

An Alternative to Remnant Movement for Partial Predicate Fronting

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Abstract. One of the main tenets of transformational grammar is that movement processes affect heads and phrases in different ways. In this article, I argue against this claim and propose that heads should be allowed to move in the same way as phrases. Conceptually, this proposal is the logical consequence of a common set of assumptions about syntax in general and movement in particular. Empirically, it finds support in the Spanish predicate cleft construction.

1. Introduction

Contemporary syntactic theory distinguishes two main types of movement—namely, head movement and phrase movement, each one with its own set of properties and restrictions. The goal of this article is to propose a revision of this dichotomy, with the ultimate purpose of defining the basics of a unified theory of movement in which there is one single set of principles regulating both head and phrase movement. More specifically, I defend a model in which both heads and phrases land uniformly in specifier positions, and in which they abide by the same set of locality restrictions (namely, phase theory and relativized minimality).

The immediate consequence of this hypothesis is that it allows for a type of movement that has usually been considered not to be possible: movement of a bare head to a specifier position across arbitrarily long distances. This is, in essence, a revamping of Koopman's (1984) idea of *A'* head movement.¹ In section 2, I show that this hypothesis is a logical extension of a set of currently common ideas about syntax in general and movement in particular. The main bulk of the article (sections 3 and 4) is devoted to developing an empirical argument in favor of the head-to-spec movement hypothesis. I focus on the Spanish predicate cleft construction (1), which has

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¹ Note that this is different from long head movement à la Lema & Rivero (1987), because they take the landing site to be a head position, not a specifier position.

received virtually no attention so far, except for my own previous work (see Vicente 2005, 2007).^{2,3} As in other languages featuring this construction, the Spanish case consists on a topicalized infinitive (which I will refer to as the *topic*) doubled in clause-internal position by a fully inflected version of the same verb (the *tail*).

(1) Spanish predicate cleft

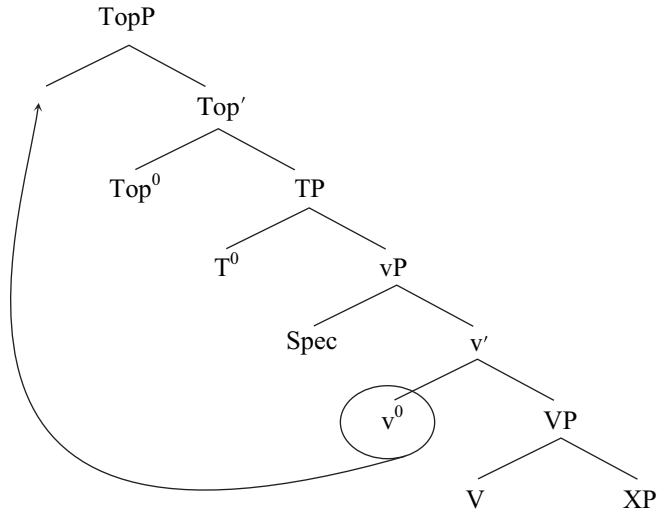
- a. Leer, Juan ha leído un libro.
read.INF Juan has read a book
'As for reading, Juan has read a book.'
- b. Salir, Juan ha salido con María.
go.out.INF Juan has gone.out with María
'As for going out, Juan has gone out with María.'

The argument for head-to-spec movement is based on the conjunction of three separate points. First, in Spanish predicate clefts, the topic and the tail are two links of one and the same A'-movement chain (for the same conclusion regarding other languages, see, among many others, Abels 2001, Hiraiwa 2005, Kandybowicz 2006, or Landau 2006). Second, this movement targets the v(P) level, that is, the projection where the external argument is merged (also called Voice in Kratzer 1996 and Pylkannen 2002). Given this much, it follows that a remnant vP movement analysis of (1) is feasible only to the extent that Spanish has a productive rule of object movement out of vP. The third point of the analysis concerns showing that, although such a rule does exist (cf. Ordóñez 1997, 1998), it has a very limited domain of application. In fact, it can be shown through a series of tests that vP-internal constituents stranded under predicate clefting—such as *un libro* 'a book' in (1a), or *con María* 'with María' in (1b)—have *not* moved out of vP. This conclusion directly falsifies any analysis of (1) based on remnant movement, as no remnant constituent can be created in the first place. The alternative, then, is to move the bare v head to the topic position, as schematized in the tree in (2), with some details omitted for the sake of clarity.

² For instance, in Bosque & Demonte's (1999) descriptive grammar, predicate clefts (*infinitivos temáticos*) are mentioned only in three paragraphs on pages 2341–2342. This short passage barely does anything beyond acknowledging the existence of the construction and vaguely hinting at a possible connection with clitic doubling and (pseudo)clefts.

³ The term "predicate cleft" is somewhat of a misnomer, given that the Spanish construction is not a cleft in any way. However, I adopt it, given the lack of an alternative term to refer to verb-fronting-with-repetition constructions.

(2) A structure for (1)



Before starting, though, three caveats are in order: first, this article is not meant to be an exhaustive theory of Spanish predicate clefts. Its purpose is to defend a specific analysis for (1)—namely, the one in (2)—and, in doing so, to defend a specific theoretical point—namely, the existence of head-to-spec movement. Due to space limitations, I will not discuss any aspects of Spanish predicate clefts that are not related to this goal nor will I discuss any languages beyond Spanish.⁴ Second, I will assume without discussion that head-to-head movement is a narrow syntactic operation, contra Chomsky's (2000) hypothesis that it is PF process (see also Boeckx & Stjepanović 2001 and Harley 2004). For justification of this choice, I refer the reader to work by Zwart (2001), Roberts (2004), Donati (2006), Matushansky (2006), and especially Lechner (2005), who all point out a number of theoretical and empirical problems with the head-movement-at-PF hypothesis.

Finally, it is important to bear in mind that I am *not* arguing for the elimination of remnant movement across the board. I acknowledge that remnant movement is a valuable tool, and that it constitutes the only viable alternative for some constructions (see, e.g., Massam 2001). However, there are also other cases in which remnant movement is not an option, because (as I show for Spanish) no remnant constituent can be created. This article develops a way to analyze the latter set of cases.

⁴ See section 6, though, for a small comment on the crosslinguistic perspectives of the theory outlined here.

2. The Theory

2.1 Background: Head Movement and BPS

In the GB era, the head versus phrase movement distinction was a consequence of the way in which X-bar theory regulated the distribution of constituents on the basis of their bar levels. Heads, qua zero-level elements, could only appear in zero-level positions, whereas phrases, qua double-bar-level elements, could only appear in double-bar-level positions. This is a reinterpretation of Emonds's (1970) structure preservation hypothesis, applied to X-bar theory rather than to phrase structure rules. It is important to bear in mind that X-bar theory only constrained the structural distribution of heads and phrases, but it had nothing to say about their different locality properties. In particular, the very local nature of head movement was encoded through a different constraint altogether, namely, Travis's (1984) Head Movement Constraint (HMC)—ultimately, a theorem derived from the ECP, see Chomsky 1986. In those cases where the strict locality of the HMC was argued not to hold (e.g., the long head movement cases discussed in Lema & Rivero 1987), the moving head was still assumed to land in an X^0 position.

Since the GB implementation of the head versus phrase movement distinction is crucially based on bar levels, it obviously cannot be maintained in a model where bar levels do not exist, such as Chomsky's (1995b) Bare Phrase Structure (henceforth BPS). The core idea of BPS is that structure building is a function of merger and movement alone. Syntactic processes may make reference only to geometric relations between nodes and to features contained in the lexical items, but, crucially, not to diacritics such as bar levels.⁵ Chomsky (1995a,b) spots this problem and suggests a way to reintroduce the head versus phrase movement distinction. He notes that, even without bar levels, it is possible to distinguish two different types of constituents in purely structural terms, namely, X^{\min} s and X^{\max} s. An X^{\min} is a node that doesn't dominate any projection of itself (a terminal node), whereas an X^{\max} is a node that is not dominated by any projection of itself (a maximal projection). This distinction is then complemented with the Chain Uniformity Condition (CUC), whose definition follows.

- (3) Chain Uniformity Condition (Chomsky 1995a:253)
A chain is uniform with regard to its phrase structure status.

In other words, the links of a movement chain must have the same X^{\min}/X^{\max} status. Although this condition might look intuitively correct, I want to argue here that, under closer examination, it is actually unnecessary. There is, to begin with, the question of why the CUC should hold at all.⁶ In other words,

⁵ This point has also been made by Carnie (1996, 2000) and Harley (2004).

