather that they cannot explain the full distribution of CLLD in relative and interrogative clauses, since the difference boils down to the [ $\pm$ finite] nature of the clause, not to different intervention patterns.

## 6. A New Proposal: Syncretism in the Left Periphery

We have shown beyond doubt that infinitive sentences allow less material in the left periphery than their finite correlates. Moreover, in the case of IWRs very little room exists for moving anything to the left periphery. Hence, the truncation proposal seems a simple solution, which becomes even more attractive when we confirm that the intervention approach cannot offer an explanation for the differences based on the [ $\pm$ finite] nature of the clause. However, we cannot assume a unified pruning analysis for both relatives *and* interrogatives. Even though this is certainly disappointing at first sight, I think it is a sensible conclusion. As ? originally remarked, the role of Force is

crucial for linking the [+interrogative] feature of the sentence with the corresponding selectional requirements of the higher governing predicate (see also ??? for similar ideas, and ??? for an initial discussion of the issue of complementizer selection in the context of English infinitive relatives). Rizzi suggests that we have a double relation crucially mediated by Force: the [+interrogative] Force head is locally selected by the higher verb (see ? for discussion), whereas the interrogative *wh*-element landing lower in the CP area (here, in IntP) gets licensed by Agree through the standard probe–goal procedure (??). Schematically:

(59)



Crucially, as originally remarked in ?:301 and repeated elsewhere, “the higher verb selects the specification of Force, not the TopP: verbs select for declaratives or questions, not for clauses with or without topic (or focus).” Hence, we can expect Force to remain active in infinitive interrogatives, with the consequences we have been reporting for TopP.

However, this is not necessarily the case for IWRs. Relative clauses are not selected, so the crucial mediating role of Force is less clear at this point, regardless of your favorite analysis of relatives (see ???). Moreover, Force has been linked to the typically selected sentence types, declarative, interrogative, and exclamative, not to the relative type, which is not associated with any particular illocutionary force. Hence, if truncation in IWRs is not constrained by selectional issues and TopP is linked to the presence of Force, a radical-truncation analysis seems natural, as represented in table ??.

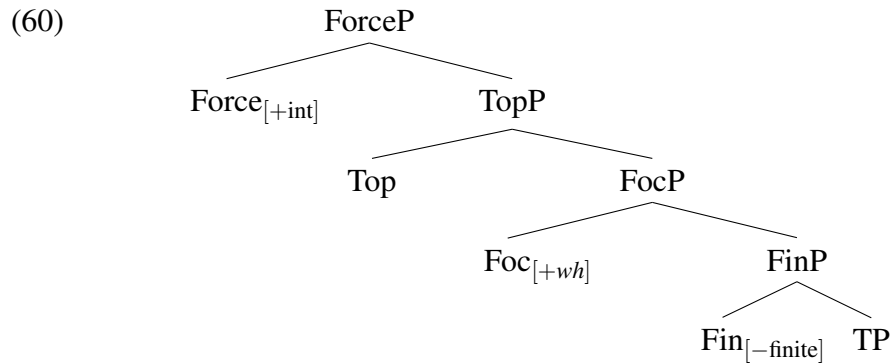
	ForceP	TopP	FocP	TopP	FinP	TP
Infinitive interrogative		CLLD	<i>wh</i>			
IWR					<i>wh</i>	

**Table 3: IWRs and infinitive interrogatives in Catalan and Spanish under the radical-truncation analysis**

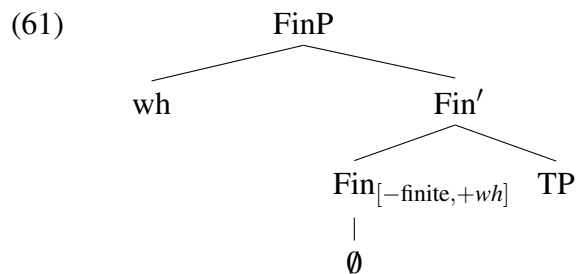
This can be implemented by means of features first and, only then, by functional categories, as suggested in ?. Specifically, the projection of the features involved in the CP domain allows several degrees of syncretism (see ?:100 for an original proposal involving the syncretic categories



T/topic, T/focus, and T/emphasis; see also ? for a general view). For instance, we can have the maximally transparent distribution of features with interrogatives, where each feature associates with a functional head univocally:



In contrast, IWRs would show the maximal degree of syncretism, encoding both the interrogative features and the tense features in Fin:



Obviously, this doesn't exhaust the possibilities, and other combinations are expected. For example, ? (see also (??)) has proposed a dedicated  $Q_{\text{embedded}}P$  immediately dominating FinP for hosting (certain) *wh*-interrogatives in Italian that co-occur with a fronted focus (I mark the focus with italics and the *wh*-word with boldface):

*p5in@p0.25in@ > p1.25in@@p5in@p0.25in@ > p1.25in@124578*

Accordingly, he proposes the following representation (where Mod is a projection hosting modal adverbs):

(63) *Mi domando* [<sub>Force</sub> [<sub>Top\*</sub> [<sub>Int</sub> [<sub>Top\*</sub> [<sub>Foc</sub> *a Gianni* [<sub>Top\*</sub> [<sub>Mod</sub> *ieri* [<sub>Top\*</sub> [<sub>Q<sub>emb</sub></sub> *che cosa* [<sub>Fin</sub> [<sub>IP</sub> . . . ]]]]]]]]]].

