A feature-inheritance approach to root phenomena and parametric variation

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Abstract

This work concerns itself with Root Transformations (RT) such as topic fronting in English, Japanese, and Spanish. We claim that RTs are in principle compatible with all types of embedded clauses regardless of whether the selecting predicate is factive/non-assertive or non-factive/assertive. Languages vary greatly on how freely they allow RTs in various types of complements. Adapting an intervention account of RTs in which an operator moving to Spec,CP intervenes with other types of operations, we claim that two A'-movements compete for the same syntactic position in certain types of clauses. We account for the variation in the distribution of RTs across languages by the options made possible by feature inheritance of discourse features. In Japanese and Spanish, the topic feature may be inherited by T from C, so that some instances of topic fronting are to Spec,TP. This movement does not compete with the operator that has moved to Spec,CP, so no competition arises. In contrast, the topic feature stays in C in English, so that topic fronting (and other RTs) and the operator movement to CP vie for the same position. This then triggers a competition effect in many constructions such as factives where operator movement has occurred.

Keywords: topicalization, competition, factivity, feature inheritance, root transformations.

1. Introduction

Emonds (1969) observed that certain transformations can only apply in root environments.

> … a root will mean either the highest S in a tree, an S immediately dominated by the highest S or the reported S in indirect discourse.
>
> Emonds (1969:6)

A root transformation such as Negative Constituent Preposing (NCP), which Emonds (1976) characterizes as non-structure preserving, is said only to apply in these contexts. The following demonstrates this for the two environments; "highest S" (1a) and "reported S in indirect discourse" (1b):

(1) a. Never had I had to borrow money.
b. John said that never had he had to borrow money.
c. *The fact that never had he had to borrow money is well-known.

In a later work, Emonds (2004) responds to criticism that root transformations apply in more constructions than he originally specified by extending his notion of 'root'. He argues that the so-called Root Transformations (RTs) apply in "root-like indirect discourse embeddings" (or "RIDEs"), which are defined as finite complement clauses of a governing V or A. The following are two examples of RIDEs:

(2) a. Bill warned us that [$_{RIDE}$ flights to Chicago we should try to avoid].
b. I made a promise right away that [$_{RIDE}$ only until five would we work].[1]

In contrast, following are non-RIDEs.

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[1] According to Emonds (2004:77), the clausal complement in (2b) is sister of V (not of N). This syntactic dependency is obtained via extraposition. In clear cases where the clausal complement is within NP, it displays non-root properties in English:

(i) *A promise that [$_{IP}$ defective sets the company will fix] has been made by John.

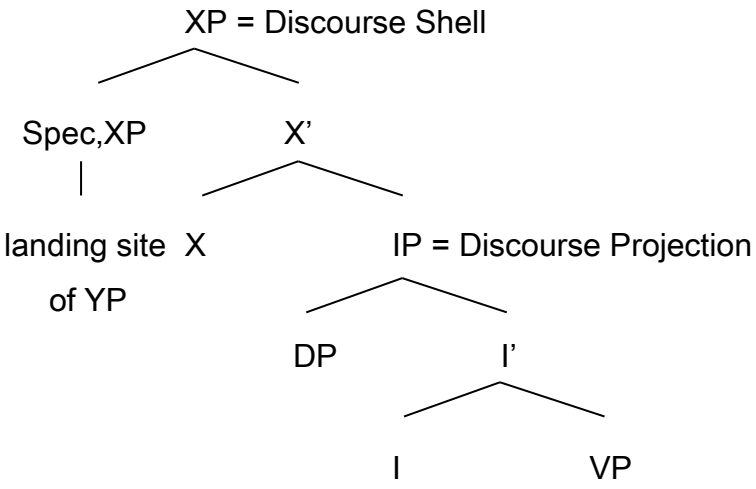
(3) a. *Bill warned us [flights to Chicago to try to avoid].

b. *Mary used another company since/until [flights to Chicago they could avoid].

c. *A warning that [flights to Chicago travellers should avoid] will soon be posted.

(3a) is an instance of non-reported speech, while (3b) is a case of an adjunct clause, and (3c) involves the complement of N. Emonds (2004) offers a large inventory of root transformations, including topicalization, VP-preposing, preposed negative constituents, V inversion for quotes and for directional PPs, and left dislocation, and suggests that these only apply in RIDE environments. He demonstrates this for English, French, and German, thereby showing the cross-linguistic relevance of RIDEs for RTs. To formally distinguish RIDEs from non-RIDEs, Emonds (2004, 2012) proposes that RIDEs project a Discourse Shell.

(4)



"YP" corresponds to any constituent undergoing movement to the specifier of the discourse shell. Only RIDEs project this discourse shell, accounting for the occurrence of root transformations in root-like contexts.[2]

Unlike Emonds' syntactic approach, Hooper and Thompson (1973) and Bianchi and Frascarelli (2010) take an approach to RTs that is based on semantics and pragmatics. Hooper and Thompson argue that the RTs Emonds identified involve some kind of emphasis (e.g., NCP, VP-preposing), so that these transformations naturally occur in clauses that contain the meaning of assertion. They point out that this predicts the possibility of RTs in environments outside of Emonds' original conception of 'root'. The revision in Emonds (2004, 2012) addresses some, but not all, of the problems raised by Hooper and Thompson:

(5) I found out that never before had he had to borrow money. (H&T (119))

Find out does not take a 'reported S' as a complement, hence the complement of this predicate fits neither the original conception of 'root' nor the later idea of RIDE.[3] (See Heycock, 2006 for a critical review of Hooper and Thompson, 1973 including empirical issues with their analysis).

Bianchi and Frascarelli (2010) offer an account of the root phenomenon based on the typology of topics that Frascarelli and Hinterhölzl (2007) propose in terms of Aboutness-Shift, Contrastive and Familiar Topics. As we will see, Bianchi and Frascarelli's semantics-based approach as well as that of Hooper and Thompson's will be quite helpful in understanding the syntax of RTs.

In a recent series of works, Haegeman (e.g. 2006b, 2010, 2012) and Haegeman and Ürögdi (2010) adopt a syntactic approach to RTs, much like

[2]This analysis of RIDE by Emonds is reminiscent of Haegeman's (2003) truncation analysis.

[3] As Joseph Emonds (p.c.) points out to us, example (5) shows that RIDES do not have a clear correlation to indirect discourse. In Emonds (2004) he limits RIDES to certain syntactic contexts (as we have observed earlier), but stops short of any predictive characterization, semantic or syntactic, of where they appear.

Emonds, but they set aside any notion of "indirect quote" as the domain in which RTs are allowed. Instead, they focus on contexts in which RTs do not apply and argue that these are environments in which some operator movement to CP takes place independent of a RT. This analysis is virtually a syntactic counterpart of the semantic/pragmatic proposals by Hooper and Thompson and Bianchi & Frascarelli in that, as H&T note, RTs do not occur in presupposed (as opposed to asserted) environments, and, as Haegeman notes (e.g., 2006b), presupposed environments are factive in nature, and factives have been argued to involve operator movement (Melvold, 1991; Hiraiwa, 2010; Watanabe, 1993, 1996; among many others; see Munsat, 1986 for relevant discussion).

Given that the semantic approach of Hooper and Thompson/Bianchi and Frascarelli and the syntactic approach by Haegeman often make similar predictions, it is not always easy to empirically tease apart the two approaches. We will present data and an analysis that clearly favor the syntactic approach, one that also overcomes difficulties that arise with Emonds' (2004) "RIDE" approach once we expand the data beyond English, French, and German. It is important to note that the syntactic approach we will support is informed by the work based on semantics and pragmatics. We intend to show that the variation in the syntactic properties we observe across languages is consistent with the semantic properties of RTs noted in the literature.

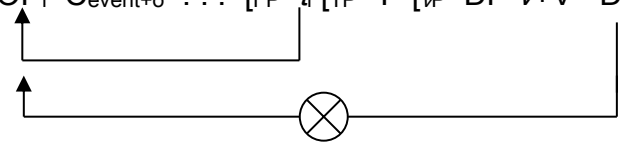
Haegeman's approach to RTs is based on the notion of intervention. The sort of intervention she assumes is a feature-based interpretation of Relativized Minimality (Starke 2001; Rizzi 2004). For Haegeman (2012:107), 'intervention effects are computed on feature sets, where an entity with a richer feature set can cross one that has an impoverished feature set.' Adopting a cartographic analysis, this author suggests that a constituent intervenes when another category crosses it and it is weaker in features than the crossed constituent.[4]

[4] Emonds (2012:24-25) calls into question the accuracy of the intervention analysis. In Haegeman (2009 et subseq.) complementizers are held to move from a clause-internal position to the initial part of the sentence. A moved subject should display the same intervention effects with regards

While recognizing the advantages of the feature-based intervention approach of Haegeman (2012), one of which is that it does not depend on having just one slot for the operator/MCP-moved element, we will base our analysis on the notion of competition (Den Besten, 1977): in referential (factive) CPs the factive operator and other types of A'-movement compete for the same syntactic position; the higher-moving category will block movement of the lower category. This is the more established approach and also avoids uncertainties regarding the features relevant to computing intervention.

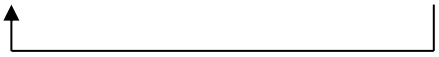
If topicalization in English targets Spec,CP and in referential CPs the event operator moves to Spec,CP, the latter blocks any other movement to the same syntactic position:

(6) $[_{CP}\ OP_i\ C_{event+\delta}\ \ldots\ [_{FP}\ t_i\ [_{TP}\ T\ [_{vP}\ DP\ v+V\ \ DP]]]]$



Movement of any material to Spec,CP from *v*P is blocked by the competitor OP. In the absence of operator movement (as in non-factives), there is no competition and hence topics can be fronted to Spec,CP:

(7) $[_{CP}\ TOP_i\ \ C_{\delta}\ [_{TP}\ T\ [_{vP}\ DP\ \ v+V\ \ DP_i]]]$



In clear contrast with English, Japanese and Spanish are discourse-configurational (additionally, Spanish is agreement-based as well). This is interpreted in our system in terms of lowering δ-features onto T (Author2, 2010;

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to complementizer movement as fronted topics do in subordinate clauses. This prediction is not borne out, as illustrated by the following examples:

(i) *No experiment showed that such material a metal reacts with. (Emonds 2012:23, his (2c))

(ii) Helen arrived back when/before the sun sets. (Emonds 2012:24, his (6))

Author1, 2010, 2011). If this is on the right track, it has an important consequence for the blocking effect shown by operator movement in referential CPs. If preposed topics in the form of clitic left dislocation (CLLD) and scrambled constituents are moved to Spec,TP, operator movement does not interfere with any subsequent movement in the same construction. This predicts that independently of the referential or non-referential character of CPs, topic movement to Spec,TP is completely compatible with operator movement in referential CPs. As we will show, this prediction is borne out by contrastive and familiar topics in Spanish and Japanese:

(8) $[_{CP}\ OP_i\ C_{event+\delta}\ [_{FP}\ t_i\ [_{TP}\ TOP_j\ T_\delta\ [_{vP}\ DP\ v\text{+}V\ DP_j]]]]$

The paper is organized as follows: section 2 deals with RTs in Spanish and Japanese, showing that in both languages RTs are possible in contexts other than 'root' contexts whether they are defined syntactically or semantically; in section 3 we summarize Bianchi and Frascarelli's (2010) typology of topics, which we basically adopt; section 4 presents our syntactic proposal that RTs are licensed only if they do not compete with other movements. We show that in languages where the distribution of RTs is relatively free, discourse features are inherited from C by T, hence no competition effect arises. Section 5 extends our feature analysis to relative clauses; in section 6 we discuss our feature-inheritance approach for adverbial clauses, specifically reason clauses; in section 7 we establish a correlation between feature inheritance and the positions of clitics in Romance; finally, section 8 summarizes our findings.

2. Some challenging data

2.1. Spanish

Spanish poses a challenge to the approaches mentioned above, since there appears to be no distinction between root and non-root contexts for the application of operations that correspond to RTs. For example, NCP is possible in Spanish in root and non-root clauses, as opposed to the general assumption that this type of transformation is incompatible with non-asserted, or presupposed, contexts (Hooper and Thompson, 1973).