⁶ Note that the CUC also misses the whole point of adopting BPS in the first place, which is to develop a theory of phrase structure based only on the geometric relations between constituents and their inherent features, without resorting to diacritics like X^{\max} or X^{\min} .

why can't the links of a movement chain differ in their X^{\min}/X^{\max} status? This is an odd restriction, in the sense that nothing comparable seems to exist outside the realm of movement chains. Bear in mind that BPS explicitly allows certain constituents (e.g., clitics) to qualify simultaneously as X^{\min} s and X^{\max} s. The inability of movement chains to exhibit this ambiguity is unexpected, and it can only be encoded by stipulation.⁷

Furthermore, the CUC does not apply either to other types of relations between constituents. It clearly does not constrain external merge, as there is no ban on an X^{\min} merging to an X^{\max} (such a ban would effectively block all cases in which a head merges with its complement). Similarly, nonmovement dependencies such as agreement may relate an X^{\min} and an X^{\max} . Consider, for instance, the Spanish example in (4), where the verb agrees with a coordinate subject. Each of the conjuncts is singular on its own, yet the verb exhibits plural agreement. This shows that the verb agrees with the entire coordinate structure, which qualifies as an X^{\max} . Given that subject agreement is encoded in an X^{\min} constituent (i.e., the T/AGR_S head), this example shows that nonmovement dependencies are not constrained by any condition similar to (3). We can conclude, then, that the only purpose of the CUC is to constrain the shape of movement chains.⁸

- (4) Ayer vinieron [Pedro y Juan].
 yesterday came.3PL Pedro and Juan
 'Pedro and Juan came yesterday.'

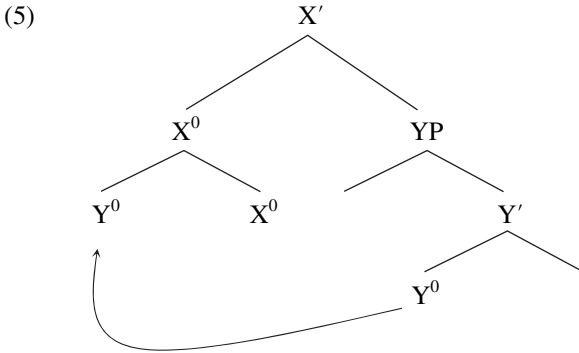
Moreover, independently of its motivation, it is not clear what the CUC actually contributes. In the case of phrase movement, it ensures two things: first, that the moving XP will land in a specifier position; second, that, once in its landing site, it will not project any further. Although both are welcome results, they can be derived without resorting to the CUC. For instance, the Extension Condition (a specific way of implementing cyclicity; see Chomsky 1995a) already ensures that the moving XP will land in a specifier position. Similarly, cyclicity bans the moved XP from projecting: it is a common assumption in derivational models (though not always explicitly stated) that one may not introduce a new projecting head until the previous head has finished projecting. Thus, when an XP moves, it cannot project in its landing site simply because there is no reason for it to project. All of its selectional/

⁷ One reviewer proposes replacing the X^{\max}/X^{\min} distinction with a $[\pm\text{MAX}]$ feature, so that CUC effects would be derived as contradictory feature specifications. As far as I can see, though, this alternative would face the same problems as the original X^{\min}/X^{\max} distinction: it would have to explain why clitics can be simultaneously $[\pm\text{MAX}]$ and $[-\text{MAX}]$, and why other operations like merger or agreement can target categories of different $[\pm\text{MAX}]$ specifications.

⁸ This is in stark contrast with the other conditions on movement that Chomsky (1995) proposes (i.e., cyclicity, c-command, and Last Resort), which clearly have applications beyond movement chains. For instance, cyclicity is a general condition on structure building, c-command is a general condition on dependencies, and Last Resort can be seen as a general condition on grammatical operations.

EPP requirements that could potentially result in projection have been already satisfied in its base position. If this reasoning is correct, then the CUC is redundant with regard to phrase movement, as its results can be attained through independently required principles.

The situation is no better when considering head-to-head movement. Let us examine the prototypical head-to-head movement configuration in (5), with Y^0 incorporating into X^0 .



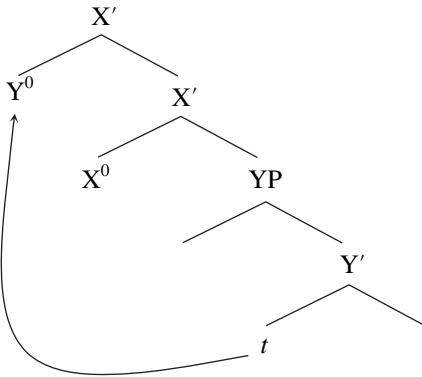
Here we can see that the higher copy of Y^0 qualifies as both an X^{\min} (since it is a terminal node) and an X^{\max} (since it doesn't project any further). However, the lower copy of Y^0 qualifies only as an X^{\min} . It does not qualify as an X^{\max} because it projects. Therefore, we have a movement chain that does not abide by (3). Chomsky (1995a:322) gets around this problem by proposing that head-to-head movement is regulated by a Word Interpretation (WI) component. WI works by taking two X^{\min} s and combining them into a constituent that, importantly, also qualifies as an X^{\min} . This last point is achieved by stipulating that the internal structure of the outcome of WI is not accessible for syntax (in Chomsky's own words, "WI ignores principles of C_{HL} within X^0 "). As a consequence, X^{\min} constituents need not abide by the CUC, and head-to-head adjunction is effectively ruled back in. In other words, WI is a means to prevent the CUC from applying to head movement chains, which is a strange conclusion, given that capturing the structural properties of head-movement chains was the main motivation for introducing the CUC in the first place.

2.2 *The Alternative: Generalized Movement to Specifier Position*

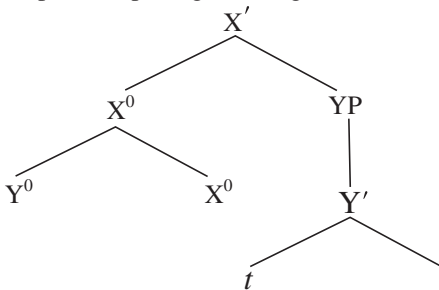
We have seen that the CUC raises a number of difficulties: (a) it is not clear why it should hold at all; (b) it has a very limited domain of application; and (c) where it applies, its effects can be derived anyway through independently required principles. Admittedly, these difficulties are not a definitive proof that the CUC is incorrect, but they make it at least fair to consider the possibility of dropping it. Therefore, suppose that we do so, and postulate that the only

principles that movement chains need to observe are (i) cyclicity, (ii) the Proper Binding Condition (which is itself reducible to cyclicity; see Epstein et al. 1998), and (iii) Last Resort. The theory of movement entailed by this hypothesis is one in which moved constituents land uniformly in specifier positions, irrespective of their size. In and of itself, this is not a new idea: Toyoshima (2001) and Matushansky (2006) have already proposed reanalyzing head-to-head movement in these terms. I will especially focus here on Matushansky's implementation of this hypothesis.⁹ She argues that a bare head can move to the (inner) specifier position of the immediately next head up, resulting in the configuration in (6). Then, via a process of m(orphological)-merger (cf. Marantz 1984, Halle & Marantz 1993), the two adjacent heads are rebracketed into a single constituent (7). The resulting structure is identical to what would have been achieved via traditional head-to-head movement but employs only movement to specifier positions.

(6) Step I: head-to-spec movement



(7) Step II: morphological merger



⁹ The main reason for this choice is that Toyoshima adopts a lexicalist approach (à la Chomsky 1995a), in which verbs are inserted in syntax fully inflected. However, as discussed in section 5, the analysis of predicate clefts I propose requires the verb root to be combined with its inflectional affixes in syntax (as in Baker 1988 and much subsequent work). This possibility is afforded by Matushansky's analysis of head movement.

This hypothesis entails that moved constituents land uniformly on specifier positions, independently of whether they qualify as heads or phrases. Importantly, Matushansky implements the strict locality of head-to-head movement through totally independent means. Following ideas from Svenonius (1994), she assumes that head-to-head movement is driven by a selectional relation (encoded as a selectional feature) between the upper and the lower head. Now, this analysis of head movement opens up an interesting possibility. Suppose first that, in some cases, the attracting feature is not a selectional feature, but rather a topic or focus feature. If so, the prediction is that, in these cases, a bare head would undergo long-distance movement (specifically, what would otherwise be characterized as A'-movement). Moreover, suppose also that m-merger at the landing site did not apply in this case. The latter is a possibility explicitly acknowledged by Matushansky, who argues that head-to-spec movement and m-merger are independent operations and therefore need not go hand in hand.¹⁰ If this much is correct, then we could expect to find cases in which a bare verbal head is attracted by a topic/focus feature but doesn't end up forming a constituent with its attractor. The result would be superficially similar to cases of remnant topicalization, but, crucially, there would be no signs of a remnant constituent having been formed. The rest of the article is devoted to showing that the Spanish predicate cleft construction is one such case.

3. Spanish Predicate Clefts

3.1 Initial Description

As shown in (1), a predicate cleft in Spanish consists of an infinitive (the *topic*) sitting in a left peripheral topic position and doubled by a fully inflected version of the same verb (the *tail*) sitting in a clause-internal position. The topic is usually an infinitive, though in passive clauses it surfaces as a passive participle. This is an important point I return to in section 3.3. It is not possible, however, for a topic to surface as a finite verb or a perfect participle; compare (8) to (1).

