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Highlights

A feature-inheritance approach to root phenomena and parametric variation

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- Discourse features are inherited by T from C in Spanish and Japanese.
- A feature-inheritance analysis of topic fronting is proposed.
- Contrastive and Given topics in Spanish and Japanese target Spec,TP.
- Non-asserted complement and adverbial clauses may allow topic fronting.
- Factive operators may or may not compete with topics for the same syntactic slot.



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A feature-inheritance approach to root phenomena and parametric variation

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Abstract

This work concerns itself with Root Transformations (RT), specifically discussing the RT/non-RT nature of topic fronting in English, Japanese, and Spanish. We claim that this fronting is in principle compatible with all types of embedded clauses regardless of whether the selecting predicate is factive/non-factive, or whether the selected proposition is asserted/non-asserted. Languages vary on how freely they allow topic preposing in various types of complements. Adapting an intervention account of RTs in which an event 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 and non-RTs across languages by the options made possible by 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 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.

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Keywords: Topicalization; Competition; Factivity/assertedness; Feature inheritance; Root/non-root transformations

1. Introduction

In this paper we explore the syntax of different types of topics in subordinate clauses and the reasons why topic fronting is a root phenomenon in languages like English, whereas it is not in languages like Spanish and Japanese. It is generally assumed that English topic fronting exhibits root effects and hence it is available only in those clauses which have root properties, as shown by examples in (1), partially adapted from Emonds (1970:24):

- (1) a. Each part John examined carefully.
- b. Mary said that each part John examined carefully.
- c. *The fact that each part John examined carefully is well-known.

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31 However, Cinque (1990:58) argues that in Romance topic fronting in the form of Clitic left Dislocation (CLLD) is not subject
32 to the root constraints, as illustrated in (2) for Spanish:

- 34 (2) a. Es probable que ese coche lo haya conducido Juan sólo una vez.
35 be-PRES.3SG probable that that car CL have-PRES.3SG driven Juan only one time
36 'It's probable that Juan has driven that car just once.'
39 b. Ángela estaba sorprendida de que los regalos los hubieran dejado los Reyes Magos
40 Angela be-PAST.3SG surprised of that the presents CL have-PAST.3PL left the Kings Magic
debajo del árbol.
under of.the tree
'Angela was surprised that the three Wise Men had left the present under the Christmas tree.'

41 On a par with Spanish, Japanese also shows no restriction with respect to scrambled topics:

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

46 We will analyze the contrasts attested in English vs. Spanish/Japanese and propose that the root/non-root distinction
47 derives from the availability of feature inheritance in the relevant language.

48 1.1. A brief overview of root phenomena

49 Emonds (1970) observed that certain transformations can only apply in root environments.

50 ... a root will mean either the highest S in a tree, an S immediately dominated by the highest S or the reported S in
51 indirect discourse.
52 Emonds (1970:6)

A root transformation such as English topicalization, which Emonds (1976) characterizes as non-structure preserving, is
53 said only to apply in these contexts. Examples in (1) above demonstrate this for the two environments: "highest S" (1a)
54 and "reported S in indirect discourse" (1b).

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

- 60 (4) a. Bill warned us that [_{RIDE} flights to Chicago we should try to avoid].
61 b. John said that [_{RIDE} his mother the children often helped].²

62 In contrast, following are non-RIDEs.

- 64 (5) a. *Bill warned us [flights to Chicago to try to avoid].
65 b. *Mary used another company since/until [flights to Chicago they could avoid].
66 c. *A warning that [flights to Chicago travelers should avoid] will soon be posted.

67 (5a) is an instance of non-reported speech, while (5b) is a case of an adjunct clause, and (5c) involves the complement of
68 N. Emonds (2004, 2012) offers a large inventory of root transformations, including topicalization, VP-preposing, preposed

² According to Emonds (2004:77), the clausal complements in (4) are sisters of V. However, when these clauses are sisters of N, he claims that they are not root-like, as in (i). On the other hand, when the syntactic dependency between the governing N and the clause is obtained via extraposition RTs are allowed, as in (ii).

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

69 negative constituents, V inversion for quotes and for directional PPs, and left dislocation, and suggests that these only
70 apply in RIDE environments. He demonstrates this for English and German, thereby showing the cross-linguistic
71 relevance of RIDEs for RTs. To formally distinguish RIDEs from non-RIDEs, Emonds (2004, 2012) proposes that RIDEs
72 project a Discourse Shell, which is available only in certain contexts.

73 Unlike Emonds' syntactic approach, Hooper and Thompson (1973) and Bianchi and Frascarelli (2010) take an
74 approach to RTs that is based on semantics and pragmatics. Hooper and Thompson argue that the RTs Emonds
75 identified involve some kind of emphasis (e.g., Negative Preposing, VP-preposing), so that these transformations
76 naturally occur in clauses that contain the meaning of assertion. They point out that this predicts the possibility of RTs in
77 environments outside of Emonds' original conception of 'root':

79 (6) We saw that each part he examined carefully. (H&T (125))

80 The V *see* does not take a 'reported S' as a complement, hence the complement of this predicate fits neither the original
81 conception of 'root' nor the later idea of RIDE.³

82 Bianchi and Frascarelli (2010) offer an account of root phenomena based on the typology of topics that Frascarelli and
83 Hinterhölzl (2007) propose in terms of Aboutness-Shift, Contrastive and Familiar Topics. Bianchi and Frascarelli conclude
84 that Familiar (or Given) Topics are not RTs whereas Aboutness-Shift and Contrastive Topics are RTs on the basis of their
85 discourse and semantic properties. As we will see, their semantics-based approach as well as that of Hooper and
86 Thompson's will be quite helpful in understanding the syntax of some types of topic preposing as RTs.

87 In a recent series of works, Haegeman (e.g. 2006b, 2010, 2012) and Haegeman and Ürögdi (2010) adopt a syntactic
88 approach to RTs, much like Emonds, but they set aside any notion of "indirect quote" as the domain in which RTs are
89 allowed. Instead, they focus on contexts in which RTs do not apply and argue that these are environments in which some
90 operator movement to CP takes place independent of a RT (the operator analysis is traced back to Aboh, 2005). This
91 analysis is virtually a syntactic counterpart of the semantic/pragmatic proposals by Hooper and Thompson and Bianchi
92 and Frascarelli in that, as H&T note, RTs do not occur in presupposed (as opposed to asserted) environments, and, as
93 Haegeman observes (e.g., 2006b), presupposed environments are factive in nature, and factives have been argued to
94 involve operator movement (Melvold, 1991; Hiraiwa, 2010; Watanabe, 1993, 1996; among many others; see Munsat,
95 1986 for relevant discussion).

96 Given that the semantic approach of Hooper and Thompson/Bianchi and Frascarelli and the syntactic approach by
97 Haegeman often make similar predictions, it is not always easy to empirically tease apart the two approaches. We will
98 present data and an analysis that clearly favor the syntactic approach, one that also overcomes difficulties that arise with
99 Emonds' (2004) "RIDE" approach once we expand the data beyond English and German (see the relevant German data
100 in Emonds, 2004:84). It is important to bear in mind that the syntactic approach we will support is informed by the work
101 based on semantics and pragmatics. We intend to show that the variation in the syntactic properties we observe across
102 languages is consistent with the semantic properties of RTs/non-RTs noted in the literature. In pursuing this goal, we offer
103 an analysis of different types of topic fronting as RTs/Non-RTs, which is ultimately derived from the inheritance of
104 discourse-based features.

105 1.2. Feature inheritance and discourse

106 Relevant to our analysis is the notion of agreement as it is proposed by Chomsky (2007, 2008). This mechanism is
107 responsible for establishing a relation between a probe and a goal in such a way that grammatical features are valued. As
108 a result, unvalued features are assigned a specific value. In Chomsky's system the mechanism of agreement affects
109 formal features (φ -features) such as person and number at T. Nevertheless, expanding Miyagawa's (2005, 2010)
110 proposal, we deal with preposed constituents as a result of setting an agreement relation in terms of discourse features
111 (δ -features) such as topic and focus in C/T.⁴ This process is informally represented in (7):



³ As Joseph Emonds (p.c.) points out to us, example (6) 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. The revision in Emonds (2004, 2012) addresses some, but not all, of the problems raised by Hooper and Thompson. See Heycock (2006) for a critical review of Hooper and Thompson (1973), including empirical issues with their analysis.

⁴ See Chomsky (2008) and Richards (2007) for arguments that the agreement feature occurs at least initially at C.