(9) a. *The fact that never had he had to borrow money is well-known.

b. El hecho de que nunca haya tenido que pedir
the fact of that never have-PRES-SUBJ.3SG had that to.ask
dinero es bien conocido.
money be-PRES.3SG well-known
'The fact that he has never had to borrow money is well-known.'

c. El hecho de que ningún dinero haya tenido que
the fact of that no money have-PRES-SUBJ.3SG had that
pedir María es bien conocido.
to.ask Maria be-PRES.3SG well-known
'The fact that Mary has to ask for no money is well-known.'

This means that in Spanish, RTs apply in an environment earlier noted as incompatible with RTs: non-root (Emonds, 1969), non-RIDE (Emond, 2004), operator-movement (Haegeman's work), and "presupposed" clauses (Hooper and Thompson, 1973).

To further illustrate that Spanish behaves differently from English, let us look at Hooper and Thompson's (1973) classification of predicates which either allow or do not allow a RT in their complement clause:

(10) Hooper and Thompson (1973:473-474)

Non-factive: Class A: say, report, exclaim, etc.
Class B: suppose, believe, think
Class C: be (un)likely, be (im)possible, deny

Factive: Class D: resent, regret, be surprised
Class E: realize, learn, know

H&T show that RTs are compatible only with those subordinate clauses which are selected by predicates belonging to Classes A, B and E; these are the predicates that, according to H&T, allow the complement to express assertion (see (11-13) below). The complements of the predicates in C and D are presupposed so RTs are not possible ((14-15)) in these contexts:[5]

(11) I exclaimed that never in my life had I seen such a crowd. (A) (H&T (43))

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[5] Kiparsky and Kiparsky (1970) established a distinction between factive and non-factive predicates in terms of how we present the truth of the selected subordinate clause. For these authors, factive predicates presuppose the truth of their clausal complement, whereas non-factive predicates simply assert it. One of the problems for Hooper and Thompson's classification is that though Class C predicates are included within non-factives they may express either an assertion or a presupposition. Following Kalluli (2006), non-factive predicates can trigger factivity, as shown by Class B predicates:

(i) Can you believe that John left? *In fact, he didn't.
(ii) I can believe that John left (*but in fact he didn't).

On the other hand, Class E predicates are not always presupposed, so their complement can convey an assertion. This is why they are called 'semi-factives'.

H&T's classification has been extended by Meinunger (2004) to cover a more fine-grained set of predicates such as emotive, volitional and negative predicates, which resist main clause word order in languages such as German. This author sets a correlation between mood, factivity, subordination and RTs. See also Gärtner (2002), Krifka (2011) and Bianchi and Frascarelli (2010) for an analysis of RTs in which the availability of RTs is pragmatically influenced by the type of matrix predicate.

(12) I think that this book, he read thoroughly. (B)

(13) I found out that never before had he had to borrow money. (E) (H&T (119))

(14) *It's likely that seldom did he drive that car. (C) (H&T (96))

(15) *He was surprised that never in my life had I seen a hippopotamus. (D) (H&T (103))

Classes A, B and E involve non-factive (A, B) or semi-factive (E) predicates, whereas Class C contains non-assertions and Class D is composed of factive predicates (See Peterson, 1997 for a classification of clauses as involving facts, propositions and events).

In Spanish, both Class C and D predicates allow RTs (either NCP or Clitic Left Dislocation (CLLD)), contrary to English, as the contrast between (14-15) and (16) shows:[6]

(16) a. Es probable que sólo alguna vez haya
be-PRES.3SG probable that only some time have-PRES.3SG
conducido Juan ese coche.
driven Juan that car
'It's probable that Juan has only rarely driven that car.'[7] (Class C)

[6] The observation that in Romance there is no restriction with respect to CLLD is not new. Haegeman (2006a) suggests that CLLD is acceptable in non-root contexts in a wide variety of languages. Citing Cinque (1990) and Rizzi (1997), Bianchi and Frascarelli (2010) note that CLLD is available in all finite subordinate clauses. See also Haegeman and Ürögdi (2010) and Haegeman (2012) for a feature-based analysis of intervention in which CLLD is compatible with operator movement as long as the CLLD-ed constituent is generated via merge. We will assume a different approach to CLLD based on movement and feature inheritance (section 4).

[7] As stated in the main text, Class C verbs do not allow focus/topic fronting in English, as opposed to Spanish:

(i) *John regretted that never had he seen *Gone with the Wind*. (Authier 1992:334, (10b))

(ii) (%)*John regrets that this book Mary read. (Maki *et al.*, 1999:3, (2c))

b. Ángela estaba sorprendida de que los regalos lo
Angela be-PAST.3SG surprised of that the presents CL
hubieran dejado los Reyes Magos debajo del árbol.
have-PAST.3PL left the Kings Magic under of.the tree
'Angela was surprised that the three Wise Men had left the present under the Christmas tree.' (Class D)

These are non-RIDE complements as well. Given that the complements are presupposed, not only do these examples pose a problem for Hooper and Thompson's semantic/pragmatic approach, but they also raise an issue with Haegeman's approach since this is an environment in which factive operator movement would occur that should block RTs. A point that is particularly pertinent to our analysis is that, in Bianchi and Frascarelli's (2010) semantic system, the grammaticality of (16b) follows from the fact that the CLLD-ed constituent is a Given (familiar) Topic, which, according to the authors, is not a result of a RT. This works for Romance, but a more strict language such as

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However, as Haegeman (2012) points out, *regret* may have a second reading as a verb of communication (meaning 'regret to say'), in which case RTs are allowed (we will come back to this type of predicates below):

(iii) I regret that those free meals our institution can now no longer provide.
(Haegeman 2012: 67, note 19)

In Spanish the counterpart of 'regret', *sentir*, may also have this double interpretation, and even with its original meaning as 'resent', both CLLD and focus fronting are possible:

(iv) Siento que nunca hayas podido ver esa película.
regret-PRES.1SG that never have-PRES.2SG can see that movie
'I regret that never were you able to see that movie.'

(v) Siento que esa película no la hayas podido ver nunca.
regret-PRES.1SG that that movie not CL have-PRES.2SG can see never
'I regret that that movie you were never able to see.'

English does not distinguish types of topics, disallowing topicalization of any kind in non-root environments. We will derive this non-RT property of Given Topics in Romance from the syntactic notion of feature inheritance. We return to the semantic typology of topics in section 3.

2.2. Japanese

Japanese shows both the classic root effect with one type of topic construction and a complete exception to the root effect with two other types of topicalization which are parallel to the facts we have seen in Spanish. More precisely, there is a clear root effect with one type of topicalization which demonstrates that Japanese falls together with those languages such as English and German that exhibit root/non-root distinction for RTs. However, the fact that the other two types of topicalization show no root/non-root distinction requires explanation within the context of a language that clearly displays root effects.

One type of topicalization that is generally amenable to either the semantic/pragmatic approach or the syntactic approaches of operator-intervention (Haegeman) or RIDEs (Emonds, 2004) is the *-wa* marked topicalization. In Japanese, embedded clauses are introduced by different complementizers, *koto* (or *no*) or *to*, depending on the factive or non-factive nature of the matrix predicate (Kuno, 1973; McCawley, 1978). Author2 (2012a) shows that the predicates in Hooper and Thompson's classes A, B and E, which allow RTs in English, introduce their complements in Japanese by either *koto* (factive) or *to* (non-factive). Of these two, *to*, the non-factive complementizer, is compatible with assertion, and, indeed, the complements of these predicates allow topics explicitly marked with *-wa*.[8] This is shown for A and B below.

(17) Hanako-wa [piza-wa Taroo-ga tabeta to] itta.

[8] Kuroda (2005:19-20) specifically points out that the topic *wa* can only occur in "statement-making contexts," which we can interpret to mean something like 'root' contexts (see Heycock 2008 for further comment on this point as well as an extensive discussion of the literature).

Hanako-TOP pizza-TOP Taro-NOM eat-PAST $C_{NONFACT}$ say-PAST
'Hanako said that pizza, Taro ate.' (Class A, Author2's 2012a, example (41))

(18) Taroo-ga [Hanako-wa kuru to] sinzitei-ru.
Taro-NOM [Hanako-TOP come-PRES $C_{NONFACT}$] believe-PRES
'Taro believes that Hanako will come.' (Class B, Author2's 2012a, example (44))

On the other hand, C and D only allow the *koto* (factive) complementizer, and, predictably, -*wa* topicalization is not possible; this is illustrated for D in (19).

(19) *John-wa [kono hon-wa zibun-no-kodomo-ga yonda koto]-o
John-TOP this book-TOP self's child-NOM read C_{FACT}-ACC
kookaisita.
regret
'John regrets that this book, his child read.' (Class D) (Maki *et al*. (12b))

Following much of the literature (e.g., Kuno, 1973; Hoji, 1985; Saito, 1985), we adopt the idea that the -*wa* topic occurs high in the structure, in a 'root' position, which we take to be Spec,CP for topics (Author2, 2012a). We assume, contra Author2 (2012a), that topic -*wa* does not involve movement (see Kuno, 1973; Saito, 1985; Hoji, 1985 for relevant comments). This is compatible with Hooper and Thompson's approach, which claims that RTs like topicalization can only apply in asserted environments. It is also compatible with Haegeman's operator-intervention approach since operator movement plausibly occurs in clauses with the 'factive' *koto* complement (C, D), and this operator movement is to Spec,CP, which competes with topic -*wa*. It is also compatible with Emonds' RIDE approach since the *to* complementizer is a form of quotation, which makes *to*

complements into “indirect quotes”, which according to Emonds should allow RTs. Finally, it also is compatible with Bianchi and Frascarelli’s (2010) system because it corresponds to their “Aboutness-Shift” topic (Kuno, 1973), which must occur in root contexts (see section 3 for details).

In contrast to *-wa* topicalization, a local form of scrambling used for topicalization is not constrained by the assertion/presupposed distinction or operator-movement/non-movement environments. For example, in clear opposition to the ungrammatical *-wa* topicalization in the complement of a Class D predicate, Maki *et al.* (1999) note that local scrambling is perfectly possible.

(20) John-wa [kono hon-o zibun-no-kodomo-ga yonda koto]-o
John-TOP this book-ACC self’s child-NOM read C_{FACT}-ACC
kookaisita.
regret
‘John regrets that this book, his child read.’ (Class D) (Maki *et al.*’ (12b))

This form of scrambling, which indicates the topic of the clause, occurs freely across all kinds of complements just as we saw for “root” transformations in Spanish.

There is another form of topicalization, commonly labeled “contrastive topic” (Kuno, 1973), which, like scrambling topicalization, does not show any root effects. Thus, the contrastive topic version of (20) above is grammatical. Note that contrastive topic involves the particle *-wa*, but unlike the destressed “root” topic, contrastive topic with *-wa* receives prominent stress (Kuno, 1973).

(21) John-wa [kono hon-WA zibun-no-kodomo-ga yonda koto]-o
John-TOP this book-CONT.TOP self’s child-NOM read C_{FACT}-ACC
kookaisita.
regret
‘John regrets that this book (but not some other book), his child read.’

As we have observed, there are three types of topics in Japanese, and while one is subject to the typical root effect (the "regular" topic with *-wa*), the other two, topicalization via scrambling and contrastive topic with *-wa*, are not contingent upon any root environment.

3. Different types of topics and 'root' effects

We have seen that topicalization and NCP, which are typical RTs, can occur in Spanish and Japanese across all kinds of 'root' and 'non-root' clauses, however those are defined. It seems that there is something special about the particular type of topicalization that we have observed in Japanese and Spanish that brings about this effect, and that once that is taken into account, topicalization adheres to the traditional 'root/non-root' distinction. However, we will see that this is not the case. We will focus on Spanish.

Bianchi and Frascarelli (2010) give a pragmatic account of RTs in connection with different types of topics. The basis of the semantic/pragmatic part of their analysis is the topic typology proposed in Frascarelli and Hinterhölzl (2007:87-88), who identify three types of topics:

(22) Three types of topics

(a) aboutness topic: "what the sentence is about" (Reinhart, 1981; Lambrecht, 1994); in particular a constituent that is "newly introduced, newly changed or newly returned to" (Givón, 1983:8), a constituent which is proposed as "a matter of standing and current interest or concern" (Strawson, 1964);

(b) contrastive topic: an element that induces alternatives which have no impact on the focus value and creates oppositional pairs with respect to other topics (Kuno, 1976; Büring, 1999);

(c) familiar topic: a given or accessible (cf. Chafe, 1987) constituent, which is typically destressed and realized in a pronominal form (Pesetsky, 1987); when a familiar topic is textually given and d-linked with a pre-established aboutness topic, it is defined as a continuing topic (cf. Givón, 1983).