- (8) a. ***Leyó**, Juan **leyó** el libro.
 read.PST.3SG Juan read.PST.3SG the book
 'As for reading, Juan read the book.'
- b. ***Leído**, Juan ha **leído** el libro.
 read.PERF.PART Juan has read the book
 'As for reading, Juan has read the book.'

The tail is always a fully inflected version of the topic. More specifically, the topic cannot leave a gap or be resumed by a dummy verb. The only apparent

¹⁰ Note that Matushansky herself does not provide a way of predicting which cases of head-to-spec movement will trigger subsequent m-merger. This will remain a stipulation throughout this paper.

exception is constituted by cases in which a fronted predicate is resumed by the demonstrative pronoun *eso* ‘that’. I will ignore this alternative, given that Lipták & Vicente (2009) show at length that it is a completely different construction.¹¹

All types of verbs can be targeted by predicate clefting, including raising and control verbs and verbs of all aspectual classes, as long as they make felicitous topics. For instance, the auxiliaries *haber* ‘to have’ (perfect) and *ser* ‘to be’ (passive) lack any lexical content that could make a semantically well-formed topic. Hence, they are excluded from predicate clefts.

- (9) a. ***Haber**, Juan **ha** leído un libro.
 have.INF J has read a book
 ‘As for something being done, Juan has read a book.’
 b. ***Ser**, la puerta **fue** reparada.
 be.INF the door was fixed
 ‘As for being (done something), the door was fixed.’

Quite transparently, I will refer to cases in which only a bare infinitive is clefted as *bare infinitive clefting*. It is also possible for the topic to pied-pipe its dependents (10), which I refer to as *full predicate clefting*. In these cases, typically only the verb is obligatorily repeated downstairs: repetition of the dependent, although optionally possible, is usually less preferred than nonrepetition; compare (10a) and (11a) versus (10b) and (11b). Note also the presence of a CLLD (clitic left dislocation) clitic (*lo*) in (10a), as opposed to its absence in (10b). The generalization here is that, if a complement would be doubled by a CLLD clitic if topicalized on its own (as DPs are, but not PPs), then it is also doubled if it is pied-piped under predicate clefting and not repeated in the tail. We will get back briefly to this point in section 5. Note that predicate clefts typically have a verum focus reading, asserting the truth of the proposition.¹²

¹¹ Lipták & Vicente provide a number of properties of *eso*-doubling that contrast with predicate clefts. First, whereas the *eso*-doubling construction requires a full predicate to be fronted, the predicate construction allows both fronting of a full predicate and of a bare verb. Second, under *eso*-doubling, the fronted predicate must be embedded under a higher predicate, whereas predicate clefts allow movement of both matrix and embedded predicates. Third, in the *eso*-doubling construction, the embedding predicate must be able to independently select for a nominal complement, but this restriction is not found in predicate clefts even when the tail is embedded under a higher predicate. Finally, both constructions have clearly different semantics: *eso*-doubling is a case of run-of-the-mill (contrastive) topicalization, and predicate clefts result in a verum focus reading.

¹² The verum focus reading associated to predicate clefts has also been observed in other languages, such as Brazilian Portuguese (Bastos 2001), Hungarian (Vicente 2007), or Mandarin Chinese (Cheng & Vicente 2007), and it is realized by assigning focal stress to some constituent within the main part of the clause (typically the inflected verb, but this is by no means necessary). Additionally, predicate clefts in these languages also trigger, under certain circumstances (i.e., whenever it is the verb that receives focal stress), an adversative implicature (what Bastos 2001 calls a *but* effect). Both Bastos (2001) and Vicente (2007) argue that this implicature is a consequence of Grice’s Maxims, though the authors differ in the specific implementation they propose. The reader interested in the details is referred to these works.

- (10) a. [Leer el libro], Juan lo ha leído.
read.INF the book Juan CL has read
'As for reading the book, Juan has indeed read it.'
- b. ?[Leer el libro], Juan ha leído el libro.
read.INF the book Juan has read the book
'As for reading the book, Juan has indeed read it.'
- (11) a. [Salir con Clara], Juan ha salido.
go.out.INF with Clara Juan has gone out
'As for going out with Clara, Juan has indeed gone out (with her).'
- b. ?[Salir con Clara], Juan ha salido con Clara.
go.out.INF with Clara Juan has gone out with Clara
'As for going out with Clara, Juan has indeed gone out with Clara.'

In fact, any VP-internal constituent that can be pied-piped under full predicate clefting can also be stranded under bare infinitive clefting. This has already been shown above for DPs and PPs. The paradigm is completed with examples featuring secondary predicates, complement clauses, ditransitive predicates, and verbs with locative complements.

- (12) a. Ver, Juan ha visto a María desnuda.
see.INF Juan has seen to María naked.FEM
'As for seeing, Juan has seen María naked.'
- b. Ver a María desnuda, Juan la ha visto.
see.INF to María naked.FEM Juan CL has seen
'As for seeing María naked, Juan has seen (her naked).'
- (13) a. Pensar, Juan piensa que mañana va a llover.
think.INF Juan thinks that tomorrow goes to rain
'As for thinking, Juan thinks that it is going to rain tomorrow.'
- b. Pensar que mañana va a llover, Juan lo piensa.
think.INF that tomorrow goes to rain Juan CL thinks
'As for thinking that it is going to rain tomorrow, Juan thinks (it).'
- (14) a. Mandarle, Juan le ha mandado una carta
send.INF.CL-DAT Juan CL-DAT has sent a letter
a María.
to María
'As for sending, Juan has sent María a letter.'
- b. Mandarle una carta a María, Juan se la
send.INF.CL-DAT a letter to María Juan CL CL-DAT
ha mandado.
has sent
'As for sending a letter to María, Juan has sent it to her.'

- (15) a. Entrar, Juan entró en la casa.
 enter.INF Juanentered in the house
 ‘As for going, Juan went into the house.’
 b. Entrar en la casa, Juan entró.
 enter.INF in the house, Juan entered
 ‘As for going into the house, Juan did go.’

Through this article, I will mostly focus on bare infinitive clefting, given that it is the type that can help determine whether head-to-spec movement exists. Full predicate clefting (which is clearly a case of phrase movement) will only be discussed when necessary to establish a contrast.

3.2 *Predicate Clefting is A'-movement*

As in several other languages featuring predicate clefts, the relation between the topic and the tail shows the prototypical characteristics of an A'-movement chain. To begin with, it can span finite clause boundaries.

- (16) a. **Leer**, Juan ha dicho que María ha **leído** un libro.
 read.INF Juan has said that María has read a book
 ‘As for reading, Juan has said that María has read a book.’
 b. **Venir**, me parece que ya no **vienes**.
 come.INF me.DAT seems that already not come.2SG
 ‘As for coming, it seems to me that you aren't coming in the end.’

However, predicate clefting becomes impossible if an island boundary intervenes between the topic and the tail. This is shown for complex NP islands (17a), relative clause islands (17b), adjunct islands (17c), subject islands (17d), and coordination islands (17e).¹³

- (17) a. ***Comprar**, he oído [el rumor de que Juan ha
 buy.INF have heard the rumour of that Juan has
comprado un libro].
 bought a book
 ‘As for buying, I've heard the rumour that Juan has bought a book.’
 b. ***Comprar**, he visto [al hombre que ha **comprado**
 buy.INF have seen the man that has bought
 un libro].
 a book
 ‘As for buying, I've seen the man that has bought a book.’

¹³ I do not include *wh*-islands, given that their effects are often quite weak in Spanish, as shown in the following example (from Lasnik & Uriagereka 2005:84).

(i) ¿[A quién] no sabes [cuánto aprecia Pedro *t*]?
 to who not know.2SG how.much likes Pedro
 ‘Who do you wonder how much Pedro likes?’

- c. * **Comprar**, he ido al cine [después de
buy.INF have gone to cinema after of
comprar un libro].
buy.INF a book
'As for buying, I've gone to the movies after buying a book.'
- d. *?**Ganar**, [que el Athletic **ganara** la Copa]
win.INF that the Athletic wins the Cup
sorprendería a mucha gente.
surprise to many people
'As for winning, that Athletic should win the Cup would surprise many people.'
- e. ***Leer**, Juan ha [visto una película y **leído**
read.INF Juan has watched a film and read
un libro].
a book
'As for reading, Juan has watched and film and read a book.'