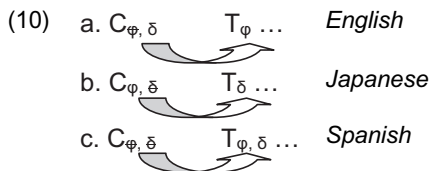
The representation in (7) sketches the feature-inheritance mechanism, indicated by the arrow. C enters the derivation with uninterpretable and unvalued agreement and discourse features, which render C an active probe. In languages such as English the φ -features are lowered onto T, but δ -features are kept in C. These δ -features are valued with those in the DP goal thereby undergoing movement to Spec,CP. The φ -features which have been inherited by T will be valued with those of the subject. This is illustrated in (9), which is the partial derivation that can be proposed for (1a), repeated here as (8) – we use the Greek letters φ for agreement features and δ for discourse features:

(8) Each part John examined very carefully. (Emonds, 1970:24, his (42))

(9) $[_{CP}$ Each part C $[_{TP}$ John $[_T$ will] examine ~~each part~~ very carefully]]
 $[\delta]$ $[\delta]$ $[\varphi]$ $[\varphi]$

Note that in English, discourse and agreement features are dissociated since the former are retained in C, whereas the latter are inherited by T. Once the process of feature valuation ends, all the uninterpretable features are deleted and the derivation is ready to be transferred to the other grammatical components. However, languages may vary as to the process of feature inheritance. Crucial to our proposal is the fact that in some languages δ -feature may be lowered onto T and in other languages both φ -features and δ -features are inherited by T. These two possibilities will explain the divergent properties of topic fronting in different languages (see section 4 for empirical evidence and for the relevant theoretical qualifications).

Let us consider how the interaction of agreement/discourse features with an edge feature in T/C may explain the basic differences between languages. In (10) we see the three-fold typology of languages; the arrow stands for the process of feature inheritance:



If a language is agreement prominent, the agreement features are inherited by T from C and, along with the EPP under T, will attract the category agreed with to Spec,TP. This is represented by possibility (10a). On the other hand, if a language is discourse prominent, the discourse feature under C will be inherited by T and in conjunction with its Edge Feature triggers the Internal Merge of a constituent with the same discourse feature in Spec,TP.⁵ In particular, this is illustrated by possibility (10b). Finally, when a language is both discourse-prominent and agreement-prominent, both types of feature are lowered onto T. The process is schematized in (10c).

In line with Miyagawa (2005, 2010) and Jiménez-Fernández (2010, 2011), in languages like Japanese and Spanish, if the subject or object is attracted to Spec,TP it is because T should contain some feature which motivates their displacement. In our system this feature is a [Top]-feature (a δ -feature) under T, which attracts the constituent that it agrees with, getting a value and then being deleted due to its non-interpretability. This [Top]-feature is inherited from C and works in conjunction with the EPP under T. We return to the feature-inheritance mechanism in section 4.

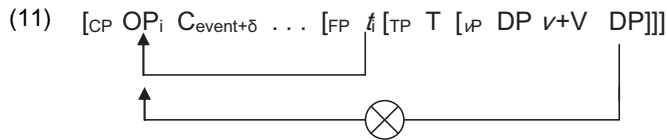
1.3. Factivity, assertedness and competition

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, she suggests that a constituent intervenes when another category crosses it and it is weaker in features than the crossed constituent. 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 event operator and other types of A’-movement compete for the same syntactic position; the higher-moving category will

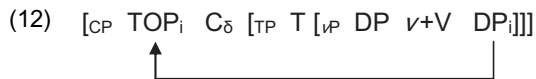
⁵ On previous approaches to a possible classification of languages depending on their discourse configurational character, see Kiss (1995). They suggest that languages can be classified as subject-prominent or topic-prominent. One of the determining factors that Kiss (1995) points out is how often a language uses Topicalization. Extending Kiss’s (1995) original proposal, Miyagawa (2010) redefines focus-prominent languages as discourse-configuration languages.

158 block movement of the lower category. This is the more established approach and also avoids uncertainties regarding the
159 features relevant to computing intervention.

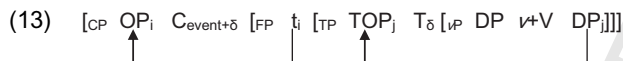
160 If topicalization in English targets Spec,CP and in referential CPs the event operator moves to Spec,CP, the latter
161 blocks any other movement to the same syntactic position:



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



168 In clear contrast with English, Japanese and Spanish are discourse-configurational (additionally, Spanish is
169 agreement-based as well). As stated earlier, this is interpreted in our system in terms of lowering certain δ -features
170 onto T (Miyagawa, 2010; Jiménez-Fernández, 2010, 2011). If this is on the right track, it has an important
171 consequence for the blocking effect shown by operator movement in referential CPs. If preposed topics in the form of
172 CLLD and scrambled constituents are moved to Spec,TP, operator movement does not interfere with any subsequent
173 movement in the same construction. This predicts that independent of the referential/non-referential or asserted/
174 non-asserted character of CPs, topic movement to Spec,TP is completely compatible with operator movement in
175 referential or non-asserted CPs. As we will show, this prediction is borne out by contrastive and familiar topics in
176 Japanese and Spanish, thereby justifying the non-RT character of these topics (as claimed for Italian CLLD in general
177 by Cinque, 1990):



180 In a nutshell, our analysis will explain why some types of CLLD in Spanish and scrambled topics in Japanese are not RTs
181 by simply proposing that these involve movement to Spec,TP, and hence no competition arises with respect to operators
182 moving to Spec,CP.

183 1.4. Outline

184 The paper is organized as follows: section 2 deals with topic fronting in Japanese and Spanish, showing that in both
185 languages topics are possible in environments other than 'root' contexts whether they are defined syntactically or
186 semantically; in section 3 we summarize Bianchi and Frascarelli's (2010) typology of topics, which we adopt and extend;
187 section 4 presents our syntactic proposal that topics are licensed only if they do not compete with other movements. We
188 show that in languages where the distribution of topics is relatively free, discourse features are inherited from C by T,
189 hence no competition effect arises. The argument properties of some types of topic fronting are also addressed here.
190 Section 5 extends our feature-inheritance analysis to adverbial clauses, specifically reason clauses; finally, section 7
191 summarizes our findings.

192 2. Some challenging data?

193 2.1. Spanish

194 As shown in section 1, Spanish apparently poses a challenge to the approaches mentioned above, since there
195 appears to be no distinction between root and non-root contexts for the application of operations that correspond to RTs in
196 other languages. For example, topicalization (in the form of CLLD) is possible in Spanish in root and non-root clauses, as
197 opposed to the general assumption that this type of transformation is incompatible with non-asserted, or presupposed,
198 contexts (Hooper and Thompson, 1973).

- 199 (14) a. *Bill's claim that each part he examined carefully is false.
200 (H&T (177))
211 b. La afirmación de Juan de que cada parte la había examinado cuidadosamente
212 the claim of Juan of that each part CL have-PAST.3SG examined carefully
213 es falsa.
be-PRES.3SG false
'Juan's claim that he had examined each part carefully is false.'

214 This means that in Spanish, topic fronting applies in an environment earlier noted as incompatible with RTs: non-root
215 (Emonds, 1979), non-RIDE (Emond, 2004), operator-movement (Haegeman's work), and presupposed or non-asserted
216 clauses (Hooper and Thompson, 1973).⁶

The observation that in Romance there is no restriction with respect to CLLD is not new. Haegeman (2006a) suggests that
217 CLLD is acceptable in non-root contexts in a wide variety of languages. Citing Cinque (1990) and Rizzi (1997), Bianchi and
218 Frascarelli (2010) note that CLLD (especially Familiar or Given Topics) is available in all finite subordinate clauses.
219 Haegeman and Ürögdi (2010) and Haegeman (2012) propose a feature-based analysis of intervention in which CLLD is
220 compatible with operator movement as long as the CLLD-ed constituent is generated via merge. We will assume a different
221 approach to CLLD in Spanish (as opposed to other Romance languages), based on movement and feature inheritance
222 (section 4). To our knowledge, the RT/non-RT character of Spanish CLLD has never been addressed before. We agree with
223 Cinque (1990) that (at least some types of) CLLD is not an RT, but suggest a syntactic analysis in which the non-RT
224 properties of CLLD is correlated with feature inheritance and the different syntactic position targeted by preposed topics.