Following Bianchi and Frascarelli's semantic analysis of RTs and different types of topics, we assume their terminology: (a) Aboutness-shift Topics (A-Topics), (b) Contrastive Topics (C-Topics) and (c) Given Topics (G-Topics).

Bianchi and Frascarelli (2010:82) conclude that A-topics are a root phenomenon, whereas G-topics are not. C-Topics can occur in embedded clauses if these are complements of proposition-taking verbs. They are permitted in clauses with or without illocutive force, but they must express some sort of proposition (*sensu* Stalnaker, 1978), irrespective of whether this is asserted or non-asserted.

These authors compare contrastive topicalization and Left Dislocation (LD) in English, showing that while contrastive topics can occur even in factive contexts,[9] LD can only occur in Emonds's original root contexts. The (a) examples are illustrative of Topicalization (which is analyzed in B&F as involving C-Topics), whereas the (b) examples instantiate LD (analyzed as A-Topic). The acceptance rates follow each example:

(23) a. I am glad that this unrewarding job, she has finally decided to give _ up (12/15)

b. I am glad that this unrewarding job, she has finally decided to give it up (0/15)

(24) a. He tried to conceal from his parents that the math exam he had not passed _, and the biology exam he had not even taken _ (13/15)

[9] See Haegeman and Ürögdi (2010:129) for discussion of Bianchi and Frascarelli's counterexamples in English topicalization. Haegeman and Ürögdi's analysis is based on the enrichment of the featural composition of the event operator, which eliminates any intervention with fronted elements in referential (their factive) CPs. We are putting this story aside since our analysis is based on the competition between two (possible) A'-movements.

b. He tried to conceal from his parents that the maths exam he had not passed it (0/15)

(25) a. Mary didn't tell us that Bill she had fired _, and John she had decided to promote _ (8/15)
b. Mary didn't tell us that Bill she had fired him (0/15)

(26) a. I hope that the past he will forget _, and the future he will face _ bravely (13/15)
b. I hope that the past he will forget it soon, so as to bravely face the future (0/15)

Setting aside LD, which is apparently restricted to Emonds' (1969) original 'root' environments, let us look at the examples of contrastive topicalization above. Is it truly the case that these clauses that allow contrastive topicalization are actually factive in nature? That is, are they Class C or D in Hooper and Thompson's classification? (25) (*tell*) and (26) (*hope*) in fact appear to fall into Classes A and B respectively, both of which are defined as assertions and not presupposed. For (23) (*glad*), Haegeman and Ürögdi (2010) suggest that it may be interpreted as *glad to say*, hence a non-factive predicate. This leaves (24) (*conceal*), which does appear to typically take a presupposed complement. However, this predicate is reminiscent of Class E, which is composed of "semi-factive" predicates that often take a factive complement, but there are exceptions (*realize, learn, know*, etc.), which makes it possible for RTs to apply in their complements.

If we use Hooper and Thompson's Class C and D predicates straightforwardly, we can see that contrastive topic, and for that matter, regular topicalization, are not allowed.[10]

Class C:

(27) a. ?*Mary denied that those books, she will read today.
b. *Mary denied that those books, she will read, but not these.

(28) a. *It is impossible that those books, John will read by the end of the week.
b. *It is impossible that those books, John read, but not these.

Class D:

(29) a. *Mary resents that those books, John read while on vacation.
b. *Mary resents that those books, John read, but not these.

(30) a. ?*I regret that those books, John read without consulting me.
b. *I regret that those books, John read, but not these.

These data show that in English a contrastive topic and a "regular" topic both involve movement to Spec,CP. What we propose is to accept Bianchi and Frascarelli's (2010) general approach of topic typology, with the following addition to account for variability across languages:

(31)

(i) A-topics must occur in root contexts;
(ii) The position of C-topics and G-topics depend on the type of language.

[10] Thanks to eleven native speakers who responded to our judgment inquiry; all eleven judged these Class C/D sentences as degraded/ungrammatical. With one exception, they found a clear contrast with examples containing Class A/B predicates.

In English, all types of topics occur in 'root' contexts of some kind, but we saw that in Japanese, while the *-wa* topic, which we assume to be an A-topic, occurs in root contexts, the other types apparently do not, as indicated by the fact that they do not enter into competition with operator movement to Spec,CP.[11] As shown below, Spanish also exhibits a similar insensitivity to root-based restrictions; the examples in (32-33) involve contrastive topicalization:

(32) Es probable que el CD-rom nunca lo haya
be-PRES.3SG probable that the CD.rom never CL have-PRES.SUBJ.1SG
visto antes, pero el cassette lo conozco.
seen before, but the cassette CL know-PRES.1SG
'It's probable that I have never seen the CD-rom before, but I know the cassette.'

(33) Las pruebas niegan que al hombre lo hayan
the proofs deny-PRES.3PL that to.the man CL have-PRES.SUBJ.3PL
matado y a la mujer la hayan violado.
killed and to the woman CL have-PRES.SUBJ.3PL raped
'They deny that he has been killed and she has been raped.'

According to Büring (2003), C-Topics are available in a clause which can be used as an answer to a superquestion which (explicitly or implicitly) establishes a set of alternatives. In this respect, sentence (33) can be the answer to (34) in a context where several murders have been committed and a new policeman joins the crime scene:

(34) Según las pruebas, ¿qué le han hecho a quién?
According.to the proofs, what CL have-PERF.3PL done to whom
'From the tests, what did they do to whom?'

[11] Kuno (1973:38) characterizes topic *–wa* as meaning "Speaking of…, talking about…", which is consistent with *–wa* as A-topics.

This shows that in Spanish, G-Topics and C-Topics can occur in all sorts of environments regardless of whether they are 'root' or 'non-root'. In the next section, we will propose a typology of languages that makes the correct prediction for English-type and Japanese-/Spanish-type.[12]

As regards A-topics in Spanish, the question arises as to whether they can be dealt with on a par with -*wa* topics. We suggest that this is precisely the case. A-Topics are new topics in discourse and they can involve a shift (Bianchi and Frascarelli, 2010). These authors claim that A-Topics are independent speech acts, and as such they are subject to the root condition. This means that embedded A-Topics are highly restricted (if they are ever licensed), which is supported by examples such as (35) from Spanish:

(35) ??Siento que tu libro no lo hayas terminado
regret-PRES.1SG that your book not CL have-PRES.SUBJ.3SG finished
todavía.
yet
'I regret that you haven't finished the book yet.'

Imagine a context where two linguists are talking about the publication of their research. One of them is saying that s/he is very lucky that all his/her books have been published but knows that the other linguist has not been this lucky. There is a shift of topic and the speaker decides to talk about the other linguist's publications. In this context, the preposed topic in (35) is interpreted as A-Topic. However, the sentence is not acceptable.[13]

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[12] What is really insightful about B&F's analysis is that they predict the distribution of different types of topic depending on their relation to discourse and conversation dynamics. In this respect, their semantic solution correctly predicts the use of RTs in contexts in which the operator-based system would not allow RTs in principle (but see Haegeman and Ürögdi, 2010:140 for a solution based on operator movement and feature-intervention).

[13] As Bianchi and Frascarelli (2010) recognize, the precise topic status in embedded CLLD is quite difficult to determine if we are not given the intonation. In (35) the preposed topic is

By contrast, if the same embedded clause is selected by a non-factive predicate, the result turns out to be well-formed in the same context:

(36) Sé que tu libro no lo has terminado todavía.
know-PRES.1SG that your book not CL have-PRES.SUBJ.3SG finished yet
'I know that you haven't finished the book yet.'

The root constraints in Spanish for A-Topics establish a clear parallelism with Japanese -*wa* topics, which is a welcome result since both languages show that RTs are a cross-linguistic phenomenon, though subject to certain parametric differences.

Finally, we have shown that in English, all types of topicalization are limited to the root environment (more or less as Emonds 2004 claimed, though he did not distinguish sub-types of topics). We have illustrated this for contrastive topicalization and "normal" topicalization ((27)-(30)). Bianchi and Frascarelli (2010) assume that all instances topics involving movement in English are instances of C-topics. They do not recognize the existence of G-topics in English on the reasonable assumption that givenness is achieved in English purely by destressing. This, per se, would not negate what we have said about topicalization in English and other languages since we showed that C-topics in English compete with operator movement but they do not do so in Japanese and Spanish. The question remains as to whether instances of "normal" topicalization in English such as the (a) examples in (27)-(30) constitute instances of G-topics. We believe that they can. Sentences such as the following need not have any sense of contrast:

(37) Mary says that her hometown, everyone will like because it is quiet and convenient to get to.

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interpreted as A-Topic only if it is pronounced with a L*+H tone, and it is precisely with this tone that the aboutness-shift reading is ruled out. If the relevant topic is pronounced with a different intonation, the CLLD can be interpreted as a G-Topic and the sentence is fully grammatical.

(38) John says that every item on the menu, the guests should enjoy because the chef is the best in town.

We will therefore assume that our extension of Bianchi and Frascarelli (2010) in which A-topics must occur in root contexts but C-topics and G-topics vary depending on the type of language wholly applies to English: A-topics, as well as C- and G-topics, occur in root environments.

4. The competition hypothesis and typology in complement clauses based on feature inheritance

The exceptions to the 'root' phenomena we have observed from Japanese and Spanish raise questions for both the semantic/pragmatic approach of Hooper & Thompson as well as the syntactic approach of Emonds (2004) and that of Haegeman's work. Of these approaches, the semantic/pragmatic approach faces the greatest challenge because the clauses in Japanese and Spanish in which RTs unexpectedly occur presumably have the same meaning as those in English in which RTs are blocked from applying. Moreover, in Japanese, *-wa* topicalization indicates that, on the semantic/pragmatic approach, the language is sensitive to the root/non-root distinction of the type Hooper and Thompson noted. Of the two syntactic approaches, Emonds's analysis of RIDE faces a similar problem as the semantic/pragmatic approach in that there is no easy way to distinguish languages based on the "governing" (selecting) lexical property of V and A; we would be hard-pressed to parametrize this fundamental property across languages for V and A.

Emonds (2004) is certainly aware that there are languages that allow RTs more freely than English, French, and German. To account for these languages, he proposes the Discourse Projection Parameter, which states that "[p]articular

languages specify progressively larger classes of finite clauses as Discourse Projections" (Emonds, 2004:82). He uses this observation to explain that in Japanese, discourse projections are available for a larger class of elements. Italian is another language that permits relatively free application of RTs; as noted by Rizzi (1997), we can find root transformations in Italian relative clauses.[14] The problem is that while Emonds's proposal recognizes that languages vary in the domains in which root operations can occur, it fails to explain why this variation exists. We therefore turn to the syntactic approach of Haegeman to see if we can overcome the problem posed by the Japanese and Spanish data.

In Haegeman's (2006b, 2010) and Haegeman and Ürögdi's (2010) analysis, an event operator generated above TP undergoes movement to Spec,CP in certain adverbial clauses and in some complement clauses, thereby blocking any other movement which competes for this position:

(39) $[_{CP}\ OP_i\ C\ .\ .\ .\ [_{FP}\ t_i\ [_{TP}\ .\ .\ .\ ]]]$[15]

To illustrate the explanatory power of Haegeman's analysis, we repeat examples (11) and (12) as (40) and (41). The former contains focus preposing in the form of NCP, while the latter involves topicalization:

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[14] Rizzi (1997:289) argues that relative operators are compatible with CLLD. When both co-occur the relative operator must precede the CLLD-ed constituent:

(i) Un uomo a cui, il premio Nobel, lo daranno senz'altro.
a man to whom the prize Nobel CL give-FUT.3PL without.another
'A man to whom, the Nobel prize, they will give it undoubtedly.' (Rizzi's example (12a))

We will return to relative clauses below.