Moreover, the topic and the tail must consist of the exact same lexical item, disregarding inflectional morphology (which issue I tackle right below). It is not possible for the tail to further specify the denotation of the topic—that is, the so-called genus-species effect. As Landau (2006) points out, this restriction follows straightforwardly from the copy theory of movement if the topic and the tail stand in a movement relation.¹⁴

¹⁴ Out of the six speakers I tested, two accepted the examples in (18). Interestingly, these same two speakers also accepted the coordination island example (17e) while starring the rest of the sentences in (17). Note that this is not a quirk of Spanish. Seth Cable (p.c.) reports an identical paradigm for Brazilian Portuguese predicate clefts: exactly those speakers that allow genus-species sentences can also circumvent coordination islands:

- (i) a. %Comer **peixe**, eu normalmente como **salmão**.
eat.INF fish I usually eat.1SG salmon
'As for eating fish, I usually eat salmon.'
- b. %**Ler**, eu [como peixe e **leo** romances].
read.INF I eat.1SG fish and read.1SG novels
'As for reading, I eat fish and read novels.'

This clustering of judgments indicates that, on top of a "pure" movement strategy, predicate clefts can be formed through a "base-generation-plus-movement" approach (see Cable 2004 for the latter). First, the topic is base-generated in the CP layer of the minimal finite clause containing the tail, and the two are related via predication, not movement. As a consequence, clause-internal islands (such the coordination island in (13e)) are predicted not to hold. Similarly, nothing prevents the topic and the tail to be different lexical items, as long as one observes some semantic/pragmatic congruence. Now, from its base position in CP, the topic may move up to higher CP layers, predicting that island effects will only show up in configurations involving cross-clausal movement. Although this is an interesting correlation, for the rest of the article I focus solely on the judgments of speakers who report movement effects in all cases, as these are the relevant ones for the theoretical goal of this paper.

- (18) a. *Leer **un tebeo japonés**, Juan ha leído *Akira*.
 read.INF a comic-book Japanese Juan has read *Akira*
 ‘As for reading a Japanese comic book, Juan has read *Akira*.’
- b. *Viajar, Juan ha **volado** a Amsterdam.
 travel.INF Juan has flown to Amsterdam
 ‘As for traveling, Juan has flown to Amsterdam.’

If predicate clefts are derived by movement, two questions arise: (i) why is it possible to pronounce more than one link of one and the same movement chain? and (ii) why is it that the two copies of the verb differ in their inflectional morphology? Here, I will assume the analysis given in Abels 2001, Landau 2006, and references therein. Given that double pronunciation is not the focus of this paper, I only provide a short summary of Abels’s and Landau’s analyses: readers interested in the details are referred to their papers.

Abels and Landau answer the two questions above in terms of the interplay between a late insertion model (e.g., Halle & Marantz 1993) and morphological well-formedness principles. Regarding question (i), they assume that double pronunciation can be derived from morphological well-formedness principles. More specifically, they assume that the usual requirement that only one link of a movement chain be spelled out can be overridden in order to salvage a morphologically deviant structure. In predicate clefts, the fronted category must be spelled out because it is a topic, and topicalization chains spell out their highest link. In consequence, the lower copy *should* remain unpronounced. However, since this movement chain targets an uninflected category, deletion of the lower link would not affect inflectional information. This would lead to a situation in which the inflectional morphemes are spelled out, but the root they attach to is not. Such a structure would be morphologically ill-formed (i.e., it would constitute a violation of the Stray Affix Filter). Abels and Landau argue that it can be salvaged by exceptionally spelling out the lower copy as well as the higher one.

Regarding question (ii), Abels and Landau assume that the clefted category is relatively low in the tree—that is, lower than aspect, tense, or agreement-related projections. As such, it ought to be spelled out as a bare, uninflected root. However, in the languages they study, it is not possible to spell out a bare root. Therefore, as a Last Resort mechanism, the morphological component spells out this category as an infinitive by default, resulting in the [infinitive-inflected verb] appearance of predicate clefts. This is a reasonable account given the Subset Principle for lexical insertion (Halle & Marantz 1993), given that the infinitival form does not spell out any features absent in the clefted category.

3.3 *Predicate Clefting Targets v(P)*

The next point in the argument consists of establishing what exact category undergoes movement. The hypothesis I defend in this section is that this is a

category structurally higher than the merger site of the internal arguments of the verb. This is an important conclusion, as it shows that one cannot resort to an analysis where the moving category is argued to be a RootP—that is, the bare verb root, below the level where the internal argument is merged (see, e.g., Harbour 1999 for justification of the latter analysis in Classical Hebrew).

The argument comes from the morphology of predicate topics in passive clauses. These clauses represent the only exception to the generalization that the topic always surfaces as an infinitive. When the tail is a passivized verb, the topic surfaces as a passive participle agreeing in gender and number with the promoted internal argument—exactly the same as any regular passive participle. Thus, (19a) is ungrammatical because the topic is an infinitive, and (19b) because of a gender mismatch (*puerta* ‘door’ being feminine in Spanish). The only grammatical variant is (19c), with the topic agreeing with *the door*. The same grammaticality pattern holds for cases in which an internal argument is pied-piped, as exemplified in (20) with a ditransitive predicate (as above, the promoted argument *medalla* ‘medal’ is feminine).

- (19) a. ***Reparar**, la puerta ha sido reparada.
 fix.INF the door has been fixed.FEM.SG
 ‘As for fixing, the door has been fixed.’
- b. ***Reparado**, la puerta ha sido reparada.
 fixed.MASC.SG the door has been fixed.FEM.SG
 ‘As for being fixed, the door has been fixed.’
- c. **Reparada**, la puerta ha sido reparada.
 fixed.FEM.SG the door has been fixed.FEM.SG
 ‘As for being fixed, the door has been fixed.’
- (20) a. ***Entregar** al ganador, la medalla le ha sido
 give.INF to.the winner the medal CL.DAT has been
 entregada.
 given.FEM.SG
 ‘As for giving to the winner, the medal has been given (to him).’
- b. ***Entregado** al ganador, la medalla le ha sido
 given.MASC.SG to.the winner the medal CL.DAT has been
 entregada.
 given.FEM.SG
 ‘As for giving to the winner, the medal has been given (to him).’
- c. **Entregada** al ganador, la medalla le ha sido
 given.FEM.SG to.the winner the medal CL.DAT has been
 entregada.
 given.FEM.SG
 ‘As for giving to the winner, the medal has been given (to him).’

- (21) a. ***Entregar**, la medalla le ha sido entregada
 give.INF the medal CL.DAT has been given.FEM.SG
 al ganador.
 to.the winner
 ‘As for giving, the medal has been given to the winner.’
- b. ***Entregado**, la medalla le ha sido entregada
 given.MASC.SG the medal CL.DAT has been given.FEM.SG
 al ganador.
 to.the winner
 ‘As for giving, the medal has been given to the winner.’
- c. **Entregada**, la medalla le ha sido entregada
 given.FEM.SG the medal CL.DAT has been given.FEM.SG
 al ganador.
 to.the winner
 ‘As for giving, the medal has been given to the winner.’

In the previous section, I followed Abels (2001) and Landau (2006) in assuming that infinitives are the minimal forms that can spell out all the features of the clefted category—a straightforward application of the Subset Principle of Distributed Morphology. By this logic, the topic in passive predicate clefts is spelled out as a passive participle because, in this particular set of cases, the passive participle is a closest match for the features of the topic than the infinitive is. Because the choice between an infinitive and a passive participle depends on the voice of the clause, then it must be the case that the topic in examples like (19c), (20c), and (21c) necessarily contains an instance of the functional head responsible for voice alternations, and especially, passive participle agreement. If this were not the case, it would be mysterious why the topic surfaces as a passive participle; in particular, it would constitute a violation of the Subset Principle, because the participle would then spell out features not present in the clefted category.

Now, particular accounts differ in the exact label of this functional head. For instance, Kayne (1989) originally identified it with Agr_OP. In more recent work (e.g., Chomsky 2000), it has been suggested that this head is v⁰ (or Voice, in Kratzer 1996 and Pyllkänen 2002), mostly as a consequence of the relocation of the work of Agr projections to other heads. For the purposes of this article, there is very little difference (if any at all) between these two options: what is important is that, under both analyses, passive participle agreement is encoded in a head relatively high within the expanded VP domain. For exposition's sake, I will take the latter view and assume that passive participle agreement resides in the v head. Readers who do not agree

with this choice are invited to recast the discussion in terms of an Agr_O head. Thus, I propose the following generalization.¹⁵

- (22) Category of the topic
Spanish predicate clefting (in both the full predicate and bare infinitive variants) targets the vP level.

3.4 *Interim Summary*

So far, we have seen that Spanish predicate clefting (in both the full predicate and bare infinitive variants) has the following two characteristics: (i) it is a case of movement, at least for a subset of speakers, and (ii) it targets the vP level. These conclusions provide a environment to test whether bare infinitive clefting is reducible to remnant vP movement, or rather, whether it requires head-to-spec movement as proposed in section 2.2. If bare infinitive clefting were remnant movement, then we should expect stranded vP-internal constituents to consistently exhibit signs of having moved out of vP. I show in the next section that this is not the case. I go through various tests for object movement in Spanish (involving binding, indefinites, subextraction, and clitic doubling), all of which show that stranded vP-internal constituents have *not* moved out of vP. Consequently, a remnant vP movement analysis becomes untenable, and the head-to-spec movement alternative gains support.