The dedicated projection  $Q_{\text{embedded}}P$  is unavailable in languages like Catalan and Spanish (I discard the modal adverb since it adds nothing to the discussion):

*p5.25in@p0.25in@ > p1in@@p5.25in@p0.25in@ > p1in@124578*

In these languages, we can think of a syncretic Wh/Foc projection, in the spirit of ?'s (?) proposal, for which both the interrogative *wh*-word and the preposed focus compete.

Moreover, the asymmetry between infinitive *wh*-interrogatives and IWRs just presented is consistent with the existence of infinitive prepositional relatives, which involve different specific complementizers (in boldface):

*p3.5in@p0.25in@ > p2.75in@@p3.5in@p0.25in@ > p2.75in@* 124578

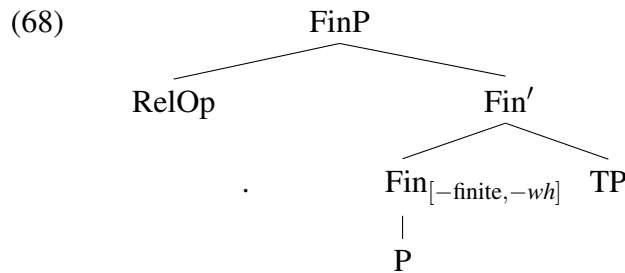
In Catalan and Spanish, they also select a specific complementizer, *per* ‘for’ and *por* ‘for’, respectively:<sup>7</sup>

*p4in@p0.25in@ > p2.25in@@p4in@p0.25in@ > p2.25in@* 124578

Crucially, this variability is not found with infinitive interrogatives, which involve the same yes/no interrogative complementizer ‘whether’ that we found in finite interrogatives:<sup>8</sup>

*p4.75in@p0.25in@ > p1.5in@@p4.75in@p0.25in@ > p1.5in@* 124578

Hence, infinitive prepositional relatives can easily be integrated into our analysis as follows.



The preposition is the realization of the nonfinite complementizer, just as in other infinitive constructions across Romance (see ? :ch. 14):

*p4.75in@p0.25in@ > p1.5in@@p4.75in@p0.25in@ > p1.5in@* 124578

To sum up, the bulk of evidence clearly points toward a truncation analysis of IWRs, which only project FinP, thus lacking room for CLLD. In contrast, infinitive *wh*-interrogatives do project the whole left periphery, just like their finite counterparts, because the presence of ForceP is crucial for satisfying the selectional requirements of the higher predicate. The resultant picture is thus less homogeneous but more consistent on theoretical and empirical grounds.<sup>9</sup>

## 7. Conclusions

This article has shown that the ban against CLLD in IWRs cannot be explained in terms of intervention effects but rather must be analyzed as a case of truncation in infinitive contexts. We have defended the view that, insofar as CLLD is a case of movement, the predictions of standard

<sup>7</sup> Spanish is unique in allowing the complementizer *que* ‘that’ with IWRs:

*p3.5in@p0.25in@ > p2.75in@@p3.5in@p0.25in@ > p2.75in@* 124578

<sup>8</sup> As ? :ch. 5 remarks, neither French, Occitan, nor Sardinian allows these constructions. Sardinian allows instead a prepositional complementizer *de* ‘of’, in contrast with the general tendency in Romance:

*p4in@p0.25in@ > p2.25in@@p4in@p0.25in@ > p2.25in@* 124578

<sup>9</sup> As one anonymous reviewer points out to me, ? :292–293 also assume a combination of intervention and truncation for explaining some of the restrictions in the Spanish left periphery (see also ? for the interaction of truncation and intervention in Basque). Indeed, they explicitly assume truncation in raising constructions, whereas they must assume ad hoc defectiveness of discourse features for control structures. In the latter construction, C cannot transfer the relevant  $\delta$  feature to T, which makes CLLD impossible in the specifier of TP. Unfortunately, it is unclear how their proposal would account for our crucial cases, namely the compatibility of CLLD with infinitive *wh*-interrogatives and the impossibility of CLLD with IWRs.

intervention approaches cannot explain why IWRs contrast with their finite counterparts. Moreover, we have seen that truncation cannot be extended to infinitive *wh*-interrogatives, which do allow CLLD. The contrast between IWRs and interrogatives has been derived from the necessity of projecting ForceP in the latter, which are selected by a higher predicate. Finally, this crucial difference between interrogatives and relatives has been shown to be consistent with the existence of specialized prepositional complementizers for the latter but not for the former.

The resultant picture doesn't negate the role of intervention effects, which are real and evident, in the left periphery of relatives and interrogatives, but it places the burden of explanation primarily on the available structure.

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