[15] We have recreated the structure as given by Haegeman and Ürögdi (2010). The FP projection would potentially get in the way of C searching down to the TP domain. From that perspective, we may wish to do away with the FP projection. Note incidentally, that later work by Haegeman (2012:270) suggests that factive operators generate in an Irrealis Phrase. We leave this as an open question.

(40) I exclaimed that never in my life had I seen such a crowd. (A) (H&T (43))
(41) I think that this book, he read thoroughly. (B)

The embedded CP in both sentences is non-factive, so there is no operator moving to the edge of CP. As a consequence, there is space available for the preposed focus (in (40)) and the fronted topic (in (41)) in the CP domain. However, in sentences containing a factive predicate the embedded CP has an operator in Spec,CP, hence any other A'-movement will be banned since there is no space for both. This accounts for the ungrammaticality of examples in (14) and (15), repeated here as (42) and (43):

(42) *It's likely that seldom did he drive that car. (C) (H&T (96))
(43) *He was surprised that never in my life had I seen a hippopotamus. (D) (H&T (103))

This recalls the proposal by den Besten (1977/1983) that the root/non-root distinction is a function of whether there is a lexical complementizer (non-root) or not (root). On this analysis, RTs are movement to CP, and they can only apply if some material does not already exist in Spec,CP. This derives the root/non-root distinction strictly from what is already in Spec,CP. We can view Haegeman's general approach as an extension of this proposal by den Besten. In fact, as we will see later for relative clauses, if the operator movement is to a position other than Spec,CP, RTs are allowed despite the presence of operator movement.[16]

[16] In Haegeman's (2006b, 2010) approach, the movements are not limited to just Spec,CP. Adopting the cartographic approach, she assumes that multiple movement to the left periphery is possible and can target distinct positions as long as the constituent that moves higher is featurally richer than that which remains lower in the Left Periphery. For the sake of simplicity, we will assume a simpler picture of Spec,CP as the landing site for both operator movement and RTs. This idea of "intervention" is not the same as the typical intervention cases in the minimalist literature. In particular, operators and topics do not share the same feature, so one would not

As stated earlier, Haegeman and Ürögdi (2010) use operator movement to explain the difference in behavior between referential (essentially, factive) and non-referential CPs in a way parallel to den Besten's approach to RTs. Referential CPs contain an event operator which blocks topicalization in English, whereas in non-referential CPs there is no such operator, and topicalization is therefore allowed (the operator analysis is traced back to Aboh, 2005).

Haegeman and Ürögdi (2010) explicitly make the observation that Romance CLLD is not affected by the distinction between referential and non-referential CPs because topics in Romance can be dealt with in terms of base generation. There has been a very fruitful debate on base-generation (Cinque, 1990; Barbosa, 2001; Frascarelli, 2007 *et seq*.) and movement approaches to CLLD (Rizzi, 1997; Uriagereka, 1995; Cecchetto, 2000; Demonte and Fernández-Soriano, 2009; López, 2009; Author1, 2010, 2011, etc.). Each approach has its own advantages and problems. For instance, the movement analysis can solve the island and reconstruction effects shown by CLLD, whereas the base-generation approach provides an accurate account of Weak Crossover (WCO) effects and parasitic gap licensing. Contrary to Haegeman and Ürögdi (2010), we will assume the movement approach to the CLLD in Spanish (on a par with Japanese scrambling). A piece of evidence that CLLD involves movement is provided by reconstruction (Cecchetto, 2000). The ungrammaticality of sentences such as (44) follows from violation of Principle C of the Binding Theory:

(44) La primera obra de un escritor$_i$, **pro*$_i$ la escribe siempre
the first work of a writer pro CL write-PRES.3SG always

---

intervene in the other's operation as far as features are concerned. We interpret Haegeman's approach more like the doubly-filled COMP filter, in which two or more items compete for the same slot, Spec,CP. The items may be different, as is the case of the traditional doubly-filled COMP that prohibits both a wh-phrase and *that* from occurring in COMP. Later, we will show that the operator involved in relative clause formation lands in a different position, with requisite consequences for root phenomena.

con placer.
with pleasure
'The first work of a writer is always written with pleasure.'

Cecchetto (2000) holds that the C effect attested in (44) can only be explained if the CLLD-ed object reconstructs to its original position, thereby being c-commanded by the null subject. This suggests that CLLD must be movement.

Based on Chomsky's (2008) idea of feature inheritance, Author2 (2005, 2010) has proposed that topics in the form of scrambling move to Spec,TP in languages such as Japanese because discourse features such as topic and focus, which start out in C, may be inherited by T and this T triggers movement of topic or focus to Spec,TP. To motivate this analysis, let us look at two well-known properties of scrambling in Japanese.

Evidence that scrambling may be A-movement, hence movement within TP, is found in its ability to overcome Weak Crossover violations (Hoji 1985, Saito 1992). In English, a typical WCO violation given in (45) is ameliorated by A-movement in (46), which is movement within the TP domain (e.g., Mahajan, 1989):

(45) ??Who$_i$ does his$_i$ mother love?
(46) Who$_i$ appears to his$_i$ mother to be sick?

Hoji (1985) points out that scrambling can repair a typical WCO violation ((47)), as shown in (48):

(47) *[e$_i$ e$_j$ hitome mita] hito$_i$-ga dare$_j$-o suki-ni-natta no?
one.glance saw person-NOM who-ACC like-came.to Q
(48) Dare$_j$-o [e$_i$ e$_j$ hitome mita] hito$_i$-ga ____$_j$ suki-ni-natta no?
who-ACC one.glance saw person-NOM like-came.to Q
'Who did the person who saw (her) come to like?'

This provides evidence that scrambling may take place within the TP region (Saito, 1985). For further support that scrambling may be A-movement in Japanese, see Saito (1992) and Author2 (2010), among many other works.

Evidence that scrambling may be a form of topicalization comes from research on acquisition. Hayashibe (1975) noted that there appears to be a period, up to around 5 years of age, during which children tend to interpret the word order of scrambled sentences like (49b) as if they were nonscrambled sentences like (49a), completely ignoring the case marking on the arguments.

(49) a. SOV: Kamesan-ga ahirusan-o osimasita.
turtle-NOM duck-ACC pushed
'A turtle pushed a duck.'

b. OSV: Ahirusan-o kamesan-ga osimasita.
duck-ACC turtle-NOM pushed

Hayashibe concludes from this that scrambling is acquired late in language development. However, Otsu (1994) shows that children around the age of three years of age or even younger have no problem with scrambling when they are presented with a discourse context that makes the scrambled sentence sound natural.

c. Kooen-ni ahirusan-ga imasita. Sono ahirusan-o
park-in duck-NOM was the duck-ACC
kamesan-ga osimasita.
turtle-NOM pushed
'There was a duck in the park. A turtle pushed the duck.'

What Otsu has shown is that scrambling of the object *sono ahirusan-o* 'the duck-ACC' is possible if the referent of the scrambled phrase has been mentioned in the previous context where it has been established as the discourse topic, hence it is a Familiar Topic or G-Topic. The fact that this type of movement is within TP is

well established (Saito, 1985, 1992; see also Author2, 2001, 2010); thus it is topicalization to the TP domain. There is also evidence that topicalization via scrambling instantiates a G-topic, which refers to some "given or accessible" entity (Bianchi and Frascarelli, 2010). In responding to Otsu (1994), Murasugi and Kawamura (2004) claim that young Japanese children can correctly comprehend sentences with the OSV word order even without the prior context which Otsu's examples include. However, they begin the experiment by showing the two stuffed animals that represent the subject and the object, and ask what they are (cow, duck) (p. 138). In so doing, they establish these entities as given and accessible, qualifying them as candidates for reference by a G-topic.

In Japanese, a topic can be overtly marked with -*wa* or not. The former has two types, the A(bout)-topic and the C(ontrastive)-topic. The topic without -*wa* is a G-topic preposed by scrambling. One of the differences between A-topics, on the one hand, and C-topics and G-topics, on the other hand, is that A-topics must occur in root contexts, which we assume to be Spec,CP in Japanese, while C-topics and G-topics are analyzed as movement within the TP region (Saito, 1985; Hoji, 1985; Author2, 2001, 2010). Following Author2, we will assume that this type of movement is to Spec,TP (see Kuroda 1988 for the earliest proposal of this sort).[17]

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[17] In many languages, scrambling to an A-position is compatible with subject movement to Spec,TP. This is the case of Dutch, as Haegeman (1996) has noted. We are assuming that TP may have multiple specifiers, and this may account for multiple movements to the TP area. On the other hand, the lack of intervention in the TP area may be due to the argumental nature of TP (as opposed to CP). This accounts for the free order of moving constituents to the TP area in languages such as Spanish (Author1, 2011 & Author1 and İşsever, 2012):

(i) a. Ángela entregó la tesis en el Departamento el jueves.
Angela submit–PAST.3SG the thesis in the Department the Thursday
b. Ángela, la tesis, en el Departamento la entregó el jueves.
Angela the thesis in the Department CL submit-PAST.3SG the Thursday
c. La tesis, en el Departamento, la entregó Ángela el jueves.
d. La tesis, Ángela, la entregó en el Departamento el jueves.

To account for the fact that in certain languages discourse-triggered phenomena such as topicalization and focus may take place within TP, Author2 (2010) makes a typological classification of languages depending on the kind of grammatical features inherited by T. Languages can be grouped into two types: agreement-based languages and discourse-configurational languages (cf. É. Kiss, 1995).[18] In his work, based on this typology, Author2 explores two types of languages, those in which the agreement feature is inherited by T (English, for example) and those in which the discourse feature is inherited by T (Japanese, for example).

(50) **Feature Inheritance** (φ: agreement features, δ: discourse features)

a. $C_{\varphi, \delta} \rightarrow T_{\delta}$ … (discourse-prominent - e.g. Japanese, Korean)

b. $C_{\varphi, \delta} \rightarrow T_{\varphi}$ … (agreement-prominent - e.g. English and most Indo-European languages)

When a discourse feature is inherited by T, it triggers movement of the probed category to Spec,TP, just as agreement triggers movement to Spec,TP in agreement-based languages (Author2, 2010).

Based on this typology, the Haegeman-style intervention effect that operator movement to Spec,CP triggers in factive clauses should not be displayed in topicalization scrambling (G-topic) because this scrambling is to TP and does not compete with the operator that has moved to Spec,CP. We saw this in (20) earlier; the following is another example:

'Angela submitted her thesis to the Department on Thursday.'

Any arrangement of the different categories targeting different specifiers of TP yields a grammatical outcome in Spanish, which suggests that TP is not subject to any possible intervention. See below for evidence that some types of CLLD in Spanish target Spec,TP.

[18] See Chomsky (2008) and Richards (2007) for arguments that the agreement feature occurs at least initially at C.

(51) Taroo-ga [sigoto-o Hanako-ga yameru koto]-o sinzitei-ru.
Taro-NOM [job-ACC Hanako-NOM quit C_{FACT} -ACC believe-PRES
'Taro believes that Hanako will quit her job.' (Class B)

The crucial point is that even with the factive complementizer *koto*, a constituent may scramble to the head of the subordinate clause selected by Class B and D verbs. In Author2's analysis, the scrambled DP in (51) undergoes movement to Spec,TP (see also Saito, 1985, 1992), thus it does not compete with any operator movement to Spec,CP. In other words, while -*wa* topicalization (A-topic) and operator movement are incompatible because they target the same position, scrambling and operator movement do not compete for the same position, hence there is no competition effect. In this way, we can keep Haegeman's syntactic approach to the root/non-root distinction intact and deal with the exceptions from Japanese as arising from the typological difference of agreement-based vs. discourse configurational languages.

Contrastive topic with -*wa* is also insensitive to the root/non-root distinction. The following is the contrastive topic version of (51) above:

(52) Taroo-ga [sigoto-WA Hanako-ga yamer-u koto]-o sinzitei-ru.
Taro-NOM [job-CONT.TOPIC Hanako-NOM quit -PRES C_{FACT} -ACC believe-PRES
'Taro believes that Hanako will quit her job.' (Class B)

Saito (1985) has shown that contrastive topic movement is within TP (see also Hoji 1985), hence this type of topic is consistent with the idea that in Japanese, the discourse feature of topic may be inherited by T.[19]

In the last section, we extended Bianchi and Frascarelli's (2010) topic typology as follows:

[19] Vermeulen (2009) provides a typology of topics including contrastive topic in Japanese. She suggests that contrastive topics have both topic and contrast features and that this distinguishes contrastive topics from normal topics. See her work for details and references.