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

- 228 (15) Hooper and Thompson (1973:473–474)
229 **Non-factive:** Class A: say, report, exclaim
230 Class B: suppose, believe, think
231 Class C: be (un)likely, be (im)possible, deny
232 **Factive:** Class D: resent, regret, be surprised
233 Class E: realize, learn, know

234 H&T show that RTs are compatible only with those subordinate clauses which are selected by predicates belonging
235 to Classes A, B and E; these are the predicates that, according to H&T, allow the complement to express assertion
236 (see (16–18) below). The complements of the predicates in C and D are non-asserted so topic fronting is not possible
(19–20) in these contexts⁷:

⁶ It should be noted that true RTs such as Negative Preposing are also available in Spanish in those contexts where they are forbidden in English:

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

Although our analysis focuses on topic fronting, examples such as (ii) should also be taken to support the view that the syntactic environments which block RTs show variation across languages.

⁷ 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 express neither an assertion nor 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'. In our analysis, we follow H&T's classification, but focuses on the dichotomy 'asserted/non-asserted propositions'. As we will see, only asserted propositions are compatible with real RTs. The reason is the presence of an event operator in non-asserted propositions.

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/Non-RTs is pragmatically influenced by the type of matrix predicate.

- 239 (16) The inspector explained that each part he had examined very carefully. (A) (H&T (50))
- 240 (17) It appears that this book he read thoroughly. (B) (H&T (92))
- 241 (18) We saw that each part he had examined carefully. (E) (H&T (125))
- (19) *It was impossible that each part he had examined carefully. (C) (H&T (99))
- (20) *I resent the fact that each part he had to examine carefully. (D) (H&T (109))

242 Classes A, B and E involve non-factive (A, B) or semi-factive (E) predicates, whereas Class C contains non-assertions
243 and Class D is composed of factive predicates.

244 In Spanish, both Class C and D predicates allow topic fronting (CLLD), contrary to English, as the contrast between
245 (19–20) and (21) shows:

- 247 (21) a. Es probable que ese coche lo haya conducido Juan sólo una vez.
248 be-PRES.3SG probable that that car CL have-PRES.3SG driven Juan only one time
249 'It's probable that Juan has driven that car just once.'⁸ (Class C)
- 252 b. Ángela estaba sorprendida de que los regalos los hubieran dejado los Reyes
253 Angela be-PAST.3SG surprised of that the presents CL have-PAST.3PL left the Kings
254 Magos debajo del árbol.
255 Magic under of.the tree
256 'Angela was surprised that the three Wise Men had left the present under the Christmas tree.' (Class D)

259 These are non-RIDE complements as well. Given that the complements are either presupposed or non-asserted, these
260 examples also pose a problem for Hooper and Thompson's semantic/pragmatic approach. In Haegeman and Ürögdi's
261 (2010) system, the data in (21) can easily be accommodated by proposing a base-generation analysis of CLLD. Thus no
262 intervention is expected to arise with respect to the event operator. Note in passing that this event operator is available for
263 factive class D and non-asserted class C.

264 A point that is particularly pertinent to our analysis is that, in Bianchi and Frascarelli's (2010) semantic system, the
265 grammaticality of (21) follows from the fact that the CLLD-ed constituent is a Given (familiar) Topic, which, according to the
266 authors, is not a result of a RT (though other types of CLLD are). This works for Romance, but a more strict language such
267 as English does not distinguish types of topics, disallowing topicalization of any kind in non-root environments. We will
268 derive this non-RT property of Given Topics in Romance (especially in Spanish) from the syntactic notion of feature
269 inheritance. We return to the semantic typology of topics in section 3.⁹

270 2.2. Japanese

271 Japanese shows both the classic root effect with one type of topic construction and non-root effects with two other
272 types of topicalization that are parallel to the facts we will see in Spanish. More precisely, there is a clear root effect with
273 one type of topicalization, which demonstrates that Japanese falls together with those languages such as English and

⁸ 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))

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', CLLD is possible (see Camacho-Taboada and Jiménez-Fernández, 2014 for data and an analysis of focus fronting along the lines pursued here):

- (iv) 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.'

⁹ The non-RT status of Romance CLLD has been independently shown for French by Authier (2011) and Authier and Haegeman (2013). The latter correctly argues that French CLLD is not an RT, whereas other phenomena such as VP-preposing are. In the same line, Bocci (2013) claims that focus fronting is restricted to root contexts in Italian. However, as argued in Camacho-Taboada and Jiménez-Fernández (2014), focus fronting is not an RT in Spanish.

German that exhibit a 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). Miyagawa (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*.¹⁰ This is illustrated for A and B below.

- (22) a. Hanako-ga [piza-wa Taroo-ga tabeta to] itta.
Hanako-NOM pizza-TOP Taro-NOM eat-PAST C_{NONFACT} say-PAST
'Hanako said that pizza, Taro ate.' (Class A, Miyagawa's, 2012a, example (41))
- b. 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, Miyagawa'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 (23).¹¹

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

Following much of the literature (e.g., Kuno, 1973; Hoji, 1985; Saito, 1985, 2012), 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 (Miyagawa, 2012a). 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", as argued convincingly by Saito (2010, 2012) (see also Kuno, 1988 for relevant discussion), 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/non-assertion 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. This was illustrated in (3), repeated here as (24):

- (24) John-wa [kono hon-o zibun-no-kodomo-ga yonda koto]-o kookaisita.
John-TOP this book-ACC self's child-NOM read C_{FACT-ACC} 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 CLLD in Spanish.

¹⁰ Kuroda (2005:19–20) specifically points out that the *-wa* topic 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; we also refer to Saito, 2012 for similar observations).

¹¹ Saito (2010) observes that the complementizer *no*, which has a similar distribution, though not identical, to *koto*, is not always factive as Kuno (1973) argued. A point worth making here is that even in those cases that Saito cites as not being factive, the *no*-headed complement does not involve assertion in any way, as predicted from Hooper and Thompson's (1973) work.

- (i) Taroo-wa zibun-no hahaoya-ni atta no-o kookaisita. (Saito's (20))
Taro-TOP self-GEN mother-DAT met *no*-ACC regretted
'Taro regretted that he met his mother.'

This complement under the main verb 'regret' cannot be construed as asserting the content of the complement.

316 There is another form of topicalization, commonly labeled “contrastive topic” (Kuno, 1973), which, like scrambling
317 topicalization, does not show any root effects. Thus, the contrastive topic version of (23) above is grammatical. Note that
318 contrastive topics involve the particle *-wa*, but unlike the destressed “root” topic, contrastive topic with *-wa* receives
319 prominent stress (Kuno, 1973).

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

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

327 To conclude this section, it should be clear that Spanish CLLD and Japanese scrambling and contrastive topic are not
328 true RTs.

329 3. Typology of topics and ‘root’ effects

330 We have seen that topicalization can occur in Spanish and Japanese across all kinds of ‘root’ and ‘non-root’ clauses,
331 however those are defined. Similar to Japanese, we will show that these instances of topicalization that are not dependent
332 on the root context are limited to certain types of topicalization in Spanish.

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

336 Three types of topics

- 338 (a) aboutness topic: “what the sentence is about” (Reinhart, 1981; Lambrecht, 1994); in particular a constituent that is
339 “newly introduced, newly changed or newly returned to” (Givón, 1983:8), a constituent which is proposed as “a matter
340 of standing and current interest or concern” (Strawson, 1964);
341 (b) contrastive topic: an element that induces alternatives which have no impact on the focus value and creates
342 oppositional pairs with respect to other topics (Kuno, 1976; Büring, 1999);
343 (c) familiar topic: a given or accessible (cf. Chafe, 1987) constituent, which is typically destressed and realized in a
344 pronominal form (Pesetsky, 1987); when a familiar topic is textually given and d-linked with a pre-established
345 aboutness topic, it is defined as a continuing topic (cf. Givón, 1983).

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

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

352 These authors compare contrastive topicalization and Left Dislocation (LD) in English, showing that while contrastive
353 topics can occur even in factive (non-asserted) contexts,¹² LD can only occur in Emonds’s original root contexts. The (a)
354 examples are illustrative of Topicalization (which is analyzed in B&F as involving C-Topics), whereas the (b) examples
355 instantiate LD (analyzed as A-Topic). The acceptance rates follow each example:

- 357 (26) a. I am glad that this unrewarding job, she has finally decided to give _ up (12/15)
358 b. I am glad that this unrewarding job, she has finally decided to give it up (0/15)
359 (27) a. He tried to conceal from his parents that the math exam he had not passed _, and the biology exam he
360 b. He tried to conceal from his parents that the maths exam he had not passed it (0/15)

¹² See Haegeman and Ürögdi (2010:129) for discussion of Bianchi and Frascarelli’s counterexamples in English topicalization. As a reviewer points out, contrastive topics are in principle allowed in factive complements even in English. There are two separate instances in which factive clauses allow for fronting of arguments: (1) the case in which the clauses are reinterpreted and grouped with verbs of saying (‘regret to say’, ‘am glad to say’) and (2) the case in which the complement of the factive verb expresses an event that is opposed to another event. It may be the case that, as suggested by Haegeman and Ürögdi, the latter are not true instances of factive environments (see discussion below in the text).