4. Phrase Movement?

4.1 *Object Movement in Spanish*

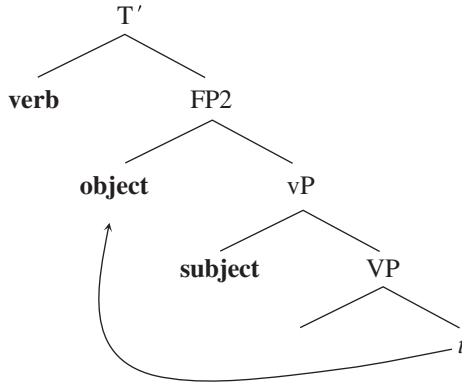
Overt object movement in Spanish is quite difficult to detect just on the basis of surface word order, and to date, the best empirical evidence supporting its existence is the work of Ordóñez (1997, 1998). His claim is that VOS orders are derived by moving the object to the left of a low subject. His analysis is represented in the tree in (23), where V-to-T movement has been omitted for simplicity. I label the landing site of the object as FP2 simply to maintain Ordóñez's terminology, but the exact label is not important as long as it is accepted that it is above the thematic position of the subject—for instance, Gallego & Uriagereka (2006) reinterpret it as an outer specifier of vP.¹⁶

¹⁵ Somewhat unfortunately, this argument cannot be replicated in other environments affecting the v⁰ head, such as middles or causatives. The reason is that, in Spanish, neither middles nor causatives have a dedicated morpheme. However, in languages where such morphemes exist, the same effect can be observed. Consider, as an illustration, the following Hungarian example involving a causative morpheme (from Vicente 2007:194–195).

(i) Ellenóriz-*(**tef**)-ni, ellenóriz-**tef**-t-em a feladatot.
check.CAUS.INF check.CAUS.PST.ISG the exercise.ACC
'As for having (it) checked, I had the exercise checked.'

¹⁶ In fact the only reason why Ordóñez postulates an independent projection is because the antisymmetric framework he assumes does not allow multiple specifiers/adjuncts.

(23) Ordóñez's analysis of VOS orders



Other researchers (e.g., Zubizarreta 1998, Uribe-Etxebarria 2003) have argued that VOS orders are derived by moving the whole [VO] constituent across the subject. However, Ordóñez points out that, under such an analysis, the preposed object does not c-command the subject. Hence, Zubizarreta's prediction is that the object will not be able to bind the subject in VOS orders. This, however, is incorrect. Ordóñez observes that, in the VOS order, the object can bind variables contained in the subject (24a). Variable binding, however, is impossible in the VSO/SVO order (24b,c). This asymmetry follows if, as predicted by (23), the object moves to a position c-commanding the subject in (24a), but not in (24b,c). Moreover, given that (24a) does not result in a Weak Crossover violation, Ordóñez concludes that object movement must be A-movement—more specifically, as we shall see below, A-scrambling driven by information structure reasons.

- (24) a. Hoy ha traído [OBJ a cada_i niño] [SUB su_i madre].
 today has brought to each boy his mother
 'His mother has brought each boy today.'
- b. *Hoy ha traído [SUB su_i madre] [OBJ a cada_i niño].
 today has brought his mother to each child
 'His mother has brought each child today.'
- c. *[SUB Su_i madre] ha traído [OBJ a cada_i niño] hoy.
 his mother has brought to each child today
 'His mother has brought each child today.'¹

Let us grant, then, that (23) is the correct way to derive VOS orders. This is an important conclusion, as it establishes that object scrambling out of vP exists in Spanish. Consequently, Ordóñez's work could in principle be used to support an analysis of bare infinitive fronting in terms of remnant vP movement. Note, however, that such an analysis would be based on the assumption that object scrambling is a productive process in Spanish—that is,

it can be invoked whenever it is necessary to create a remnant vP. In the rest of this section, I will show that this assumption is incorrect: although object scrambling does exist in Spanish, its domain of application is extremely limited. In fact, it can be shown that there are several cases of bare infinitive clefting where one cannot possibly resort to object scrambling. As a consequence, the remnant movement analysis becomes untenable.

Let me start by noting that, if object scrambling of the type in (23) were really productive, it would be a mystery why binding is ungrammatical in examples like (24c). In principle, one could imagine a derivation as in (25):¹⁷ first, the object moves to the left of the subject (25b), generating a structure identical to (24a) above as an intermediate representation. Next, the subject raises to Spec,TP, deriving the SVO surface order of (24c), represented below as (25c). Finally, at LF, the subject reconstructs to its base position below the moved object (25d). Given that in this position it is c-commanded by the scrambled object, it is incorrectly predicted that binding should be possible.

- (25) a. Base structure
 has brought [_{VP} [his mother]][each child]]
 b. Object scrambling
 has brought [_{FP2} [each child]][_{VP} [his mother] [*t*]]
 c. Subject raising to a preverbal position (=surface SVO)
 [his mother] has brought [_{FP2} [each child] [_{VP} [*t*] [*t*]]]
 d. Subject reconstruction at LF
 has brought [_{FP2} [each child]][_{VP} [his mother] [*t*]]

Note that one cannot rule out this derivation by assuming that subject raising is A-movement and that A-movement does not reconstruct (as claimed in Chomsky 1995a and Ausín 2001). For one, more recent work has shown that A-movement can in fact reconstruct (see Boeckx 2001, Legate 2003, Sauerland 2003). Ordóñez (1997, 1998) provides a Spanish-internal argument in favor of reconstruction under A-movement. In (26), we can see that a variable contained in a scrambled object can be bound by low subject, which can only be achieved via reconstruction of the object. Because object movement is arguably A-movement (given the lack of Weak Crossover effects), then it must be the case that, in Spanish, A-movement can reconstruct. Now, if this is correct for object A-movement, there is no conceivable reason why subject A-movement should not be able to reconstruct, licensing binding in (24c).

- (26) ¿Qué libro le ha regalado [_{OBJ} a su_i amigo]_[SUB cada_i niño]?
 what book CL has given to his friend each
 niño]?
 boy
 ‘Which book has each boy given to his friend?’

¹⁷ For exposition's sake, I ignore cyclicity considerations in this representation.

To block variable binding in (24c), it must be the case that these examples do not feature object movement at all. That is, overt object movement only happens in VOS clauses. This is not such a strange restriction as it might appear at first sight. It is a common observation (Ordóñez 1997, 1998; Zubizarreta 1998; Uribe-Etxebarria 2003; Lahousse 2004) that the VOS order uniformly results in a focus interpretation of the subject. Zubizarreta builds this observation into her analysis, ensuring that the VOS order is licensed only in cases where the subject is focalized.¹⁸ She argues that VOS orders arise so as to leave the subject as the most embedded constituent in the clause. In this configuration, the subject receives pitch accent through the Nuclear Stress Rule (Cinque 1993), resulting in a focus interpretation. Although Zubizarreta's theory of VOS orders is based on VP movement rather than object scrambling, her intuition can be extended without trouble to Ordóñez's analysis.

Therefore, we can conclude that object movement out of vP in regular clauses is only licensed as a means to focalize the subject. This conclusion predicts that, if bare infinitive fronting were remnant movement, then the non-topic part of the clause should exhibit a VOS order with the subject in focus. This is obviously not true: SVO and VSO orders are perfectly grammatical and acceptable, as evidenced by several examples throughout this paper.¹⁹ Therefore, the remnant vP movement analysis cannot account for a large number of cases of bare infinitive clefting. Note that one cannot circumvent this problem by postulating that, under bare infinitive clefting, object movement can apply exceptionally, even if it does not result in a VOS order or the subject being focalized. Apart from its ad hoc status, this analysis would take us to the same point as (25) above: given that the object moves to a position c-commanding the base position of the subject, the former ought to be able to bind into the latter. This, however, is not the case.

- (27) a. *Traer, [su_i madre] ha traído [a cada_i niño] hoy.
 bring.INF his mother has brought to each boy today
 'As for bringing, his mother brought each child today.'
- b. *Traer, hoy ha traído [su_i madre] [a cada_i niño].
 bring.INF today has brought his mother to each child
 'As for bringing, his mother brought each child today.'

Therefore, binding data show that bare infinitive clefting is *not* reducible to remnant vP movement. In the remainder of this section, I reinforce this idea by showing that objects stranded under bare infinitive clefting exhibit clear signs of sitting in a vP-internal position.

¹⁸ Note, though, that the reverse does not hold, given that a subject can also be focalized through fronting to a left-peripheral position.

¹⁹ Note that VOS orders are also compatible with bare infinitive clefting, and in such cases, a remnant movement analysis would be possible. The point, though, is that there is a very large and consistent set of cases in which remnant movement is *not* an option.

further movement out of them is blocked (in the same way as in languages such as Turkish or Hindi).²⁰ This generalization makes a clear prediction: if bare infinitive clefting were remnant vP movement, then stranded objects should be opaque to subextraction, given that they must move to create a remnant vP. In reality, though, extraction out of stranded objects (both nominal and clausal) is perfectly fine. Consequently, it must be the case that these objects have not moved out of vP, contrary to what is required by the remnant movement analysis of bare infinitive clefting.