(53)

(i) A-topics must occur in root contexts;

(ii) The position of C-topics and G-topics depends on the type of language.

Based on what we have observed, we can state the following:

(54) Topics and language typology:

(i) The topic feature for A-topics must remain at C regardless of the language type;

(ii) The topic feature associated with C- and G-topics may remain at C or be inherited by T depending on the type of language.

In this way, we incorporate Bianchi and Frascarelli's (2010) claims about topic typology into our typology of languages. At the same time, this allows us to capture the fact that in some languages C- and G-topics exhibit root effects (English), because they compete with operator movement to Spec,CP, while in other languages they do not (Japanese, Spanish), because in these languages these topics move within TP and do not compete with operator movement to Spec,CP.

One issue that Author2 (2010) does not explore is the possibility that both agreement and discourse features get inherited by T.[20] Author1 (2010, 2011), building on Author2 (2010), argues that Spanish and Turkish are examples of simultaneously agreement-based and discourse-configurational language.

[20] There is a fourth possibility of neither agreement nor discourse features being inherited, leaving T without any feature. We assume that something must be inherited by T to allow T to attract an element under A-movement (Chomsky, 2008).

(55) $C_{\varphi, \delta} \rightarrow T_{\varphi, \delta}$ … (discourse-prominent, agreement-oriented - e.g. Spanish, Turkish)[21]

One piece of evidence that movement such as the CLLD in Spanish may apply within TP relates to the fact that it exhibits A-properties (Author1 2010).[22]The c-command relation between binder and bindee may be modified as

[21] See Author1 and İşsever (2012) for the parallelism between Spanish and Turkish, as far as inheritance of δ–features is concerned, and Author1 and Spyropoulos (2010) for the inclusion of Greek in this third group. Joseph Emonds (p.c.) points out that Dutch and German can prove to be troublesome in Author2's (2010) original typology since in these languages there is a robust system of agreement morphology alongside a solid recourse to discourse-motivated operations. It may be the case that these two languages pattern with Spanish and Turkish and are classified as agreement prominent and discourse-oriented.

[22] CLLD-ed topics moving to Spec,TP have been independently proposed by Zubizarreta (1998), Hill-Montapanyane (2002), Cornilescu (2004), Gutiérrez-Bravo (2007), among others. As Liliane Haegeman (p.c.) notes, dealing with Romance CLLD as moving to TP is incompatible with Aux-to-C movement proposed by Cardinalletti (2004) for participial clauses in Italian:

(i) a. Avendo Gianni/egli telefonato a Maria…
Having Gianni /he phoned to Maria
b. *Avendo(lo) il libro dato a Gianni ieri...
Having (it) the book given to Gianni yesterday

If a CLLD-ed object moves to Spec,TP, it should behave as a subject. This is a non-trivial issue that we do not intend to solve here. However, it should be noted that with certain (strong) auxiliaries Aux-to-C movement allows for a topic to follow in Spanish, and the grammatical judgment is exactly the same as with subjects:

(ii) a. Pudiendo(lo) el libro terminar esta noche…
Being able (it) the book to.finish this evening
b. Pudiendo Juan leer toda la noche…
Being able Juan to.read all the night

The examples in (ii) show that a CLLD-ed object or a subject may occur after the moved auxiliary, which again supports our view that CLLD involves movement to a low position.

a consequence of topic displacement, which is clearly an indication of A-movement.

(56) a. *Su$_i$ enfermera llamó al paciente$_i$ ayer.
self's nurse call-PAST.3SG to.the patient yesterday
'His nurse called the patient yesterday.'

One further point that needs to be clarified is how Spanish CLLD fares in raising/control situations; for Italian Rizzi (1997) shows that while CLLD is possible with control patterns, it is incompatible with raising contexts. He shows that the same effect, though weaker, arises in French. In Italian, moreover, CLLD precedes *di* which is located low in the CP (Rizzi's Fin):

(iii) a. Mi sembra, il tuo libro, [$_{Fin}$ di conoscerlo bene]. (Rizzi 1997:309)
me seems, the your book, di know-it well
b. *?Gianni sembra, il tuo libro, conoscerlo bene.
Gianni seems the your book know-it well (Italian)

(iv) a. ??Je pense, ton livre, pouvoir le comprendre. (Rizzi 1997:331, n 24)
I think, your book, can it understand
b. *Marie semble, ton livre, pouvoir le comprendre.
Marie seems, your book, can it understand

These data from Italian and French are taken as an indication that in control constructions the subordinate clause is a CP and hence allows for the occurrence of topics, whereas in raising constructions the embedded clause projects up to TP and thus there is no space for topic fronting. However, Spanish again behaves differently:

(v) *Me parece tu libro, haberlo leído anteriormente. (control)
me seems your book, have-it read before

(vi) ?Juan parece, tu libro, conocerlo bien. (raising)
Juan seems your book know-it well

Though topic fronting in raising constructions is highly infrequent in Spanish, there are some marginal instances of it which allow for topics to occur, as in (vi). This again points to the fact that topics in Spanish target a low position, even when CP is not present. In other words, sentence (vi) supports our view that, in contrast to French and Italian, Spanish topics occupy a slot in the TP area. We leave this point here, pending future research.

b. Al paciente$_i$ su$_i$ enfermera lo llamó ayer.
to.the patient self's nurse CL called-PAST.3SG yesterday
'The patient was called by his/her nurse yesterday.'

Building on this agreement-based and discourse-configurational typology, we predict that Spanish should behave the same way as Japanese but unlike English in allowing 'root' operations to apply freely across all kinds of clauses. This is precisely what we have seen. It is with operations that are allowed to occur within TPs that the root/non-root distinction disappears.[23,24]

Concerning Hooper and Thompson's (1973) classification and its connection with RTs, Spanish shows no rigid 'root' constraints across all predicates and this has been claimed to be influenced by the type of topic involved. A-Topics are a root phenomenon which can be embedded only with a selected set of non-factive predicates. On the other hand, C-Topics can occur either with factive or non-factive predicates (section 3). What about G-Topics? In Bianchi & Frascarelli's (2010) semantic/pragmatic approach, it is predicted that G-Topics are not to be restricted to root-like environments. Thus, Class C and D predicates allow familiar topic preposing in the form of CLLD in their embedded clause:

Class C

[23] Spanish allows multiple CLLD. This means that the we must allow for multiple adjunction to TP. If this is so, the question arises as to why there cannot be a similar multiple adjunction to CP to circumvent the intervention effect when both operator movement and RT occur. Clearly that is not the case. One possible answer is that in TP topicalization, the same topic feature attracts multiple topics, but the situation at CP is different. Operator movement and RT are attracted by different features, hence they cannot occur as multiple specifiers of the same head. See Richards (2001) for discussion relevant to this regarding 'tucking-in' movements.

[24] Spanish is both agreement-based and discourse-configurational, which raises the question as to what the status of EPP on T is. Author2 (2010) notes that agreement feature and discourse feature both trigger movement. From that perspective, in Spanish, which has both types of features on T, T has multiple EPP features, each for agreement and topic, respectively.

(57) Es probable que los vuelos a Madrid los hayan
be-PRES.3SG probable that the flights to Madrid CL have-PRES.SUBJ.3PL
cancelado.
cancelled
'It's probable that the flights to Madrid have been cancelled.'

(58) Negaron que los vuelos a Madrid los hubieran cancelado.
deny-PAST.3PL that the flights to Madrid CL have-PRES.SUBJ.3PL cancelled
'They denied that the flights to Madrid had been cancelled.'

Class D

(59) María está sorprendida de que los vuelos a Madrid los
Mary be-PRES.3SG surprised of that the flights to Madrid CL

hayan cancelado.
have-PRES.SUBJ.3PL cancelled
'Mary is surprised that the flights to Madrid have been cancelled.'

(60) Siento que el artículo no lo hayan publicado
regret-PRES.1SG that the article not CL have-PRES.SUBJ.3SG published
en Syntax.
in Syntax
'I regret that the article hasn't been published in Syntax.'

These two types of predicates introduce a factive event, so they presuppose the truth of the embedded proposition (Kiparsky and Kiparsky 1970), and yet a G-Topic can occur regardless of the presence of the factive operator in Spec,CP.[25]

[25] Note that the subjunctive mood is used in these examples, but as opposed to what has been traditionally asserted in the relevant literature on Spanish, the subjunctive can convey factivity. For instance, (60) presupposes (i) and cannot be contradicted by (ii):

(i) El artículo no lo han publicado en Syntax.
the article not CL have–PRES.3PL published in Syntax

Similar to Japanese, we claim that Spanish C- and G-Topics move to Spec,TP. If this is on the right track, our feature-inheritance system predicts that they will never compete for the syntactic position targeted by event operators, and hence fronting familiar topics is available in both factive and non-factive clauses.

As for the syntactic position occupied by A-Topics in Spanish, we believe that they sit in Spec,CP, since discourse features are retained at C, hence accounting for the incompatibility with operator movement in non-asserted clauses.[26] An argument in favor of the two-fold character of topic positions

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'The article hasn't been published in Syntax.'

(ii) Y al final el artículo lo han publicado en Syntax.
and at.the end the article CL have–PRES.3PL published in Syntax
'And at the end has been published in Syntax.'

The conclusion to be drawn is that the subjunctive should be dissociated from non-factivity since factivity is also attested to be expressed by the subjunctive (RAE-ASALE, 2009, 2011: 1868 and ff.).

[26] The precise position occupied by A-Topics is discussed in Bianchi and Frascarelli (2010), who claim that due to the fact that A-Topics are independent speech acts, they are generated via Merge in a Speech Act Phrase above CP (see Haegeman and Hill, 2010 and Author2, 2012 for recent proposals for speech act projections). Adopting Author2's view of Speech Act Phrases, we suggest that A-Topics move to a SaP above CP; but in so doing it stops in Spec,CP. Hence, the event operator will compete with A-Topics for the same syntactic position, which is the key to our analysis.

One question that a movement-to-TP analysis raises is what determines the inheritance of discourse features by T, since, as we claim, topics may move to Spec,TP or Spec,CP. Though a full account of this issue would need further research, we can speculate that the reason for discourse-feature inheritance is related to the type of topic (in the sense of Bianchi and Frascarelli, 2010) and the root-like nature of each type. Recall that, for B&F, A-Topics are independent speech acts, whereas other types of topic must be integrated in the force of their clauses. It may be the case discourse inheritance takes place as a way of integrating C-Topics and G-Topics in the speech act of their clauses. On the other hand, topic features which originate in a Speech Act phrase cannot be lowered onto T since C mediates. This will account for the non-

(Spec,TP and Spec,CP) in Spanish comes from what is standardly called as Resumptive Preposing (Cinque, 1990; Cardinaletti, 2010). In Italian, two types of topic displacements are clearly distinguished; namely CLLD and Resumptive Preposing (RP). One difference is that the former is always associated with a resumptive clitic, whereas the latter is not:

(61) a. La stessa proposta la fece poi il partito
the same proposal CL make-PAST.3SG then the party
di maggioranza. (CLLD)
of majority

b. La stessa proposta fece poi il partito di maggioranza. (RP)
'The majority party then made the same proposal.'

Both sentences in (61) show a topic reading of the preposed DP *la stessa proposta* 'the same proposal'. For Cardinaletti (2010), Italian RP is similar to English topicalization in that they share a number of properties. One such property is that both are root phenomena:

(62) a. *Mi dispiace [che la stessa proposta fece anche
CL regret-PRES.3SG that the same proposal make-PAST.3SG also
il partito di maggioranza].
the party of majority

b. Mi dispiace [che la stessa proposta la fece anche il partito di maggioranza].

(Cardinaletti, 2010, (19b) and (22b))

(63) *John regrets [that this book Mary read]. (Maki et al., 1999, (2c))

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lowering of A-topic features if we further suppose that features can be inherited just by the next immediately low head.