- 361 (28) a. Mary didn't tell us that Bill she had fired , and John she had decided to promote (8/15)
 362 b. Mary didn't tell us that Bill she had fired him (0/15)
 363 (29) a. I hope that the past he will forget , and the future he will face bravely (13/15)
 364 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' (1979) 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 non-asserted in nature? That is, are they Class C or D in Hooper and Thompson's classification? Bianchi and Frascarelli (2010) argue that English topicalization can occur in non-asserted contexts. (28) (*tell*) and (29) (*hope*) in fact appear to fall into Classes A and B respectively, both of which are defined as assertions. For (26) (*glad*), Haegeman and Ürögdi (2010) suggest that it may be interpreted as *glad to say*, hence a non-factive (asserted) predicate. This leaves (27) (*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. In other words, it seems that some factive predicates can have properties which are typical of asserted contexts, and it is in these situations that English topicalization is permitted.

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.¹³

Class C:

- 378 (30) a. ?*Mary denied that those books, she will read today.
 379 b. *Mary denied that those books, she will read, but not these.
 380 (31) a. *It is impossible that those books, John will read by the end of the week.
 381 b. *It is impossible that those books, John read, but not these.

Class D:

- 382 (32) a. *Mary resents that those books, John read while on vacation.
 383 b. *Mary resents that those books, John read, but not these.
 384 (33) a. ?*I regret that those books, John read without consulting me.
 385 b. *I regret that those books, John read, but not these.

386 These data show that in English a contrastive topic and a "regular" topic both involve movement to the same position,
 387 under Haegeman's operator-based analysis. What we propose is to accept Bianchi and Frascarelli's (2010) general
 388 approach of topic typology, with the following addition to account for variability across languages:

389 Cross-linguistic generalization on topic types:

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

393 In English, all types of topics occur in 'root' contexts of some kind, but we saw that in Japanese, while the regular *-wa* topic
 394 described in section 2.2 (see example 23), which we assume to be an A-topic, occurs in root contexts, the other types
 395 (contrastive *-wa* topics and scrambled topics) apparently do not, as indicated by the fact that they do not enter into
 396 competition with operator movement to Spec,CP.¹⁴ As shown below, Spanish also exhibits a similar insensitivity to root-
 397 based restrictions; the examples in (34–35) involve contrastive topicalization:

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

¹³ 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.

¹⁴ Kuno (1973:38) characterizes topic *-wa* as meaning "Speaking of . . . , talking about . . .", which is consistent with *-wa* as A-topics and their main defining property of aboutness.

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

416 According to Büring (2003), C-Topics are available in a clause which can be used as an answer to a superquestion which
417 (explicitly or implicitly) establishes a set of alternatives. In this respect, sentence (35) can be the answer to (36) in a context
418 where several murders have been committed and a new policeman joins the crime scene:

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

423 This shows that in Spanish, G-Topics and C-Topics can occur in all sorts of environments regardless of whether they are
424 'root' or 'non-root'. In the next section, we will propose a typology of languages that makes the correct prediction for
425 English-type and Japanese-/Spanish-type.¹⁵

426 As regards A-topics in Spanish, the question arises as to whether they can be dealt with on a par with regular *-wa*
427 topics. We suggest that this is precisely the case. A-Topics are new topics in discourse and they can involve a shift
428 (Bianchi and Frascarelli, 2010). These authors claim that A-Topics are independent speech acts, and as such they are
429 subject to the root condition. This means that embedded A-Topics are highly restricted (if they are ever licensed), which is
430 supported by examples such as (37) from Spanish:

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

435 Imagine a context where two linguists are talking about the publication of their research. One of them is saying that s/he is
436 very lucky that all his/her books have been published but knows that the other linguist has not been this lucky. There is a
437 shift of topic and the speaker decides to talk about the other linguist's publications. In this context, the preposed topic in
438 (37) is interpreted as A-Topic. However, the sentence is not acceptable.¹⁶

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

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

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

448 Finally, we have shown that in English, all types of topicalization are limited to root or root-like environments (more or
449 less as Emonds, 2004 claimed, though he did not distinguish sub-types of topics). We have illustrated this for contrastive
450 topicalization and "normal" topicalization ((30)–(33)). Bianchi and Frascarelli (2010) assume that all instances of topics
451 involving movement in English are instances of C-topics. They do not recognize the existence of G-topics in English on the
452 reasonable assumption that givenness is achieved in English purely by destressing. This, per se, would not negate what
453 we have said about topicalization in English and other languages since we have shown that C-topics in English compete
454 with operator movement but they do not do so in Japanese and Spanish. The question remains as to whether instances of

¹⁵ B&F's analysis predicts the distribution of different types of topic depending on their relation to discourse and conversation dynamics. However, as an anonymous reviewer points out to us, they fail to account for the non-RT status of English adverbial adjuncts. We leave this issue aside.

¹⁶ 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 (37) the preposed topic is 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.

455 “normal” topicalization in English such as the (a) examples in (30)–(33) constitute instances of G-topics. We believe that
456 they can. Sentences such as the following need not have any sense of contrast:

- 458 (39) Mary says that her hometown, everyone will like because it is quiet and convenient to get to.
459 (40) John says that every item on the menu, the guests should enjoy because the chef is the best in town.

460 We will therefore assume that our extension of [Bianchi and Frascarelli \(2010\)](#) in which A-topics must occur in root contexts
461 but C-topics and G-topics vary depending on the type of language wholly applies to English: A-topics, as well as C- and
462 G-topics, occur only in root environments in English.¹⁷

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

464 4.1. The competition of topics and event operators

465 The distribution of RTs/non-RTs we have observed in Japanese and Spanish raises questions for both the semantic/
466 pragmatic approach of Hooper & Thompson as well as the syntactic approach of [Emonds \(2004\)](#) and that of [Haegeman's](#)
467 work. Of these approaches, the semantic/pragmatic analysis faces the greatest challenge because the clauses in
468 Japanese and Spanish in which topic fronting unexpectedly occurs presumably have the same meaning as those in
469 English in which this preposing is blocked from applying. Moreover, in Japanese, *-wa* topicalization indicates that, on the
470 semantic/pragmatic approach, the language is sensitive to the root/non-root distinction of the type Hooper and Thompson
471 noted. Of the two syntactic approaches, Emonds's analysis of RIDE faces a similar problem as the semantic/pragmatic
472 approach in that there is no easy way to distinguish languages based on the “governing” (selecting) lexical property of V
473 and A; we would be hard-pressed to parametrize this fundamental property across languages for V and A.

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

- 478 (41) [_{CP} OP_i C . . . [_{FP} t_i [_{TP} . . .]]]¹⁸

479 To illustrate the explanatory power of Haegeman's analysis, we repeat examples (16) and (17), involving topicalization, as
480 (42) and (43):

- 482 (42) The inspector explained that each part he had examined very carefully. (A) (H&T (50))
483 (43) It appears that this book he read thoroughly. (B) (H&T (92))

484 The embedded CP in both sentences is non-factive, so there is no operator moving to the edge of CP. As a consequence,
485 there is space available for the fronted topic in the CP domain. However, in sentences containing a factive predicate or a
486 predicate selecting a non-asserted clause, the embedded CP has an operator in Spec,CP, hence any other A'-movement
487 will be banned since there is no space for both. This accounts for the ungrammaticality of examples in (19) and (20),
488 repeated here as (44) and (45):

- (44) *It was impossible that each part he had examined carefully. (C) (H&T (99))
(45) *I resent the fact that each part he had to examine carefully. (D) (H&T (109))

¹⁷ We are assuming that there can only be one A-topic per clause. Because A-topics are limited to the root environment regardless of the type of language, an A-topic is blocked from occurring if there is operator movement to the same position (Spec,CP). As a reviewer notes, however, [Kuroda \(1988\)](#) suggests that there can be multiple occurrence of what we term A-topic in Japanese (see also [Saito, 2012](#)).

(i) Tel Aviv-e-wa_i [Hanako-wa (kyonen) t_i itta]
Tel Aviv-to-TOP Hanako-TOP last year went
'As for Tel Aviv, and as for Hanako, she went there.'

The key observation from Kuroda for us is that this double-topic construction is only allowed under movement: in (i), the PP (Tel Aviv-e-wa) has moved across the other A-topic, *Hanako-wa*. In the non-moved order (*Hanako-wa Tel Avivi-e-wa* . . .), only the first *-wa* phrase counts as A-topic, with the second only interpretable as contrastive. Although we are not certain why movement allows the double-topic construction, the fact of the matter is that there must be an A-topic to begin with (*Hanako-wa*), and another that moves across it. In our analysis, this first A-topic would be blocked by an operator movement. Hence, the double topic construction need not be considered as a counterexample to our analysis.