- (31) a. Leer, ¿[sobre qué tema]_i has leído [varios
read.INF about what topic have.2SG read some
libros *t_i*?
books
'As for reading, what topic have you read some books about?'
- b. Querer, ¿[qué equipo]_i quieres [que *t_i* gane
want.INF what club want.2SG that win.3SG
la liga]?
the championship
'As for wanting, which club do you want to win the championship?'

4.2.3 *Clitic doubling*

Finally, Ordóñez (1997, 1998) observes that certain ditransitive predicates (such as *entregar* 'to hand in' or *ofrecer* 'to offer') trigger optional clitic doubling of their goal argument.

- (32) a. El profesor (**les**) entregó las notas a los alumnos.
the teacher CL hand.3SG the grades to the students
'The teacher handed the grades to the students.'
- b. Juan (**le**) ofreció vino a María.
Juan CL offered.3SG wine to María
'Juan offered María some wine.'

However, this is the case only if the goal argument stays in its canonical position. As soon as it is moved, clitic doubling becomes obligatory. This is shown in (33) for topicalization, and in (34) for the marked [goal-theme] order.

- (33) a. A los alumnos, el profesor ***(les)** entregó las notas.
to the students the teacher CL gave.3SG the grades
'The students, the teacher handed them the grades.'
- b. A María, Juan ***(le)** ofreció vino.
to María Juan CL offered.3SG wine
'María, Juan offered the wine to her''

²⁰ See Gallego and Uriagereka 2006 for the same generalization regarding subjects.

- (34) a. El profesor ??(les) entregó a los alumnos las notas.
the teacher CL gave.2SG to the students the grades
'The teacher handed the grades to the students.'
- b. Juan *(le) ofreció a María vino.
Juan CL offered.2SG to María wine
'Juan offered María some wine.'

The generalization seems to be that the goal arguments of these verbs are obligatorily clitic doubled whenever they are moved out of their canonical position. Now, consider what happens when a goal argument is stranded under bare infinitive clefting: in this context, clitic doubling is only optional.

- (35) a. Entregar, el profesor (les) entregó las notas a
give.INF the teacher CL gave.3SG the grades to
los alumnos.
the students
'As for handing, the teacher handed the grades to the students.'
- b. Ofrecer, Juan (le) ofreció vino a María.
offer.INF Juan CL offered.3SG wine to María
'Juan offered María some wine.'

This optionality is unexpected under a remnant movement analysis of bare infinitive clefting: since the goal argument should move in order to create a remnant vP, clitic doubling would be predicted to be obligatory. Since it is not, we conclude that goal arguments do not move out of vP in (35), and that these cases of bare infinitive clefting cannot be the result of remnant movement.

4.2.4 *Interim conclusion*

We have seen in this subsection that objects stranded under bare infinitive clefting do not show any signs of having moved out of vP. In particular, and unlike objects that have moved (i) they cannot bind into the subject, (ii) they do not correlate with a focus reading on the subject, (iii) when indefinite, they can receive nonspecific readings, (iv) they are transparent for extraction, and (v) they do not trigger obligatory clitic doubling. All these properties suggest that the remnant vP analysis is incorrect for Spanish, simply because no remnant vP can be created in the first place.

4.3 *Against a Selective Deletion Alternative*

Before concluding that bare infinitive clefting is not phrase movement in disguise, it is necessary to eliminate one other possible alternative, namely, a scattered deletion analysis á la Fanselow & Ćavar (2002) or Nunes (2004).²¹

²¹ Thanks to Johan Rooryck for extended discussion regarding this possibility.

The analysis would proceed as follows: first, the entire vP is moved, without stranding its complements. The lower copy of vP is pronounced in its entirety. However, in the upper copy, only the verb receives a phonetic realization (as an infinitive, for the reasons discussed in section 3.2), resulting in a surface configuration in which the object appears to have been stranded (36). This is schematically shown below, with strikethrough marking nonpronunciation. Under this analysis, full predicate clefting consists of spelling out the upper copy in its entirety, but only the verb in the lower copy.

- (36) [leer ~~el libro~~], Juan ha leído el libro.
 read.INF the book Juan has read the book

Note, to begin with, that it is far from trivial to set up a system of copy (non-) pronunciation that can generate (36) without over- or undergenerating in other areas. However, for the sake of the argument, let us assume that such a system can be defined. It is important to bear in mind that, by definition, this would be an analysis operating exclusively at the PF branch of grammar. The consequence is that, in spite of its surface form, cases of bare infinitive clefting would have the same LF as their full vP-fronting counterparts. Below, I provide three contexts (quantifier scope, NPI licensing, and idiom interpretation) that show that this is not so. More specifically, I show that, under bare infinitive fronting, the stranded object is uniformly interpreted in its surface position in the tail. This generalization follows without stipulation under a head-to-spec movement analysis of bare infinitive clefting: the stranded object cannot be interpreted in the topic position simply because it has never moved to that position. Under a selective deletion analysis, such readings would be derived by postulating that, if part of the upper copy is deleted at PF, then the exact same part will also be deleted at LF. Although this is technically feasible, it would leave us in the awkward position of not having a portion of the upper copy represented at either PF or LF. If the stranded object is neither pronounced nor interpreted in the topic position, then we are left without any empirical evidence supporting its presence there. Therefore, it is more reasonable to say that the object has never been pied-piped under movement of the bare infinitive, which possibility is afforded by the theory of movement I have proposed.

4.3.1 *Quantifier scope*

For the first asymmetry, consider the following pair. Example (37a) is scopally ambiguous; however, (37b) only has the $[2 > \forall]$ reading, given that phrase movement creates scope islands. The quantified object is trapped inside the fronted predicate, and therefore it cannot move to a position where it could c-command and scope over the existential quantifier (see Sauerland 1998 and references).

- (37) a. Two girls have dated every boy. $[\checkmark 2 > \forall / \checkmark \forall > 2]$
 b. [Date every boy], two girls have. $[\checkmark 2 > \forall / * \forall > 2]$

The same asymmetry can be reproduced in Spanish: whereas (38a) is ambiguous, (38b) only has the [2 > ∀] reading.

- (38) a. Dos chicas han salido con todos los chicos.
 two girls have gone out with all the boys
 ‘Two girls have dated every boy.’ [✓2 > ∀/✓∀ > 2]
- b. [Salir con todos los chicos], dos chicas ha
 go out.INF with all the boys two girls have
 salido.
 gone out
 ‘As for dating all the boys, two girls have.’ [✓2 > ∀/*∀ > 2]

Nonetheless, the inverse scope reading reappears if only the bare infinitive is clefted.

- (39) [Salir], dos chicas han salido con todos los chicos.
 go out.INF two girls have gone out with all the boys
 ‘As for dating, two girls have dated every boy.’ [✓2 > ∀/✓∀ > 2]

If (38b) and (39) differed only in their PFs (i.e., if they had identical LFs), one would expect them to have the same scope possibilities. However, (39) has the same readings as (38a), which suggests that its LF is closer to the latter’s—that is, without the object being pied-piped to a topic position.

4.3.2 *NPI licensing*

In cases of full predicate clefting, the fronted predicate may not contain an NPI (40a), even if its base position in the tail is in an NPI licensing environment (40b). This restriction is presumably reducible to the cross-linguistic ban against topicalizing NPIs.

- (40) a. *[Leer ningún libro], Juan no lo ha leído.
 read.INF any book Juan not CL has read
 ‘As for reading any book, Juan hasn’t read it.’
- b. Juan no ha leído ningún libro.
 Juan not has read any book
 ‘Juan hasn’t read any book.’

Nonetheless, as shown here, a stranded object can be an NPI. This would be an unexpected result if (41) were derived via phrase movement plus PF deletion, because then we would expect it to have the same LF—and, by extension, the same restrictions on NPI licensing—as (40b). However, the grammaticality of (41) follows if the NPI object is never pied-piped to the topic position.

- (41) [Leer], Juan no ha leído ningún libro.
 read.INF Juan not has read any book
 ‘As for reading, Juan hasn’t read any book.’

4.3.3 *Idiom interpretation*

Landau (2006) observes that, in Hebrew, if the verb and the object form an idiomatic unit, the idiomatic reading is only preserved under full predicate clefting. Under bare infinitive clefting, only the literal reading survives. The same restriction holds for Spanish.

- (42) a. [Estirar la pata], Juan la ha estirado.
 stretch.INF the leg Juan CL has stretched
 ✓‘Juan has stretched his leg (as a warm-up exercise).’
 ✓‘Juan has died.’
- b. [Estirar], Juan ha estirado la pata.
 stretch.INF Juan has stretched the leg
 ✓‘Juan has stretched his leg.’
 *‘Juan has died.’