The Italian data can be easily extended to Spanish, as (64) illustrates. (64a) shows that RP in Spanish is possible, whereas (64b-c) display the same RP/CLLD dichotomy with respect to RTs:

(64) a. La misma propuesta hizo también el partido
the same proposal make-PAST.3SG also the party
del gobierno. (RT)
of.the government
'The party of the government also made the same proposal.'

b. *Me disgusta que la misma propuesta hiciera
CL regret-PRES.3SG that the same proposal make-PAST.3SG
también el partido del gobierno. (RT)
also the party of.the government

c. Me disgusta que la misma propuesta la hiciera también el partido del gobierno. (CLLD)
'I regret that the party of the government also made the same proposal.'

On a par with Italian, Spanish RP is possible in main clauses, whereas it is not in the complement clause of a factive verb. Cardinaletti takes this as evidence for positing different positions for RP and CLLD, though both target the CP-system in her analysis. In our system, the distinction between RP and CLLD may be derived from the possibility of discourse-feature inheritance. For CLLD we take it that it involves movement to Spec,TP after lowering δ-features onto T, whereas for RP no feature inheritance takes place and hence RP targets Spec,CP (similar to A-Topics; actually, Cardinaletti, 2010:8 shows that RP is an A-Topic). By assuming that in the complement clauses of factive predicates there

is operator movement, we can account for the incompatibility of this operator and RP, since both operations compete for the same position.[27]

5. Relative clauses and RTs

We are assuming, following Haegeman (2006a) and Haegeman and Ürögdi (2010), that RTs in languages such as English target Spec,CP, and if an operator has already moved to Spec,CP, RTs are blocked from applying. This makes the prediction that even if there is operator movement, RTs are allowed if the operator movement is to a position other than Spec,CP. We will see that this is the case with relative clauses, giving further credence to the syntactic competition analysis for RTs.

It is standardly assumed that in relative clauses an operator moves to Spec,CP. If topics in English and Italian move to Spec,CP, an incompatibility is expected to arise, since it would compete with operator movement for the same position. However, examples of relative clauses with topic fronting or negative preposing are not rare in English.

(65) a. A university is the kind of place [in which, that kind of behaviour, we cannot tolerate].

[27] Note that a crucial difference between CLLD and RP is the presence of a clitic (when available) in CLLD as opposed to RP, where there is no clitic at all (see Cardinaletti, 2010 for distinct properties of RP and focalization). The presence/absence of the clitic is not accidental. An account of clitics is far beyond the scope of this paper, although we admit that it will shed light on the nature of CLLD and RP. For the sake of simplicity, we assume that clitics generate as part of a 'big DP', as in Torrego (1992), Sportiche (1995), Uriagereka (1995), Cecchetto (2000), among many others. The DP moves to a higher position and the clitic may either remain in situ or move with the V depending on the morphological properties of V. In section 7 we discuss the different positions of clitics which are predicted from our feature-inheritance approach.

b. Syntax is the kind of subject [which only very rarely will students enjoy]. (Radford 2009:327)

However, if we view operator movement in relative clauses as movement to a position other than Spec,CP, examples like these are not a problem. From Rizzi's (1997 *et seq*.) cartographic analysis, relative operators move to Spec,ForceP, which is a different position from the target for the topics' movement. Based on this approach, Radford (2009:327) analyzes (65a) as follows:

(66) [$_{\text{ForceP}}$ *in which* [$_{\text{Force}}$ ø] [$_{\text{TopP}}$ **that kind of behaviour** [$_{\text{Top}}$ ø] [$_{\text{TP}}$ we cannot tolerate **t** *t*]]]

From our point of view, "TopP" is the traditional CP, and English retains its discourse feature at C so that topic moves to Spec,CP (Author2, 2010; see Author1, 2011 for comments on the split-CP nature of (66)). Thus, in the analysis given in (66), no intervention is expected in relative clauses in English.[28] A similar story can easily accommodate the Italian data that we have discussed in note 14. Rizzi (1997) explicitly shows that CLLD can occur in relative clauses.

(67) Un uomo a cui, il premio Nobel, lo daranno senz'altro.
a man to whom the prize Nobel CL give-FUT.3PL without.another

[28] Although Radford (2009) uses cartography to analyze the relative clause, we could just as well use a more traditional approach such as that of Chomsky (1977) (see also Author2, 2010 for a similar proposal that he calls αP) which allows for a topic position below C. What Chomsky did not note is that this kind of "topic under C" is only allowed in root environments. From this perspective, relative clause formation in English is parallel to that of root clauses. As a result, no competition arises. On this account, RTs are possible in environments that do not have operator movement ("presupposed") or in environments that have operator movement but because of the root nature of the structure, there is a topic position that is available below C to which a topic may move. This latter structure mimics to a restricted extent within an agreement-based language such as English what we see language-wide in discourse-configurational languages such as Japanese and Spanish, where Spec,TP is always available for topicalization.

'A man to whom, the Nobel prize, they will give it undoubtedly.'

(Rizzi's example (12a))

The relative operator *a cui* 'to whom' will move to ForceP, leaving enough syntactic space for a CLLD-ed topic.

With regard to Spanish, relative clauses are compatible with RTs such as CLLD since in our system (at least some) CLLD-ed topics undergo movement to Spec,TP. Hence, we predict the acceptability of sentences such as (68):

(68) Hay un estudiante que este examen lo
there.be-PRES.3SG a student that this exam CL
suspende siempre.
fail-PRES.3SG always
'There is a student who always fails this exam.'

The relative operator movement would never interfere with a preposed topic in Spanish, because the former moves to the CP area, whereas the latter moves to the TP region. Thus no competition is expected in Spanish relative clauses.

In this connection, an interesting phenomenon emerges in Japanese. We saw that *-wa* topicalization is to CP and it displays the classic root effects identified for languages such as English. If relative clauses in Japanese work the same as in English, we would expect *-wa* topicalization to be possible. This is, in fact, not the case (Kuno 1973).

(69) *Taroo-ga [Hanako-*wa* hirugohan-o taberu basyo]-o sitteiru.
Taro-NOM Hanako-TOP lunch-ACC eat place-ACC know
'Taro knows the place where Hanako will eat lunch.'

As shown below, topicalization by scrambling is not a problem, as expected.

(70) Taroo-ga [hirugohan-o Hanako-ga taberu basyo]-o sitteiru.
Taro-NOM lunch-ACC Hanako-NOM eat place-ACC know
'Taro knows the place where lunch, Hanako will eat.'

Why is there this difference between Japanese and English with regard to RT topicalization? Why is it possible in English but not in Japanese? It has been noted that in languages that have a head-final relative clause, the relative clause structure is "smaller" than in head-initial relative clauses (Krause, 2001; see also Hale, 2002). One way to account for the emergence of the root effect in Japanese but not in English relative clause is that in Japanese, the relative clause is limited strictly to the CP, without a ForceP, so that the operator and the *-wa* topicalization would compete for the same Spec,CP position. See Murasugi (1991) for a full account of relative clauses in Japanese.

6. Japanese/Spanish adverbial clauses

Author2 (2012a) shows that in Japanese reason-clauses, the *-wa* topicalization, a RT, is possible:

(71) Hanako-wa kuru kara, uti-ni ite-kudasai.
Hanako-TOP come because home-at be-please
'Because Hanako will come, please be at home.'

Reason clauses are ambiguous between a presupposed reading and an asserted interpretation (in much the spirit of Haegeman's (2006a,b) asymmetry between central and peripheral adverbial clauses). Author2 observes that the licensing of topicalization forces an asserted reading of the otherwise ambiguous reason-clause. Thus, in (71) above, which contains topicalization, the reason

clause is asserted, but in (72) below, without topicalization, the reason clause is ambiguous between being asserted and presupposed:

(72) Hanako-ga omiyage-o mottekuru kara, uti-ni ite-kudasai.
Hanako-NOM present-ACC bring because home-at be-please
'Because Hanako will bring a present, please be at home.'

Following the general direction set by Haegeman (e.g., 2006b), Author2 argues that in the Japanese reason clause, operator movement occurs if it is presupposed. As a consequence, although operator movement applies in the non-asserted version of (71) scrambling is still possible. Given that scrambling is movement to Spec,TP, it is not blocked by operator movement and the asserted interpretation is still available in (71). This is shown below:

(73) Omiyage-o Hanako-ga mottekuru kara, uti-ni ite-kudasai.
present-ACC Hanako-NOM bring because home-at be-please
'Because Hanako will bring a present, please be at home.'

Spanish adverbial clauses behave in a similar way. Haegeman (2007, 2010) proposes that in English, topicalization is possible only in peripheral adverbial clauses. The reason is that in central adverbial clauses operator movement to CP intervenes and blocks any further A'-movement:

(74) a. *While this paper I was revising last week, I thought of another analysis.
b. *When her regular column she began to write again, I thought she would be OK.
c. *If these exams you don't pass, you won't get the degree.
(Haegeman 2010:629)

Haegeman states that, cross-linguistically, adverbial clauses are not amenable to RTs, and provides examples from Hernanz (2007), who claims that emphatic polarity markers *sí* 'yes' and *bien* 'well' in Spanish are not possible in central adverbial clauses. If CLLD were an RT, the prediction would be that no topic preposing should occur in central reason clauses. This is not borne out in examples such as (75):

(75) a. Julia no ha entregado la tesis en el departamento
Julia not have-PERF.3SG submitted the thesis in the department
porque el capítulo final no lo ha terminado todavía.
because the chapter final not CL have-PERF. 3SG finished yet
'Julia hasn't submitted her thesis to the Department because she hasn't finished her final chapter yet.'

b. Julia no debe (de) haber entregado la tesis en el
Julia not must-PERF.3SG (of) have submitted the thesis in the
departamento, porque el último capítulo lo tiene
department because the last chapter CL have-PRES.3SG
su supervisor todavía.
her supervisor still
'Julia mustn't have submitted her thesis to the Department, because her supervisor still has the last chapter.'

Example (75b) contains a peripheral reason clause. If Haegeman is correct in claiming that there is no operator movement in peripheral adverbial clauses, the grammaticality of (75b) is expected again, since there will be no intervention effect blocking CLLD.[29] However, the interesting datum is (75a). This has a

[29] In the two examples in (75), the preposed topic is specifically either a G-Topic or a C-Topic. Both types have been claimed to undergo movement to Spec,TP in Spanish after δ–feature inheritance from C by T. See Arregi (2003) for arguments in support of analyzing Spanish CLLD as contrastive topicalization.

The contrastive nature of CLLD in (75) can be illustrated in a context where there is a set of salient alternatives. In a context where different sections of Julia's thesis (introduction, chapters,

central reason clause.[30] In the operator-movement analysis, central adverbial clauses involve movement of the operator to Spec,CP, thus banning any further movement to this position. If CLLD-ed elements are either merged in or moved to Spec,CP we expect them to be barred in central adverbial clauses. (75a) simply supports our view that Spanish CLLD targets a lower position, Spec,TP. Therefore, CLLD is always available in both central and peripheral reason clauses. No competition effect blocks CLLD because operator movement and CLLD do not compete for the same syntactic position. Note that the preposed topics are G-topics and these sentences are felicitous in a context where the information provided by the fronted topics is given. Bianchi & Frascarelli (2010)

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conclusions, references, etc.) are being discussed, we can establish a contrast between those different sections as the possible reason for her not having finished the thesis yet. In this context, both sentences in (75) will be felicitous. From a phonological point of view, the contrastive interpretation is corroborated by an H* tone. Otherwise, the CLLD in (75) is interpreted as a G-Topic.

[30] One of the tests that Hegeman (2003) uses to discriminate between central and peripheral adjunct clauses is clefting. She claims that only central adverbial clauses can be the focus of a cleft sentence, therefore peripheral adverbial clauses cannot. She applies this test to conditional clauses. If we apply it to the reason clauses in (73) we have enough elements of judgment to single out the central status on (75a):

(i) Es porque el capítulo final no lo ha terminado todavía por lo que
be because the chapter final not CL have-PERF. 3SG finished yet for which
Julia no ha entregado la tesis en el departamento hoy
Julia not have-PERF.3SG submitted the thesis in the department today
'It is because she hasn't finished her final chapter yet that Julia hasn't submitted her thesis to the Department today.'

(ii) *Es porque el último capítulo lo tiene su supervisor todavía por lo que
be because the last chapter CL have-PRES.3SG her supervisor still for which
Julia no debe (de) haber entregado la tesis en el departamento.
Julia not must-PERF.3SG (of) have submitted the thesis in the department
'It is because her supervisor still has the last chapter that Julia mustn't have submitted her thesis to the Department.'

claim that G-Topics are not a root-like phenomenon. However, we must ask again whether there is any syntactic explanation for this.