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](#).¹⁹

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.

4.2. Romance CLLD and movement vs. merge

[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](#); [Jiménez-Fernández, 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 Spanish CLLD involves movement is provided by reconstruction ([Cecchetto, 2000](#)). The ungrammaticality of sentences such as (46) follows from violation of Principle C of the Binding Theory:

- (46) La primera obra de un escritor_i, *pro_i la escribe siempre con placer.
 the first work of a writer pro CL write-PRES.3SG always with pleasure
 'The first work of a writer is always written with pleasure.'

[Cecchetto \(2000\)](#) holds that the C effect attested in (46) 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. However, for Italian we assume that discourse-related phenomena such as CLLD must involve base-generation, hence a CLLD-ed constituent is merged in the CP-domain. This predicts, for example, that Spanish and Italian should display different behavior with respect to parasitic gaps (PG). Since parasitic gaps show up in movement contexts, we expect them to be compatible with CLLD in Spanish but not in Italian. Our predictions are borne out in light of examples such as (47):

- (47) a. *Il libro l'ha venduto senza leggere [PG]. (Italian)
 the book CL.have-PRES.3SG sold without reading
 b. El libro lo ha vendido sin leer [PG]. (Spanish)
 'He has sold the book without reading.'

These data confirm that there is a parametric distinction with respect to CLLD in terms of merge (Italian, in line with [Cinque, 1990](#) and [Frascarelli, 2007](#)) and move (Spanish). A crucial question arises at this point: why should some types of topic move to Spec,CP, whereas other types move to Spec,TP? We provide an answer to this question in the next sections.

¹⁹ 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. We will assume a simpler picture of Spec,CP as the landing site for both operator movement and RTs. However, we are not against cartography and believe that minimalism and cartography may be perfectly compatible within the same theoretical system. We leave this compatibility as an open issue for further research.

The 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 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.

¹⁸ 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.

4.3. Topics in Japanese and discourse-feature inheritance

As stated in section 1.2, to account for the fact that in certain languages discourse-triggered phenomena such as topicalization may take place within TP, Miyagawa (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. In his work, based on this classification, Miyagawa 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).

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 (Miyagawa, 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 (24) earlier; the following is another example:

- (48) Taroo-ga [sigoto-o Hanako-ga yameru koto]-o hiteisita.
Taro-NOM [job-ACC Hanako-NOM quit C_{FACT}-ACC denied
'Taro denied that Hanako will quit her job.' (Class C)

The pivotal point is that even with the factive complementizer *koto*, a constituent may scramble to the head of the subordinate clause. In Miyagawa's analysis, the scrambled DP in (48) undergoes movement to Spec,TP (or adjoined to TP; see also Saito, 1985, 1992), thus it does not compete with any operator movement to Spec,CP. In other words, while regular *-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 (48) above:

- (49) Taroo-ga [sigoto-WA Hanako-ga yamer-u koto]-o hiteisita.
Taro-NOM [job-CONT.TOPIC Hanako-NOM quit -PRES C_{FACT}-ACC denied
'Taro denied that Hanako will quit her job.' (Class C)

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 C-topic may be inherited by T.^{20,21}

In section 3, we extended Bianchi and Frascarelli's (2010) topic typology as follows:

- (50)
(i) A-topics must occur in root contexts;
(ii) The position of C-topics and G-topics depends on the type of language.

²⁰ 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.

²¹ An anonymous reviewer notes the following interesting minimal pair.

- (i) a. *Otagai-no yuuzin-wa Taroo-to Hanako-o hihansita.
e.o.-GEN friends-TOP Taro-and Hanako-ACC criticized
'Each other's friends criticized Taro and Hanako.'
b. Taroo-to Hanako-o_i otagai-no yuuzin-wa t_i hihansita.
Taro-and Hanako-ACC e.o.-GEN friends-TOP criticized
'Each other's friends criticized Taro and Hanako.'

In (a) the reciprocal is not bound by its antecedent 'Taro and Hanako', and therefore the example is ungrammatical. In (b), the antecedent has been moved to the head of the sentence and is able to bind the reciprocal. The point here is that this movement of the antecedent must be A-movement, hence within the TP projection. Yet, the subject that contains the reciprocal has the topic marker *-wa*. Unlike the anonymous reviewer, who claims to interpret this as A-topic, we believe that the most natural interpretation is that of a contrastive topic. Thus, in its default pronunciation, the *-wa* phrase would receive stress, indicating that it is a C-topic, and hence compatible with verbs such as 'criticize'.

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

(51) 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 classification 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.

This approach to various types of topicalization indicates that there can be more than one topic feature in a clause, the A-topic feature, which always stays at C (or higher), and C- or G-topic features, which must occur at C in some languages (English) but may be inherited by T in others (Japanese, Spanish).

An anonymous reviewer notes that in [Bianchi and Frascarelli's \(2010\)](#) framework, the various topics have different positions that presumably identify the particular topic interpretation a phrase would be associated with, but in our system, position per se does not matter for the various topics. How then are the various topics distinguished in interpretation? Looking at Japanese hints at the answer. A-topics are marked by *-wa*, are structurally always positioned high, and prosodically are destressed. Contrastive topics, which in Japanese may occur within the TP projection, are also marked by *-wa*, but prosodically are stressed. Finally, G-topics are marked by movement (scrambling) inside the TP, are not marked by *-wa*, and are destressed (see [Ishihara, 2000](#) for relevant discussion among many other works). In this way, the three types of topics are distinguished, not only by position, but by prosody, presence/absence of *-wa*, and movement. We believe that each language has different ways of distinguishing these topics without having to rely solely on syntactic positions.

4.4. Discourse-oriented A-movement in Japanese

We have assumed with [Miyagawa \(2005, 2010\)](#) that topics in the form of scrambling move to Spec,TP in languages such as Japanese because discourse features such as topic, which start out in C, may be inherited by T and this T triggers movement of topic 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 (52) is ameliorated by A-movement in (53), which is movement within the TP domain (e.g., [Mahajan, 1990](#)):

- (52) ??Who_i does his_i mother love?
- (53) Who_i appears to his_i mother to be sick?

[Hoji \(1985\)](#) points out that scrambling can repair a typical WCO violation (illustrated in (54)), as shown in (55):

- (54) *[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
- (55) 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 supports our view 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 [Miyagawa \(2010\)](#), 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 (56b) as if they were nonscrambled sentences like (56a), completely ignoring the case marking on the arguments.

- (56) 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

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

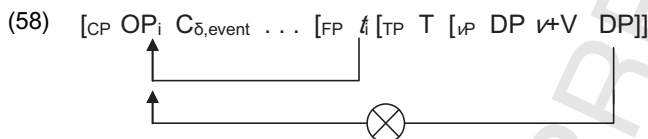
615 (57) Koen-ni ahirusan-ga imasita. Sono ahirusan-o kamesan-ga osimasita.
 616 park-in duck-NOM was the duck-ACC turtle-NOM pushed
 617 'There was a duck in the park. A turtle pushed the duck.'

618 What Otsu has shown is that scrambling of the object *sono ahirusan-o* 'the duck-ACC' is possible if the referent of the
 619 scrambled phrase has been mentioned in the previous context where it has been established as the discourse topic,
 620 hence it is a Familiar Topic or G-Topic. The fact that this type of movement is within TP is well established (Saito, 1985,
 621 1992; see also Miyagawa, 2001, 2010); thus it is topicalization to the TP domain (see Meinunger, 2000 for further details
 622 which relate scrambling with topicalization).

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

629 In Japanese, a topic can be overtly marked with *-wa* or not. The former has two types, the A-topic and the C-topic. The
 630 topic without *-wa* is a G-topic preposed by scrambling. One of the differences between A-topics, on the one hand, and
 631 C-topics and G-topics, on the other, is that A-topics must occur in root contexts, which we assume to be the CP system in
 632 Japanese, while C-topics and G-topics are analyzed as movement within the TP region (Saito, 1985; Hoji, 1985;
 633 Miyagawa, 2001, 2010). Following Miyagawa, we will assume that this type of movement is to Spec,TP (see Kuroda, 1988
 634 for the earliest proposal of this sort).²²

635 The precise position occupied by A-Topics is discussed in Bianchi and Frascarelli (2010), who claim that due to the fact
 636 that A-Topics are independent speech acts, they are generated via Merge in a Speech Act Phrase (SaP) above CP (see
 637 Haegeman and Hill, 2010; Miyagawa, 2012 for recent proposals for speech act projections). In our system, we suggest that
 638 A-Topics undergo movement to Spec,CP, a position independently targeted by the event operator in asserted contexts.
 Hence, the event operator will compete with A-Topics for the same syntactic position, which is the key to our analysis:



641 The derivation in (58) will explain why A-Topics are RTs in Japanese in that the topic and the event operator vie for Spec,
 642 CP.