Landau explains this effect by capitalizing on the fact that, in Hebrew (as in Spanish), predicate clefting is essentially a way of creating alternatives to the clefted constituent. In particular, he claims that full predicate clefting creates alternatives to VP meanings, whereas bare infinitive clefting creates alternatives to verb meanings alone, to the exclusion of the object. Hence, bare infinitive clefting blocks idiomatic readings, at least to the extent that one cannot create alternatives to parts of idioms.²² As in the previous two cases, this asymmetry would be unexpected if (42a) and (42b) had the same LF. However, it follows if the object is not pied-piped in (42b), since that would force the two parts of the idiom to be interpreted separately.

²² Ricardo Etxepare (p.c.) and Carme Picallo (p.c.) both point out that there seem to be some exceptions, such as *tocar las pelotas* ‘to be annoying’ (lit. ‘to touch [someone’s] balls’), which maintains the idiomatic reading under bare infinitive clefting (i). Note, though, that the idiomatic reading is also kept under topicalization of the object (ii), but in the case of (42), this is not so (iii). Presumably, this double contrast can eventually be reduced to the different resistance of idioms to assigning a contrastive interpretation to just one of their parts. A genuine counterexample would be an idiom where the idiomatic reading is preserved under bare infinitive clefting but not under object topicalization, or vice versa.

- (i) Tocar, Juan nos ha tocado las pelotas.
 touch.INF Juan us has touched the balls
 ‘Juan has been annoying us.’ [✓idiomatic reading]
- (ii) Las pelotas, Juan nos las ha tocado.
 the balls Juan us CL has touched
 ‘Juan has been annoying us.’ [✓idiomatic reading]
- (iii) La pata, Juan la ha estirado.
 the leg Juan CL has stretched
 ‘Juan has stretched his leg.’ [*idiomatic reading]

4.4 Conclusion

Although object movement out of vP does exist in Spanish, its domain of application is extremely limited, namely, VOS clauses, which in turn are only possible if the subject is in focus. This restriction casts the first serious doubts on the remnant vP movement analysis of bare infinitive clefting. I have further shown that vP-internal constituents stranded under bare infinitive clefting show clear signs of not having moved out of vP. Since no remnant vP can be created, the remnant vP movement analysis becomes untenable. Moreover, I have also shown that an analysis based on full vP movement plus selective deletion is not tenable, either. In contrast, a head-to-spec movement analysis can account for the properties of bare infinitive clefting without trouble: stranded vP-internal constituents are expected not to pass any movement tests for the simple reason that they have not moved.

5. The Syntax of Spanish Predicate Clefts

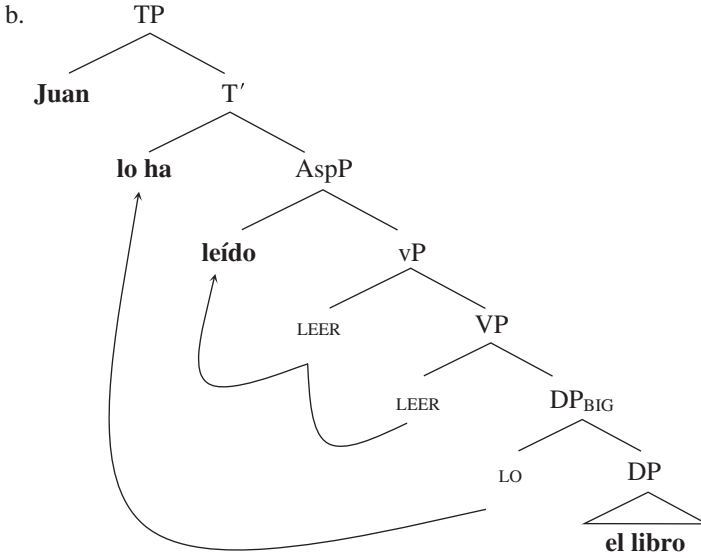
So far we have established that Spanish bare infinitive clefting is derived via movement of the bare *v* head, rather than vP movement in disguise. In this section, I want offer more detailed derivations of the structures in question, with the goal of clarifying some issues that have been mentioned in the preceding sections.

Let me begin with the derivation of full infinitive clefting. The derivation of the clause up to the TP level is rather straightforward, though it requires two brief notes. First, there is the issue of the clitic doubling the pied-piped object. Although I do not have any clear answer as to why it is necessary to have a clitic in the first place,²³ I believe its placement is straightforward. For concreteness, I will adopt Uriagereka's (1995) analysis, where the clitic starts off as a sister to the object in a "big DP" structure and then adjoins to T. When the object subsequently moves, either on its own or, as in this case, as part of vP, the clitic is stranded.²⁴ Second, after Zagona (2001), I assume that the perfect participle raises out of vP to an aspectual position, so as to account for its morphology (for clauses with simple tenses, I assume that the verb raises all the way to T). In the tree here, I represent the lower copies of movement with small caps, and I omit irrelevant positions.

²³ One possibility would be to adopt Rimmell & Leu's (2002) and Baltin's (2005) proposals to decompose VP fronting into object fronting plus an independent step of verb fronting. Under this analysis, clitic doubling is straightforwardly linked to object topicalization. However, this analysis also makes various erroneous predictions. First, it does not predict the existence of scope freezing effects (section 4.3.1). Second, it predicts (incorrectly) that VP fronting would block idiomatic readings in the same way as verb fronting or object fronting alone (section 4.3.3). Finally, it would be necessary to explain why the object and the verb are not separated by an intonational break, as is the case in other cases of multiple topicalization. Given these problems, I must leave the trigger of clitic doubling as an unsolved problem.

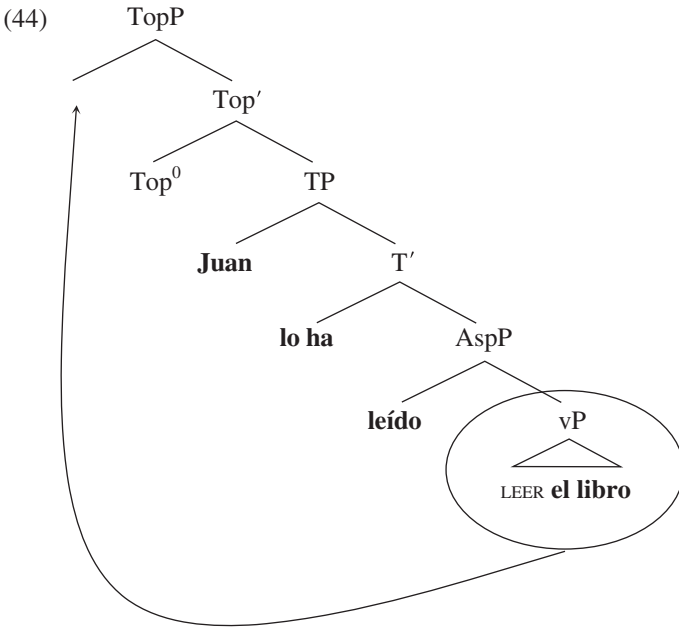
²⁴ For simplicity, I represent the clitic as adjoined to T, but the analysis would remain the same if it was actually taken to move to a inner specifier position of T. Similarly, nothing would change if the clitic was taken to be base generated in the TP domain rather than moved from below.

- (43) a. [Leer el libro], Juan lo ha leído.
 read.INF the book Juan CL has read
 ‘As for reading the book, Juan has read it book.’



Next, the entire vP is moved to the topic position.²⁵ For explicitness, I am assuming that there is TopP projection, and that movement is triggered by feature checking needs (or, alternatively, Agree plus EPP satisfaction). However, the analysis is independent of the technical implementation of topic movement, and it would remain the same under analysis that do not involve a TopP projection (cf. accounts where topics are adjoined to some other XP) or a triggering feature (cf. interface-based accounts of topicalization).

²⁵ For simplicity, I am ignoring the intermediate landing site at the edge of the vP phase. Nonetheless, this step would be required for predicate clefting in the same way as for other types of A'-movement. Similarly, long-distance predicate clefting (16) would require the moved constituent to stop at every intermediate Spec,CP in the way.