Recall that, in our view, preposed G-Topics undergo movement to Spec,TP in languages such as Spanish. More precisely, in the reason clauses in (75), discourse-features (δ-features) are inherited from C by T and the EPP under T triggers movement of the G-topic. Assuming that this is on the right track and adopting a movement analysis of temporal subordinators *à la* Haegeman, we should expect no competition effect either in central or peripheral reason clauses, since operator movement to Spec,CP does not impose any restriction on other types of movement such as topic fronting to Spec,TP. The examples in (75) support this analysis.

7. A collateral argument supporting feature inheritance: clitics

There is a crucial aspect in Romance CLLD that we have not discussed so far; namely the role of clitics in the strategy used by Romance-type languages when topics are fronted to the left periphery. Recent literature on clitic placement in Romance agrees that the sentence has three distinct domains for object clitic placement: the C-domain (Benincà, 2006; Benincà, 1983; and Uriagereka, 1995), the T-domain (Kayne, 1989, 1991) and the V-domain (Cardinaletti and Shlonsky, 2004; Cardinaletti, 2008; Ledgeway and Lombardi, 2004; and Tortora 2000, 2002, 2010).

In line with Boeckx and Gallego's (2008) analysis of clitics, we assume that cliticization involves movement to the relevant host. In Chomsky's (2008) phase-based system adopted in our work, movement of a clitic should imply a Probe-Goal Agree relation, similar to Roberts (2006, 2012). Under this view, phasal heads are the triggers of clitic movement (clitic climbing). Boeckx and Gallego (2008) claim that cliticization is connected to φ-feature inheritance (Chomsky 2008), and can only target phase heads: C, *v**, and P. As they argue, cliticization

is subject to *freezing effects* or Chomsky's *Activity Condition*, according to which a category becomes inert once all its uninterpretable features have been valued. Concentrating on object clitics, they suggest that an Agree relation is established with *v*. However, due to φ-feature inheritance the real target is V:

(76) a. [v^*_{φ} [V Cl]]
b. [v^* [Cl-V_{φ} t_{Cl}]]

Boeckx and Gallego note that object clitics are not frozen within the v^*P phase and assume they can escape if they act as 'free riders' on v^* (Collins' 2005 *smuggling*). Implementing this proposal, we suggest that object clitics also carry an unvalued discourse-feature (δ-feature). It is precisely this unvalued feature that permits object clitics to escape the v^*P phase since these remain active to be probed by a higher phasal head.

In addition to φ-feature inheritance, we have proposed a mechanism of δ-feature inheritance. We have held that in Spanish (at least some) δ-features are lowered from C to T. This predicts that T qualifies as a probe in search of a goal. In other words, T will trigger movement of whatever constituent is hosting the clitic. This explains why in Spanish the clitic is ultimately hosted by T.

(77) a. [$C_{\varphi,\delta}$ [$T_{\varphi,\delta}$ [v^* Cl_{δ}-V [V …]]
b. [C [Cl_{δ}-V-$T_{\varphi,\delta}$ [v^* Cl_{δ}-V …]]

On the other hand, we have claimed that in other Romance languages δ-features are all retained in C. This is the case in Italian. If this is correct, the prediction is that object clitics will undergo movement to C, as illustrated below:

(78) [Cl_{δ}-V-$C_{\varphi,\delta}$ [T [v* Cl_{δ}-V …]]

Roberts (2010, 2012) has independently claimed that clitics move to Finiteness in the CP-system (reminiscent of Uriagereka's 1995 FP). He proposes that in languages such as Serbian/Croatian clitics are attracted to the CP-field, accounting for the second position of clitics in this type of language.

(79) Dao ga je Mariji
given it has (he) to-Maria
'He has given it to Maria.'

(80) Taj mi je pjesnik dao autogram
this to-me has poet given autogram
'This poet has given mean autogram.'
(Ćavar and Wilder, 1992, via Roberts, 2012:386)

One problem posed by this clitic movement is that it has to escape the *v*P phase. To solve this problem, Roberts (2012:391) suggests that clitics are $D^{min/max}$ and that *v* lacks a D-feature but carries an Edge Feature which avoids a PIC violation by moving the clitic via Spec, *v*P. The clitic then undergoes movement to Finiteness due to the presence of a D-feature in this category. Assuming this is basically correct, we want to argue that the reason why clitics move out of *v*P to a higher position is that, as mentioned earlier, they bear a δ-feature which makes the clitic active. Clitics then move to a discourse-related category. We have seen that in Spanish clitics move to T after discourse-feature inheritance. Now we suggest that, alongside Serbian/Croatian, Italian clitics may move to the CP field unless the δ-feature has been valued in some other way.

However, we are faced with the problem that in general Romance languages are all *v*-oriented, hence clitics are hosted by *v*. This raises the question as to why clitics should move to T or C. In the minimalist spirit that we adopt, long-distance agreement may ensure that the δ-feature which the clitic is endowed with can be valued in situ. Nevertheless, V in Romance is held to move to T. In line with Baker (1988), once the clitic is attached to the V, it cannot be

excorporated. The point is whether we can detect any positional difference between Spanish and Italian, which can be derived from feature inheritance. We believe we can do just this.

Note the examples in (81-82) from Italian and Spanish, respectively. Tortora (2010) claims that in Absolute Small Clauses Italian allows enclesis (Belletti, 1990):

(81) Conosciuta-la ieri, …
met-OCL yesterday
'Having met her yesterday, …'

(82) *Conocido-la ayer, …
met-OCL yesterday
'Having met her yesterday, …'

The examples in (81-82) display the different positional properties of the participle in Italian and Spanish respectively. According to Egerland (1995), participles in Italian move to C in Absolute Small Clauses. If Chomsky's (2008) observation that phasal heads enter the derivation with uninterpretable features is correct and if we are right when we claim that clitic movement is triggered by a δ-feature in the relevant phasal head, we expect to find the cluster 'participle+clitic' in the CP-domain. This explains the grammaticality of the Italian example.

Why is it that Spanish does not exhibit this pattern? One plausible reason is that the relevant δ-feature has been inherited by T and thus any host containing the clitic is frozen in T. In conclusion, our system accounts for the different syntactic positions that clitics can occupy cross-linguistically: C-domain, T-domain and V-domain. This parametric distinction correlates with discourse-feature inheritance in that if a language has feature inheritance it disqualifies C as a host for a clitic (Spanish). Conversely, if a language retains all features in C, this phasal head qualifies as a host for the clitic (Italian).

8. Conclusions

We have observed that root transformations such as topicalization (CLLD) and Negative Preposing in Spanish and contrastive topic and topicalization via scrambling in Japanese occur much more freely than the root transformations in English. At first glance, it appears that these operations in Japanese and Spanish represent a challenge to the operator-movement approach to referential (factive) clauses. However, by arguing that some types of topics (denoting G-Topics and C-Topics) involve movement to Spec,TP, we can maintain the operator-movement and the competition analysis intact. In fact, it provides further evidence for the syntactic approach to the root/non-root distinction since in all the languages we dealt with, the semantic distinctions that ostensibly distinguish root and non-root environments are constant.

The distribution of root transformations turns out to correlate with whether the discourse feature of topic is inherited from C by T. If it is, "root transformations" take place within TP as in Japanese and Spanish, and no competition occurs (this holds for G-Topics and C-Topics). However, if this discourse feature stays in C, as in English or the *-wa* topicalization in Japanese and A-Topics or Resumptive Preposing in Spanish, it competes with operator movement to Spec,CP for the same syntactic space.

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References

Aboh, E. 2005. Deriving relative and factive constructions in Kwa. In: Brugè, L., Giusti, G., Munaro, N., Schweikert, W., Turano, G. (Eds.), Contributions to the Thirtieth Incontro di Grammatica Generativa. Libreria Editrice Cafoscarina, Venezia, pp. 265-285.

Arregi, K. 2003. Clitic left dislocation is contrastive topicalization. Penn Working Papers in Linguistics 9 (1), 31-44.

Baker, M.C. 1988. Incorporation: A Theory of Grammatical Function Changing. University of Chicago Press Chicago.

Barbosa, P. 2001. On inversion in wh-questions in Romance. In: Hulk, A., Pollock, J.-Y. (Eds.), Romance Inversion. Oxford University Press, New York, pp. 2-59.

Belletti, A. 1990. Generalized Verb Movement: Aspects of Verb Syntax. Rosenberg and Sellier, Torino.

Benincà, P. 1983. Osservazioni sulla Sintassi dei Testi di Lio Mazor. In: Angelet, C., Melis, L., Mertens, F.J., Musarra, F. (Eds.), Langue, Dialecte, Litterature. Etudes Romanes à la Mémoire de Hugo Plomteux. Leuven University Press, Leuven, pp. 187-197.

Benincà, P. 2006. A detailed map of the left periphery in Medieval Romance. In: Zanuttini, R., Campos, H., Herburger, E., Portner, P. (Eds.), Negation, Tense, and Clausal Architecture: Crosslinguistic Investigations. Georgetown University Press, Washington, D.C., pp. 53-86.

Bianchi, V., Frascarelli, M. 2010. Is topic a root phenomenon?. Iberia: An International Journal of Theoretical Linguistics 2 (1), 43-88.

Bianchi, V., Frascarelli, M. 2012. On how to be rooted in a context. Paper presented at GLOW 35, University of Potsdam.

Boeckx, C., Gallego, Á. 2008. Clitic climbing by (long-distance) agree. Paper presented at the workshop on Explanatory proposals of clitics, Universitat Pompeu Fabra.

Büring, D. 1999. Topic. In: Bosch P., van der Sand, R. (Eds.), Focus - Linguistic Cognitive and Computational Perspectives. Cambridge University Press, Cambridge, pp. 142-165.

Büring, D. 2003. On D-trees, beans and B-accents. Linguistics and Philosophy 26, 511-45.

Cardinaletti, A. 2004. Toward a cartography of subject positions. In: Rizzi L. (Ed.), The Structure of CP and IP. Oxford University Press, Oxford and New York, pp. 115-165.

Cardinaletti, A. 2008. On different types of clitic clusters. In: De Cat, C., Demuth, K. (Eds.), The Bantu-Romance Connection. A Comparative Investigation of Verbal Agreement, DPs and Information Structure. John Benjamins, Amsterdam, pp. 41-82.

Cardinaletti, A. 2010. On a (wh-)moved topic in Italian, compared to Germanic. In: Alexiadou, A., Hankamer, J., McFadden, T., Nuger, J., Schaeffer, F. (Eds.), Advances in Comparative Germanic Syntax. John Benjamins, Amsterdam,pp. 3-40.

Cardinaletti, A. Shlonsky, U. 2004. Clitic positions and restructuring in Italian. Linguistic Inquiry 35, 519-557.

Cecchetto, C. 2000. Doubling structures and reconstruction. Probus 12, 93-126.

Chafe, W. 1987. Cognitive constrains on information flow. In: Tomlin, R. (Ed.), Coherence and Grounding in Discourse. Benjamins, Amsterdam, pp. 21-51.

Chomsky, N. 1977. On wh-movement. In: Culicover, P., Wasow, T., Akmajian, A. (Eds.), Formal Syntax. Academic Press, San Diego, CA, pp. 71-132.

Chomsky, N. 2008. On phases. In: Freidin, R., Otero, C., Zubizarreta, M.L. (Eds.), Foundational Issues in Linguistic Theory. MIT Press, Cambridge, MA, pp. 133-166.

Cinque, G. 1990. Types of A-Bar Dependencies. MIT Press, Cambridge, MA.

Collins, C. 2005. A smuggling approach to the passive in English. Syntax 8, 81-120.

Cornilescu, A. 2004. Direct object movement and the structure of the Romanian left periphery. In: Coene, M., de Cuyper G., D'Hulst Y. (Eds.), Antwerp Papers in Linguistics (APiL) 7: Current Studies in Comparative Romance Linguistics, 141-166.

Demonte, V. Fernández-Soriano, Olga. 2009. Force and finiteness in the Spanish complementizer system. Probus 21, 23-49.

den Besten, H. 1977/1983. On the interaction of root transformations and lexical deletive rules. In: Abraham, W. (Ed.), On the Formal Syntax of the Westgermania. John Benjamins, Amsterdam, pp. 47-131.