²² 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 (Jiménez-Fernández, 2011 & Jiménez-Fernández and Işsever, 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.
 '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. Reordering of topics in TP is possible if we assume with Richards (2001) that there are no constraints on the order of different A-movements to multiple specifiers within TP. In this respect, topic fronting should be viewed as distinct from other TP-internal movements such as Germanic object shift for which some order preservation has been attested (Broekhuis, 2008; Watanabe, 1992). Also the topic nature of the freely arranged moving constituents may explain why in West Flemish the order of scrambled elements in TP is rigid, but we leave the issue as a stipulation in need of further refinements.

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 that 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, A-topic features which originate in C do not need to be lowered onto T since A-Topics are themselves a speech act. This will account for the non-lowering of A-topic features. This implies that in those languages where δ -features are inherited (Japanese, Spanish), A-Topics move to Spec,CP and in case we have an event operator, the competition effect is displayed. By contrast, in those languages where no feature inheritance is attested (English and Italian), movement of A-Topics is blocked in factive/non-asserted contexts because they must move to Spec,CP, which is already filled with the event operator.

4.5. Spanish CLLD as A-movement and feature inheritance

One issue that [Miyagawa \(2010\)](#) does not explore is the possibility we mentioned in the introduction that both agreement and discourse features get inherited by T.²³ [Jiménez-Fernández \(2010, 2011\)](#), building on [Miyagawa \(2010\)](#), argues that Spanish and Turkish are examples of simultaneously agreement-based and discourse-configurational language.

(59) $C_{\varphi, \delta} \rightarrow T_{\varphi, \delta} \dots$ (discourse-prominent, agreement-oriented – e.g. Spanish, Turkish)²⁴

If this is on the right track, CLLD-ed topics target Spec,TP in Spanish, which is exactly what [Jiménez-Fernández \(2010, 2011\)](#) has shown. In light of this, we propose that some topic features are lowered from C to T in Spanish. More precisely, the topic features which trigger movement of G-topics and C-topics in Spanish start at C, but are inherited by T. As a consequence, CLLD-ed G- and C-topics undergo movement to Spec,TP.²⁵

As Liliane Haegeman (p.c.) notes, dealing with Romance CLLD as moving to TP is incompatible with Aux-to-C movement proposed by [Rizzi \(1982\)](#), [Belletti \(1990\)](#), [Cardinaletti \(1997, 2004\)](#) for participial clauses in Italian:

- (60) 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:

- (61) 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 (61) show that a CLLD-ed object or a subject may occur after the moved auxiliary (subject to dialectal variation), which again supports our view that CLLD involves movement to a low position. We take this position to be Spec,TP.

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](#)):

²³ 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](#)).

²⁴ See [Jiménez-Fernández and İşsever \(2012\)](#) for the parallelism between Spanish and Turkish, as far as inheritance of δ -features is concerned, and [Jiménez-Fernández and Spyropoulos \(2013\)](#) for the inclusion of Greek in this third group.

²⁵ 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 will be shown below, only G- and C-topics move to the TP-area in Spanish; other types of topic move to the CP-system.

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- 689 (62) a. Mi sembra, il tuo libro, [_{Fin} di conoscerlo bene]. (Rizzi, 1997:309)
690 me seems, the your book, di know-it well
693 b. *?Gianni sembra, il tuo libro, conoscerlo bene.
694 Gianni seems the your book know-it well (Italian)
698 (63) a. ??Je pense, ton livre, pouvoir le comprendre. (Rizzi, 1997:331, n 24)
699 I think, your book, can it understand
702 b. *Marie semble, ton livre, pouvoir le comprendre.
703 Marie seems, your book, can it understand

704 These data from Italian and French are taken as an indication that in control constructions the subordinate clause is a CP
705 and hence allows for the occurrence of topics, whereas in raising constructions the embedded clause projects up to TP
706 and thus there is no space for topic fronting. This can be explained in a truncated-CP analysis (Haegeman, 2004;
707 Hernanz, 2011). However, Spanish again behaves differently.

708 *Hernanz (2011)* offers examples of control constructions where some topic has been fronted, and renders them
709 ungrammatical. Both (64) illustrate control in complement clauses, but (65), in addition, instantiates the use of the
710 prepositional complementizer *de*:

- 712 (64) *Es lamentable [al rector increparlo en el claustro].
713 be-PRES.3SG regrettable to.the rector to.rebuke at the faculty meeting
'It is regrettable to rebuke the rector at the faculty meeting.'
716 (65) *Pepe no se acordaba de [esta novela haberla ya leído].
717 Pepe not CL remember-PAST.3SG of this novel to.have already read
718 'Pepe didn't remember having already read this novel.'
(Hernanz, 2011, her (2b) and (26a))

719 The reason adduced by *Hernanz* is that there is not enough space in the CP system of control infinitives to license topic
720 fronting. In our view, this 'truncation' can be explained in terms of the kind of C selected in Spanish: control C is not the type
721 of head which may be endowed with discourse features. Hence no inheritance of discourse features will ever occur in
722 control constructions. On the other hand, the grammaticality of control data in Italian and French can be accounted for by
723 claiming that in these languages control C carries discourse features (and they remain in C). Note in passing that the
724 relevant features in C are non-interpretable, hence no interpretive difference is expected between Spanish and French/
725 Italian control constructions.²⁶

726 As far as raising constructions are concerned, topic preposing is also not available in this type of infinitives:

- 728 (66) ??Mi hermana parece, esa ropa, comprarla/haberla comprado en el mercadillo. (raising)
729 my sister seem-PRES.3SG those clothes to.buy.it/to.have.it bought at the flea-market
730 'My sister seems to have bought those clothes at the flea market.'
731 (Fernández and Roman, 2013:4, their (13b))

732 One plausible explanation of the unacceptability of CLLD in raising constructions may be that, as standardly assumed
733 (Chomsky, 1980), these infinitives do not project a CP. If there is no CP, no discourse feature will be lowered onto T,
734 thereby accounting for the unavailability of CLLD in raising infinitives. In other words, sentence (66) supports our view that
735 Spanish topics may occupy a slot in the TP area, but this is contingent on feature inheritance by T from C. Likewise, our
736 system also predicts the incompatibility of CLLD and raising in French and Italian, since the absence of CP determines the
737 lack of space for topic fronting. We leave this point here, pending future research, but see Fernández and Román (2013)

²⁶ Independent evidence for the distinct feature composition of control C in Spanish and, for instance, Italian is that Spanish a null control C may be selected by verbs like *creer* 'believe', whereas in Italian they are incompatible unless the overt control C *di* mediates (Italian data provided by Mara Frascarelli and Javier Martos):

- (i) María cree ser muy inteligente.
María believe-PRES.3SG to.be very intelligent
(ii) *María crede essere intelligente.
(iii) María crede di essere intelligente.
'Mary believes herself to be very intelligent.'

The distinction in terms of overt/covert control C points to the fact that their feature composition is different.

for an analysis of topics in infinitive clauses in Spanish and Catalan. Now we turn to arguments in support of identifying Spanish CLLD as an instance of A-movement (Mahajan, 1990).

Floating Quantifiers (FQ) constitute one piece of evidence which supports our analysis of topic dislocation to Spec,TP, hence to an A-position, in Spanish. On the basis of Catalan data, López (2009) concludes that FQs are allowed only in A-movement, not in A'-movement (Lasnik, 2003).²⁷ In Spanish, the same constraint is detected, thus cases of A-movement such as raising and passive constructions are compatible with FQs, as shown by (67a) and (67b), respectively.

- (67) a. Los padres parecen haber asistido todos a la reunión.
the parents seem-PRES.3PL to.have attended all to the meeting
'Parents seem to have all attended the meeting.'
- b. Los exámenes han sido corregidos todos.
the exams have-PERF.3PL been corrected all
'The exams have all been graded.'

Similarly, if topic displacement involves A-movement, it should be concurrent with FQs. This prediction is borne out, as shown in (68). This strongly suggests that topic fronting is an instance of A-movement in languages such as Spanish:

- (68) Los exámenes los ha corregido todos este profesor.
the exams CL have-PERF.3SG corrected all this teacher
'This teacher has corrected all the exams.'