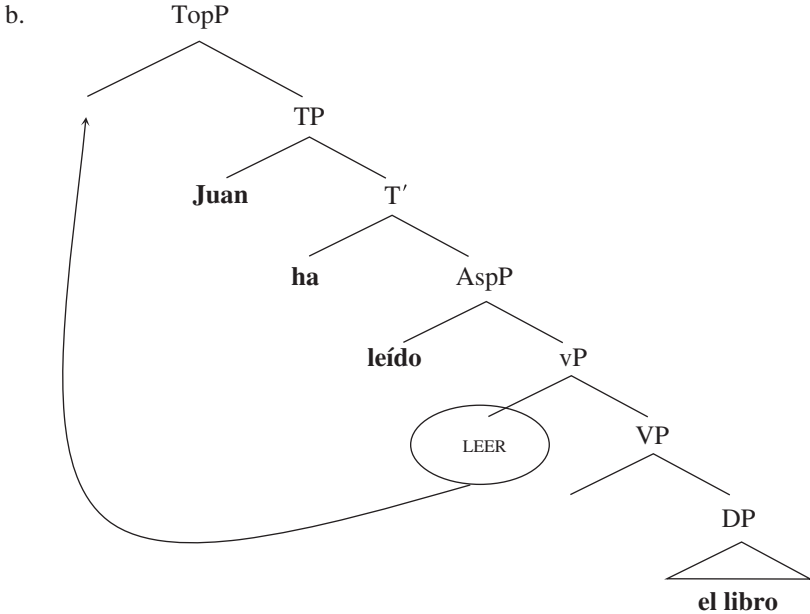


The fronted constituent in (44) is headed by a *v* head without any aspect or tense features. As discussed in section 3.2, it is spelled out as an infinitive, as these are the most unmarked forms. The Subset Principle blocks the insertion of a form that spells out features not present in this head. In the case of passive predicate clefts, where the voice alternation triggers agreement in *v*, the Subset Principle allows the insertion of a more specific form, namely, an agreeing passive participle (see the discussion in section 3.3).

The derivation of bare infinitive clefting is nearly identical to the one in (43) and (44), except for the fact that the topic feature attracts just the bare *v* head instead of the entire *vP*. Note that there is no clitic in this case, given that there is no object topicalization either. Aside from this difference, the spell out of (45) works the same as above.²⁶

- (45) a. [Leer], Juan ha leído el libro.
 read.INF Juan has read the book
 ‘As for reading, Juan has read the book.’

²⁶ Note also that it is necessary to move the *v*⁰ head plus the lexical *V*⁰ incorporated into it. Otherwise, the topic would be a light verb like *make* or *become*, which is the usual spell-out of bare *v* heads (see, among others, den Dikken & Sybesma 1999, Megerdooimian 2003).



As one anonymous reviewer pointed out, these derivations incur a potential technical problem, on the assumption that predicate clefting is triggered by a [+topic] feature in *v*. As shown in (43) *v* undergoes head movement to a position external to *vP* prior to predicate clefting. In this configuration, the copy of *v* in *Asp*⁰ could conceivably cause an intervention effect between the topic position and the lower copy of *v*. It should be noted, though, that this problem is independent of whether predicate clefting is analyzed as remnant phrase movement, and that it arises in any language where predicate clefting targets a lower category than the one hosting the tail (Hebrew, Russian, Brazilian Portuguese, Yiddish, etc.).²⁷

Let me, however, try to offer a way around this problem. Note, to begin with, that this would be a rather atypical intervention effect. A category *y* is normally assumed to intervene between *x* and *z* if $x > y > z$ (where “>” is the c-command relation) and a feature is shared by all three constituents. However, in this definition, *y* and *z* are independent constituents (in early minimalist terms, one could say that they are different items in the

²⁷ In fact, this is not even a problem exclusive to predicate clefts, given that it arises also in the realm of VP ellipsis. In recent years, it has become customary to implement VPE in terms of an [E] feature, which instructs PF to parse the complement domain of the head it resides in as null (see Merchant 2001 and much following work). Now, if this head happens to undergo further movement (say, to T or C), the prediction is that a larger category should be elided. This, however, is not so: Goldberg (2005) shows that VPE always targets *vP/VP*, even in languages where the verb moves higher. As far as I can tell, the current literature on ellipsis does not offer a solution to this problem. My thanks to Jeroen van Craenenbroeck (p.c) and Jason Merchant (p.c.) for discussion on this topic.

numeration). This is not the case in the trees above, where *y* is a copy of *z*. If we take this difference seriously, the intervention problem can be circumvented by saying that moved constituents do not create intervention effects for lower copies of themselves. This claim, although admittedly quite far-fetched at first sight, can be rationalized if we adopt the assumption that movement is decomposed into Agree plus satisfaction of an EPP feature (Chomsky 2000 and subsequent work). As Rezac (2004) observes, these two operations are logically independent: there is no requirement that the EPP feature on a particular head should be satisfied by the exact same constituent that the head in question has Agreed with. If so, then it is possible for the EPP feature in the topic head to be satisfied by the lower copy of *v*, even if the relevant Agree relation is established with the copy of *v* that has incorporated into Asp.

6. Outlook

Movement of a bare head to a specifier position is a type of movement that has been considered for a long time not to be possible, but which is virtually unavoidable given Chomsky's (1995b) Bare Phrase Structure hypothesis. In this article, I provided an empirical argument in favor of its existence. I have shown that bare infinitive clefting in Spanish cannot be phrase movement in disguise (either remnant movement or scattered deletion) and must therefore involve a type of movement that affects a bare head to the exclusion of its complement domain. This analysis, in conjunction with Matushansky's (2006) reanalysis of head-to-head movement, establishes the foundations of a unified theory of movement in which movement processes are insensitive to the phrase structural status of the targeted constituents. This is, in essence, the same theoretical goal that one can find in several proposals that postulate reiterative remnant movement (see Hinterhölzl 1997, Kayne 1998, Koopman & Szabolcsi 2000, Mahajan 2003, Müller 2004)—namely, to eliminate the head versus phrase movement distinction. In both these analyses and the one I developed here, the goal is to allow head movement to be formally the same as phrase movement.²⁸ However, instead of postulating that only maximal categories may move (and therefore requiring reiterative remnant movement), I have taken the route of allowing bare heads to move as though they were phrases. The strongest implementation of this hypothesis is that all movement is head-to-spec movement, and that phrase movement is a case of pied-piping, in a way reminiscent of Chomsky's (1995a) feature-movement-plus-generalized-pied-piping hypothesis.

The scope of this article is admittedly quite narrow, as I have only advocated the existence of head-to-spec movement for one construction in one language. Determining whether there are more such cases is a task that,

²⁸ One anonymous reviewer wonders whether this unification could allow movement of phrases into head positions. Given that movement into head positions is reanalyzed here (following Matushansky 2006) as movement to specifier plus m-merger, the question is better recast as whether it is possible for a phrase to be the input for m-merger. See Carnie 1996, 2000 for some evidence that this might indeed be possible in some cases.

for space reasons, I cannot accomplish here. For one, given cases analogous to the Spanish predicate cleft, it would be quite difficult to determine solely on the basis of surface order whether they involve remnant or head-to-spec movement. Rather, each individual case would require a detailed study to determine whether a remnant constituent can be created in the first place, which in turn requires a close understanding of the VP syntax of the language in question. Nonetheless, I believe it is not extremely difficult to find other potential cases of head-to-spec movement—and in fact, the existing literature already contains a few candidates.²⁹ For instance, Landau (2006) argues against a remnant movement analysis of predicate clefts in Modern Hebrew, for the same reason as I have given for Spanish—namely, the lack of a productive scrambling rule. The same reasoning is used by Ürögdi (2006) and Vicente (2007) for Hungarian and Cheng and Vicente (2007) for Mandarin Chinese. Similarly, Holmberg (2000) claims that some instances of Scandinavian stylistic fronting involve movement of a participial head to Spec,TP without prior remnant formation.³⁰ Toyoshima (2001) also argues for a head-to-spec movement analysis for participle fronting in Slavic (i.e., what Lema & Rivero 1987 originally analyzed as long head movement).³¹ Fanselow (2002) also observes that there is a subset of cases of partial participle fronting in German that cannot be reduced to remnant movement, again, because stranded VP-internal constituents can be independently shown not to have undergone movement. Given that fronting of the bare head of a predicate is a relatively widespread phenomenon, the expectation is that more cases of head-to-spec movement will be discovered as more languages are examined.

²⁹ As one anonymous reviewer points out, all the cases cited below involve movement of a verbal constituent (i.e., an infinitive or a participle), which raises the question of whether head-to-spec movement exists beyond this area. Part of the problem is that the VP area is possibly the one part of syntax where movement of the complements of a head is best understood. Therefore, this is also the area where it is the easiest to make a clear case for the (im)possibility of creating a remnant VP (and therefore, for the necessity of either head-to-spec or remnant movement). In principle, there is no reason why some word-order alternations within, say, the nominal domain could not be analysed as head-to-spec movement. For instance, it might be the case that some of the [N-Adj] orders that Cinque (2005) analyzes as NP movement to a specifier position actually involve head-to-spec movement of bare N head. However, this cannot be established until our understanding of the syntax of noun complements (PPs, complement clauses) reaches a level comparable to our understanding of the syntax of verb complements.

³⁰ Note, however, that Holmberg (1999) actually argues that object shift is exceptionally licensed just in case a remnant VP is subsequently fronted.

³¹ Migdalski (2006) has also argued convincingly that participle fronting in Slavic is best analyzed as a case of locative inversion, and thus it targets Spec,TP (contra Lema & Rivero's claim that it targets the C head). He proposes a remnant predicate movement analysis, which suffers from the complication (already noted in Lema & Rivero) that several Slavic languages lack full predicate fronting in the first place.

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