Egerland, V. 1995. Spec head agreement, case theory and the syntax of participles: Absolute participal clauses in Old Italian. Rivista di Grammatica Generativa 20, 33-68.

Emonds, J. 1969. Root and structure-preserving transformations. Doctoral dissertation, MIT.

Emonds, J. 1976. A Transformational Approach to English Syntax. Academic Press, New York.

Emonds, J. 2004. Unspecified categories as the key to root constructions. In: Adger, D., De Cat, C., Tsoulas, G. (Eds.), Peripheries. Kluwer, Dordrecht, 75-121.

Emonds, J. 2012. Augmented structure preservation and the tensed S constraint. In: Aelbrecht, L., Haegeman, L., Nye, R. (Eds.), Main Clause Phenomena: New Horizons. John Benjamins, Amsterdam, pp. 23-46.

Frascarelli, M. 2007. Subjects, topics and the interpretation of referential *pro*: an interface approach to the linking of (null) pronouns. Natural Language and Linguistic Theory 25, 691-734.

Frascarelli, M., Hinterhölzl, R. 2007. Types of topics in German and Italian. In: Schwabe, K., Winkler, S., (Eds.), On Information Structure, Meaning and Form. John Benjamins, Amsterdam, pp. 87-116.

Gärtner, H.-M. 2002. On the Force of V2 Declaratives, Theoretical Linguistics 28 (1), 33-42.

Givón, T. 1983. Topic continuity in discourse: An introduction. In: Givón, T. (Ed.), Topic Continuity in Discourse: A Quantitative Cross Language Study. John Benjamins, Amsterdam and Philadelphia, pp. 5-41.

Gutiérrez-Bravo, R. 2007. Prominence scales and unmarked word order in Spanish. Natural Language and Linguistic Theory 25, 235-271.

Haegeman, L. 1996. Verb second, the split CP and null subjects in early Dutch finite clauses. GenGenP 2, 133-175.

Haegeman, L. 2003. Conditional clauses: external and internal syntax. Mind and Language18, (Special Issue on Conditionals) 317-339.

Haegeman, L. 2006a. Argument fronting in English, Romance CLLD and the left periphery. In: Zanuttini, R., Campos, H., Herburger, E., Portner, P. (Eds.), Negation, Tense and Clausal Architecture: Cross-Linguistic Investigations. Georgetown University Press, Washington D.C., pp. 27-52.

Haegeman, L. 2006b. Conditionals, factives and the left periphery. Lingua 116, 1651-1669.

Haegeman, L. 2007. Operator movement and topicalization in adverbial clauses. Folia Linguistica18, 485-502.

Haegeman, L. 2010. The internal syntax of adverbial clauses. Lingua 120, 628- 648.

Haegeman, L. 2012. Adverbial Clauses, Main Clause Phenomena, and Composition of the Left Periphery. OUP, Oxford.

Haegeman, L., Ürögdi, B. 2010. Referential CPs and DPs: An operator movement account. Theoretical Lnguistics 36 (2/3), 111-152.

Hale, K. 2002. On the Dagur object relative: some comparative notes. Journal of East Asian Linguistics 11, 109-122.

Hayashibe, H. 1975. Word order and particles: A developmental study in Japanese. Descriptive and Applied Linguistics 8, 1-18.

Hernanz, M.L. 2007. From polarity to modality: Some (a)symmetries between *bien* and *sí* in Spanish. In: Eguren, L., Fernández-Soriano, O. (Eds.), Coreference, Modality and Focus. John Benjamins, Amsterdam, pp. 133-170.

Heycock, C. 2006. Embedded root phenomena. In: Everaert, M., van Riemsdijk, H. (Eds.), The Blackwell Companion to Syntax. Vol II. Blackwell, Oxford, pp. 174-209.

Heycock, C. 2008. Japanese -wa, -ga, and information structure. In: Author2, Saito, M., (Eds.), Oxford Handbook of Japanese Linguistics. Oxford University Press, Oxford and New York, pp. 54-83.

Hill-Motapanyane, V. 2002. Adhering focus. Linguistic Inquiry 33, 164-172.

Hiraiwa, K. 2010. Complement types and the CP/DP parallelism - A case of Japanese. Theoretical Linguistics 36 (2/3), 189-198.

Hoji, H. 1985. Logical Form constraints and configurational structures in Japanese. Ph.D. dissertation, University of Washington, Seattle.

Hooper, J., Thompson, S. 1973. On the applicability of root transformations. Linguistic Inquiry 4, 465-497.

Krause, C. 2001. On reduced relatives with genitive subjects. Ph.D. dissertation, MIT.

Kalluli, D. 2006. Triggering factivity: Prosodic evidence for syntactic structure. In: Baumer, D. Montero, D., Scanlon, M. (Eds.), Proceedings of the 25th West Coast Conference on Formal Linguistics. Cascadilla Proceedings Project, Sommerville, MA, pp. 211-219.

Kayne, R. 1989. Null subjects and clitic climbing. In: Jaeggli, O., Safir, K. (Eds.), The Null Subject Parameter. Kluwer Academic Publishers, Dordrecht, pp. 239-261.

Kayne, R. 1991. Romance clitics, verb movement, and PRO. Linguistic Inquiry 22, 647-686.

Kiparsky, P., Kiparsky, C. 1970. Fact. In: Manfred Bierwisch and Karl Erich Heidolphed, (Eds.), Progress in Linguistics. Mouton, The Hague, pp. 143-73.

Kiss, K.É. 1995. Introduction. In: Kiss, K.É. (Ed.), Discourse Configurational Languages. Oxford University Press, Oxford, pp. 3-27.

Krifka, M. 2007. Basic notions of information structure. In: Féry, C., Fanselow, G., Krifka, M. (Eds.), Interdisciplinary Studies on Information Structure. Potsdam, Universitätsverlag Potsdam, pp. 13-55.

Krifka, M. 2011. Embedding speech acts. Ms., Humboldt Univ. zu Berlin.

Kuno, S. 1973. The Structure of the Japanese Language. MIT Press, Cambridge, MA.

Kuno, S. 1976. Subject, theme, and the speaker's empathy - A reexamination of relativization phenomena. In: Li, C. (Ed.), Subject and Topic. Academic Press, New York, pp. 417-444.

Kuroda, S.-Y. 1980. Bun kouzou no hikaku [The comparison of sentence structures]. In: Kunihiro, T. (Ed.), Niti-Eigo Hikaku Kouza 2: Bunpou [Lectures on Japanese-English Comparative Studies 2: Grammar]. Taisyukan, Tokyo, pp. 23-61.

Kuroda, S.-Y. 2005. Focusing on the matter of topic: A study of *wa* and *ga* in Japanese. Journal of East Asian Linguistics 14, 1-58.

Lambrecht, K. 1994. Information Structure and Sentence Form: Topic, Focus and the Mental Representations of Discourse Referents. Cambridge University Press, Cambridge.

Ledgeway, A., Lombardi, A. 2005. V-movement, adverbs, and clitic positions in Romance. Probus 171, 79-113.

López, L. 2009. A Derivational Syntax for Information Structure. Oxford University Press, Oxford.

McCawley, N.A. 1978. Another look at *no*, *koto*, and *to*: Epistemology and complementizer choice in Japanese. In: Hinds, J., Howard, I. (Eds.), Problems in Japanese Syntax and Semantics. Kaitakusha, Tokyo, pp. 178-212.

Maki, H., Kaiser, L., Ochi, M. 1999. Embedded topicalization in English and Japanese. Lingua 109, 1-14.

Meinunger, A. 2004. Verb position, verbal mood and the anchoring (potential) of sentences. In: Lohnstein, H., Trissler, S. (Eds.), Syntax and Semantics of the Left Periphery. Mouton de Gruyter, Berlin, pp. 459-487.

Melvold, J. 1991. Factivity and definiteness. In: Cheng, L., Demirdache, H. (Eds.), More Papers on Wh-Movement, MIT Working Papers in Linguistics 15. MIT, Cambridge, MA., pp. 97-117.

Munsat, S. 1986. Wh-complementizers. Linguistics and Philosophy 9, 191-217.

Murasugi, K. 1991. Noun phrases in Japanese and English: A study in syntax, learnability and acquisition. Ph.D. dissertation, University of Connecticut.

Murasugi, K., Kawamura, T. 2004. On the acquisition of scrambling in Japanese. Language and

Linguistics 5 (1), 131-151.

Otsu, Y. 1994. Early acquisition of scrambling in Japanese. In: Hoekstra, T., Schwartz, B.D. (Eds.), Language Acquisition Studies in Generative Grammar. John Benjamins, Amsterdam, pp. 253-264.

Pesetsky, D. 1987. Wh-in-situ: Movement and unselective binding. In: Reuland, E., ter Meulen, A. (Eds.), The Representation of (In)definiteness. MIT Press, Cambridge, MA., pp. 98-129.

Peterson, P. 1997. Fact, Proposition and Event. Kluwer, Dordrecht.

Radford, A. 2009. Analysing English Sentences. Cambridge University Press, Cambridge.

RAE – ASALE. 2009/2011. Nueva Gramática de la Lengua Española. Espasa, Madrid.

Reinhart, T. 1981. Pragmatics and linguistics: an analysis of sentence topics. Philosophica 27, 53-94.

Richards, M.D. 2007. On feature inheritance: an argument from the phase impenetrability condition. Linguistic Inquiry 38, 563-572.

Richards, N. 2001. Movement in Language: Interactions and Architectures. Oxford University Press, Oxford.

Rizzi, L. 1997. The fine structure of the left periphery. In: Haegeman, L. (Ed.), Elements of Grammar. Kluwer, Dordrecht, pp. 281-337.

Roberts, I. 2010. Agreement and Head Movement: Clitics, Incorporation, and Defective Goals. MIT Press, Cambridge, MA.

Roberts, I. 2012. Phases, head movement and second-position effects. In: Gallego, Á. (Ed.), Phases: Developing the Framework. Mouton de Gruyter, Berlin, pp. 385-440.

Saito, M. 1985. Some asymmetries in Japanese and their theoretical implications. Ph.D. dissertation, MIT.

Saito, M. 1992. Long-distance scrambling in Japanese. Journal of East Asian Linguistics 1, 69-118.

Sportiche, D. 1995. Clitic constructions. In: Rooryck, J., Zaring, L. (Eds.), Phrase structure and the lexicon. Kluwer, Dordrecht, pp. 213-276.

Strawson, P. 1964. Identifying reference and truth values. Theoria 30, 96-118.

Torrego, E. 1992. Case and argument structure. Ms., University of Massachussetts.

Tortora, C. 2000. Functional heads and object clitics. In: Hirotani, M., Coetzee, A., Hall, N., Kim, J.-Y. (Eds.), Proceedings of the 30th Meeting of the Northeast Linguistics Society, vol. 2, pp. 639-653.

Tortora, C. 2002. Romance enclisis, prepositions, and aspect. Natural Language and Linguistic Theory 20, 725-758.

Tortora, C. 2010. Domains of clitic placement in finite and non-finite clauses: Evidence from a Piedmontese dialect. In: D'Alessandro, R., Ledgeway, A., Roberts, I. (Eds.), Syntactic Variation. The Dialects of Italy. Cambridge University Press, Cambridge, pp. 135-149.

Uriagereka, J. 1995. Aspects of the syntax of clitic placement in Western Romance. Linguistic Inquiry 26, 79-123.

Vermuelen, R. 2009. Topics, contrast and contrastive topics in Japanese. In: Vermeulen, R. Shibagaki, R. (Eds.), MIT Working Papers in Linguistics 58: Proceedings of the 5th Workshop on Altaic Formal Linguistics (WAFL 5). MIT Press, Cambridge, MA., pp. 361-372.

Watanabe, A. 1993. Larsonian CP recursion, factive complements, and selection. In: Schafer, A.J. (Ed.), Proceedings of the North East Linguistic Society 23. GLSA, Amherst, MA., pp. 523-537.

Watanabe, A. 1996. Nominative-genitive conversion and agreement in Japanese: A cross-linguistic perspective. Journal of East Asian Linguistics 5(4), 373-410.

Zubizarreta, M.L. 1998. Word Order, Prosody and Focus. MIT Press, Cambridge, MA.