On the other extreme of our classification are languages such as English, in which topic dislocation has been claimed to involve A'-movement. If this is on the right track, no FQ should be expected to interact with topic fronting, which is confirmed in (69):

- (69) *Those problems this computer could all solve in a second.

The second piece of evidence that movement such as CLLD in Spanish may apply within TP relates to the fact that it exhibits A-properties (Jiménez-Fernández, 2010). The c-command relation between binder and bindee may be modified as a consequence of topic displacement, which is clearly an indication of A-movement. This accounts for the difference in terms of binding between (70a) and (70b):

- (70) a. *Su_i enfermera llamó al paciente.
self's nurse call-PAST.3SG to.the patient
'His nurse called the patient.'
- b. Al paciente_i lo llamó su_i enfermera.
to.the patient CL called-PAST.3SG self's nurse
'The patient was called by his/her nurse.'²⁸

Similar effects have been suggested for Portuguese (both European and Brazilian) with respect to quantifier binding, to claim that subjects sit in Spec,TP:

- (71) a. Todos os coelhos_i comem a sua_i cenoura. (EP)
all the rabbits eat-PRES.3PL the their carrot
'All the rabbits_i eat their_i carrot.'

²⁷ See McCloskey (2000) for an analysis of wh-movement (A'-movement) as compatible with FQs.

²⁸ The new binding configuration is an anti-reconstruction effect which arises in A-movement (Mahajan, 1990). Hence clear instances of A-movement as raising constructions should show the same effects. This is shown in the English example in (i):

(i) Pictures of John_i seem to him_i to be on sale.

Topic fronting in Spanish displays the same binding effects, as illustrated in (70).

As a reviewer points to us, Spanish seems to display a paradoxical behavior with respect to reconstruction in that topic fronting exhibits both reconstruction and anti-reconstruction (A'- and A-properties, respectively). In Jiménez-Fernández and İşsever (2012) we connect this optionality to the interaction of reconstruction and information focus to conclude that reconstruction from an A-position is allowed only if the binder is defocused. In (70b) *su enfermera* 'his nurse' is focused and hence the object does not reconstruct.

785 b. Todos os coelhos_i cuidam da própria_i cria. (BP)
786 all the rabbits take.care-PRES.3PL of.the own offspring
787 'All the rabbits_i take care of their_i offspring.'

788 These data are used by [Costa \(2000\)](#) and [Pires \(2007\)](#) to argue that subjects are in Spec,TP and hence they are
789 A-binders. In Spanish these pre-verbal subjects can be topics and yet they can A-bind an anaphor, but a quantifying
790 CLLD-ed object also exhibits exactly the same binding properties:

792 (72) a. Todos los conejos cuidan de sus crías.
793 all the rabbits take.care-PRES.3PL of their offspring
794 'All the rabbits_i take care of their_i offspring.'
797 b. A todas las crías las cuidan sus madres.
798 to all the offspring CL take.care-PRES.3PL their mothers
799 'All their offspring_i are taken care of by their_i mothers.'

800 The topicalized subject in (72a) can bind the relevant possessive pronominal. But if the preposed constituent is the object
801 we also obtain a new binding configuration. If we follow [Costa \(2000\)](#) and [Pires \(2007\)](#) in claiming that these antecedents
802 are A-binders, this constitutes a third piece of evidence supporting that the preposed constituents sit in Spec,TP.

803 In contrast to Spanish and Portuguese, quantifier binding does not hold in Italian CLLD ([Cinque, 1990:179, n.6](#)):

805 (73) a. *?Sua_i madre ama ogni_i bambino.
806 his mother love-PRES.3SG every boy
809 b. *?Ogni_i bambino, sua_i madre lo_i ama.
810 every boy, his mother CL love-PRES.3SG
811 'Each boy is loved by his mother.'

812 The crucial point is that if our claim that Italian CLLD involves base-generation in the CP-system, and A'-position, (as
813 opposed to Spanish), (70b) is predicted to be ill-formed because the dislocated element sits in an A'-slot, and hence
814 cannot A-bind the anaphoric pronoun, contrary to facts.

815 4.6. Topic typology and feature inheritance: further cross-linguistic predictions

816 Building on the agreement-based and discourse-configurational typology, we predict that Spanish should behave the
817 same way as Japanese but unlike English in allowing 'root' operations to apply freely across all kinds of clauses. This is
818 precisely what we have seen. It is with operations that are allowed to occur within TPs that the root/non-root distinction
819 disappears.^{29,30}

820 Concerning [Hooper and Thompson's \(1973\)](#) classification and its connection with RTs/non-RTs, Spanish shows no
821 rigid 'root' constraints across all predicates and we have claimed this to be influenced by the type of topic involved.
822 A-Topics are a root phenomenon which can be embedded only with a selected set of non-factive predicates. On the other
823 hand, C-Topics can occur either with factive or non-factive predicates (section 3). What about G-Topics? In [Bianchi and](#)
824 [Frascarelli's \(2010\)](#) semantic/pragmatic approach, it is predicted that G-Topics are not to be restricted to root-like

²⁹ As stated earlier, Spanish allows multiple CLLD. This means that 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.

In connection with multiple topics, it seems that the co-occurrence of different types of topics is ruled by [Bianchi and Frascarelli's \(2010\)](#) Topic Hierarchy: Shifting topic [+aboutness] > Contrastive topic > Familiar topic. This predicts that all types of topic can appear in a single sentence. To account for this, the topic features in C can be of three kinds: an A-feature (attracting A-Topics), C-features (attracting C-Topics) and G-features (attracting G-Topics). In Japanese and Spanish A-features are retained in C, whereas C- and G-features are lowered onto T.

³⁰ As stated earlier, Spanish is both agreement-based and discourse-configurational, which raises the question as to what the status of EPP on T is. [Miyagawa \(2010\)](#) 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. However, agreement features can only work with a single EPP so that agreement-driven movement is limited to one subject, as opposed to what we find in Japanese, where we find multiple subject constructions.

825 environments. Thus, Class C and D predicates – both of them selecting a non-asserted proposition – allow familiar topic
826 preposing in the form of CLLD in their embedded clause:

Class C

- 828 (74) Es probable que los vuelos a Madrid los hayan cancelado.
 829 be-PRES.3SG probable that the flights to Madrid CL have-PRES.SUBJ.3PL canceled
 830 'It's probable that the flights to Madrid have been canceled.'
 833 (75) Negaron que los vuelos a Madrid los hubieran cancelado.
 834 deny-PAST.3PL that the flights to Madrid CL have-PRES.SUBJ.3PL canceled
 835 'They denied that the flights to Madrid had been canceled.'

Class D

- 838 (76) María está sorprendida de que los vuelos a Madrid los hayan cancelado.
 839 Mary be-PRES.3SG surprised of that the flights to Madrid CL have-PRES.SUBJ.3PL canceled
 840 'Mary is surprised that the flights to Madrid have been canceled.'
 843 (77) Siento que el artículo no lo hayan publicado en Syntax.
 844 regret-PRES.1SG that the article not CL have-PRES.SUBJ.3SG published in Syntax
 845 'I regret that the article hasn't been published in Syntax.'

846 These two types of predicates introduce a non-asserted event, so they presuppose the truth of the embedded proposition
 847 (Class D) (Kiparsky and Kiparsky, 1970) or express the speaker's belief that the proposition is true (Class C). Yet a G-
 848 Topic can occur regardless of the presence of the event operator in Spec,CP.³¹

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

853 As for the syntactic position occupied by A-Topics in Spanish, we believe that they sit in Spec,CP (on a par with
 854 Japanese), since discourse features are retained at C, thus accounting for the incompatibility with operator movement in
 855 non-asserted clauses. An argument in favor of the two-fold character of topic positions (Spec,TP and Spec,CP) in Spanish
 856 comes from what is standardly called as Resumptive Preposing (Cinque, 1990; Cardinaletti, 2010). In Italian, two types of
 857 topic displacements are clearly distinguished; namely CLLD and Resumptive Preposing (RP). One difference is that the
 858 former is always associated with a resumptive clitic, whereas the latter is not:

- 860 (78) a. La stessa proposta la fece poi il partito di maggioranza. (CLLD)
 862 the same proposal CL make-PAST.3SG then the party of majority
 864 b. La stessa proposta fece poi il partito di maggioranza. (RP)
 865 'The majority party then made the same proposal.'

866 Both sentences in (78) show a topic reading of the preposed DP *la stessa proposta* 'the same proposal'. For
 867 Cardinaletti (2010), Italian RP is similar to English topicalization in that they share a number of properties. One such
 868 property is that both are root phenomena:

³¹ 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, (78) 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
 '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.). See also the semantic approach to subjunctive mood in Giorgi and Pianesi (1997), who account for the availability of subjunctive in factive and irrealis contexts.

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- 870 (79) a. *Mi dispiace [che la stessa proposta fece anche il partito di maggioranza].
872 CL regret-PRES.3SG that the same proposal make-PAST.3SG also the party of majority
873 b. Mi dispiace [che la stessa proposta la fece anche il partito di maggioranza].
874 (Cardinaletti, 2010, (19b) and (22b))
(80) *John regrets [that this book Mary read]. (Maki et al., 1999, (2c))

875 The Italian data can be easily extended to Spanish, as examples in (81) illustrate. (81a) shows that RP in Spanish is
876 possible, whereas (81b–c) display the same RP/CLLD dichotomy with respect to RTs:

- 878 (81) a. La misma propuesta hizo también el partido del gobierno. (RP)
879 the same proposal make-PAST.3SG also the party of.the government
880 'The party of the government also made the same proposal.'
883 b. *Me disgusta que la misma propuesta hiciera también el partido del
885 CL regret-PRES.3SG that the same proposal make-PAST.3SG also the party of.the
887 gobierno. (RP)
889 government
891 c. Me disgusta que la misma propuesta la hiciera también el partido del gobierno. (CLLD)
892 'I regret that the party of the government also made the same proposal.'

893 On a par with Italian, Spanish RP is possible in main clauses, whereas it is not in the complement clause of a factive
894 verb. Cardinaletti takes this as evidence for positing different positions for RP and CLLD, though both target the CP-
895 system in her analysis. In our system, the distinction between RP and CLLD in Spanish may be derived from the possibility
896 of discourse-feature inheritance. For Spanish CLLD we take it that it involves movement to Spec,TP after lowering δ -
897 features onto T, whereas for RP the relevant δ -feature is located at CP and hence RP targets Spec,CP (similar to A-
898 Topics; actually, Cardinaletti, 2010:8 shows that RP is an A-Topic). By assuming that in the complement clauses of these
899 factive predicates there is operator movement, we can account for the incompatibility of this operator and RP, since both
900 operations compete for the same position.³²

901 5. Japanese/Spanish adverbial clauses

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

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

907 Reason clauses are ambiguous between a presupposed reading and an asserted interpretation (in much the spirit of
908 Haegeman's 2006a,b asymmetry between central and peripheral adverbial clauses). Miyagawa observes that the
909 licensing of an A-topic forces an asserted reading of the otherwise ambiguous reason-clause. Thus, in (82) above, which
910 contains an A-topic, the reason clause is asserted, but in (83) below, without this topicalization, the reason clause is
911 ambiguous between being asserted or presupposed³³:

- 912 (83) Hanako-ga omiyage-o mottekuru kara, uti-n ite-kudasai.
913 Hanako-NOM present-ACC bring because home-at be-please
914 'Because Hanako will bring a present, please be at home.'

915 Following the general direction set by Haegeman (e.g., 2006b), Miyagawa argues that in the Japanese reason clause,
916 operator movement occurs if the clause conveys a presupposition. As a consequence, although operator movement
917 applies in the non-asserted version of (83), scrambling is still possible. Given that scrambling is movement to Spec,TP, it is
918 not blocked by operator movement and the asserted interpretation is still available in (83). This is shown below:

³² 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.

³³ An anonymous reviewer asks if the because-clause remains ambiguous in case the *-wa* phrase is interpreted as a C-topic. We predict it to be ambiguous. However, because a C-topic by nature contains assertion, it is difficult to make the judgment.

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

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

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

(Haegeman, 2010:629)

931 Haegeman states that, cross-linguistically, adverbial clauses are not amenable to RTs, and provides examples from
932 Hernanz (2007), who claims that emphatic polarity markers *sí* 'yes' and *bien* 'well' in Spanish are not possible in central
933 adverbial clauses.

934 If all types of topics (A-Topics, C-Topics and G-Topics) were RTs, the prediction would be that no topic preposing
935 should occur in central reason clauses. This is not borne out in examples such as (86):

- 937 (86) a. Julia no ha entregado la tesis en el departamento porque el capítulo final
938 Julia not have-PERF.3SG submitted the thesis in the department because the chapter final
941 no lo ha terminado todavía.
942 not CL have-PERF.3SG finished ye
943 'Julia hasn't submitted her thesis to the Department because she hasn't finished her final chapter yet.'
946 b. Julia no debe (de) haber entregado la tesis en el departamento, porque el
948 Julia not must-PERF.3SG (of) have submitted the thesis in the department because the
950 último capítulo lo tiene su supervisor todavía.
951 last chapter CL have-PRES.3SG her supervisor still
952 'Julia mustn't have submitted her thesis to the Department, because her supervisor still has the last chapter.'

953 Example (86b) contains a peripheral reason clause. If Haegeman is correct in claiming that there is no operator movement
954 in peripheral adverbial clauses, the grammaticality of (86b) is expected again, since there will be no intervention effect
955 blocking CLLD.³⁴ However, the interesting datum is (86a). This has a central reason clause.³⁵ In the operator-movement
956 analysis, central adverbial clauses involve movement of the operator to Spec,CP, thus banning any further movement to
957 this position. If CLLD-ed elements in Spanish are moved to Spec,CP we expect them to be barred in central adverbial
958 clauses. (86a) simply supports our view that Spanish CLLD (C-Topics and G-Topics) targets a lower position, Spec,TP.

³⁴ In the two examples in (86), 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 possible contrastive nature of CLLD in (66) 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, 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 (86) will be felicitous. From a phonological point of view, the contrastive interpretation is corroborated by an H* tone. Otherwise, the CLLD in (96) is interpreted as a G-Topic.

³⁵ 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 (86) we have enough elements of judgment to single out the central status on (86a):

- (i) Es porque el capítulo final no lo ha terminado todavía por lo que Julia no ha entregado
be because the chapter final not CL have-PERF.3SG finished yet for which Julia not have-PERF.3SG submitted
la tesis en el departamento hoy
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 Julia no debe (de) haber
be because the last chapter CL have-PRES.3SG her supervisor still for which Julia not must-PERF.3SG (of) have
entregado la tesis en el departamento.
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.'

959 Therefore, these two types of CLLD are always available in both central and peripheral reason clauses. No competition
960 effect blocks CLLD because operator movement and CLLD do not compete for the same syntactic position. Note that the
961 preposed topics are G-topics and these sentences are felicitous in a context where the information provided by the fronted
962 topics is given. Bianchi and Frascarelli (2010) claim that G-Topics are not a root-like phenomenon. However, we must ask
963 again whether there is any syntactic explanation for this.

964 Recall that, in our view, preposed G-Topics undergo movement to Spec,TP in languages such as Spanish. More
965 precisely, in the reason clauses in (84), discourse-features (δ -features) are inherited from C by T and the EPP under T
966 triggers movement of the G-topic. Assuming that this is on the right track and adopting a movement analysis of temporal
967 subordinators à la Haegeman,³⁶ we should expect no competition effect either in central or peripheral reason clauses,
968 since operator movement to Spec,CP does not impose any restriction on other types of movement such as topic fronting
969 to Spec,TP. The examples in (96) support this analysis.

970 6. Conclusions

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

979 The distribution of root/non-root transformations turns out to correlate with whether the relevant discourse feature of
980 topic is inherited from C by T and the use of the movement (as opposed to merge) strategy. If this feature is inherited, topic
981 preposing takes place within TP as in Japanese and Spanish, and no competition occurs (this holds for G-Topics and
982 C-Topics). However, if this discourse feature stays in C, as in English or the regular *-wa* topicalization in Japanese
983 (an A-Topic) or Resumptive Preposing (which may be seen as an instance of A-Topic) in Spanish, it competes with
984 operator movement to Spec,CP for the same syntactic space, and hence the operation is blocked. In conclusion, A-Topics
985 are RTs crosslinguistically, whereas C-Topics and G-Topics are not.

986 q5 Uncited references

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988 (2002), Krause (2001), Kayne (1989), Kayne (1991), Krifka (2007), Kuroda (1980), Miyagawa (2011, 2012b) and
989 Vermuelen (2009) 

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³⁶ Adverbial clauses have been claimed to be some sort of relative clauses in their syntactic derivation. Haegeman (2012) argues that adverbial clauses involve operator movement and movement of the subordinator. In line of this, our proposal should be revised to accommodate this analysis. This also raises questions about the compatibility of RTs/non-RTs in relative clauses. However, for reasons of space and time we have to postpone this reformulation for future research and refer the reader to Haegeman (2012) and references therein.

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