

## Is Topic a Root Phenomenon?

Valentina Bianchi & Mara Frascarelli  
bianchi10@unisi.it – frascare@uniroma3.it  
*Università di Siena – Università Roma Tre*

**Abstract:** In this paper we discuss the question of whether topics are necessarily restricted to root clauses. From an interface perspective, if topics affect the management of the conversational common ground (Reinhart 1981; Büring 2003; Krifka 2007), we expect them to appear in clauses endowed with illocutive force, implementing a conversational move (§ 2). This conclusion, however, is too general. Adopting the typology of topics by Frascarelli & Hinterhölzl (2007), we show (§ 3) that Familiar topics do not affect the conversational dynamics, and as expected, they are not restricted to root clauses. The English-Romance asymmetry in the distribution of topics (Haegeman 2004) is reduced to the lack of Familiar topics in English, as opposed to Romance. In § 4 we discuss English contrastive topics, showing that they have embedded interpretations in non-asserted complement clauses: we therefore sketch a semantic analysis which does not link contrastive topics to conversational strategies of inquiry. The only type of topic that complies with the root restriction is the Aboutness-Shift topic (§ 5): we suggest that it can be analysed as an independent speech act (cf. Krifka 2001). Finally, in § 6 we discuss «root-like» embedded clauses and offers a tentative solution for their quasi-assertive role.

**Keywords:** Aboutness-shift (A-)Topic, Contrastive (C-)Topic, common ground, conversational dynamics, Familiar/Given (G-)Topic, illocutive force, interface, root restriction, syntax, semantics.

**Resumen:** En este artículo tratamos la cuestión de si los tópicos están necesariamente limitados a las cláusulas principales. Desde una perspectiva de las interfaces, si los tópicos tienen un efecto en la negociación de la zona común (*common ground*) a nivel conversacional (Reinhart 1981; Büring 2003; Krifka 2007), entonces habrá de esperar que aparezcan en cláusulas con fuerza ilocutiva, implementando un turno conversacional (§ 2). Esta conclusión es, sin embargo, demasiado general. Adoptando la tipología de Tópicos de Frascarelli & Hinterhölzl (2007), mostramos (§ 3) que los Tópicos Familiares no afectan la dinámica conversacional y que, como es de esperar, no se limitan a cláusulas principales. La asimetría existente entre el inglés y



las lenguas románicas en la distribución de los tópicos (Haegeman 2004) se reduce a la falta de tópicos Familiares en inglés, en contraste con las lenguas románicas. En § 4 tratamos los Tópicos Contrastivos del inglés, donde mostramos que contienen interpretaciones (propias de cláusulas) dependientes cuando aparecen en cláusulas completivas no declarativas: de este modo trazamos un análisis semántico que no implica una asociación entre los Tópicos Contrastivos con estrategias conversacionales de búsqueda de información. El único tipo de Tópico que obedece la *restricción de cláusula principal* es el Tópico de Cambio de Tema (§ 5) el que, sugerimos, puede ser analizado como acto de habla independiente (cf. Krifka 2001). Finalmente, en § 6 tratamos cláusulas dependientes con aspecto de cláusula principal y ofrecemos una solución provisional a su rol quasi-assertivo.

**Palabras clave:** Tópico de Cambio de Tema, Tópico Contrastivo, zona común, mutuos, dinámica conversacional, Tópico familiar o asumido, fuerza ilocutiva, interfaces, restricción de cláusula principal, sintaxis, semántica.

## 1. Introduction: the Root Restriction On (English) Topics

Since (Emonds 1970, 1976), English left dislocation (LD) and topicalization (TOP) have been analysed as root phenomena: they are restricted to root clauses and a subset of root-like subordinate clauses (cf. among others Emonds 2004, Haegeman 2002, Heycock 2006, Maki et al. 1999). This «root restriction» has been connected to the availability of assertive force in these clauses (Hooper and Thompson 1973) and several works have tried to define this subset of embedded contexts and explain their properties (cf. Haegeman 2004, 2007, Gärtner 2001, Meinunger 2004).<sup>1</sup>

Hooper and Thompson (1973) make the point that this restriction only relies on semantic/pragmatic requirements and cannot be accounted for syntactically:

---

<sup>1</sup> As a matter of fact, Hooper and Thompson (1973) do not provide a clear definition of what constitutes an 'asserted clause'. They only state that the assertion of a sentence is 'its core meaning or main proposition' and that it 'may be identified as the part that can be negated or questioned'. Sentences, however, may contain more than one assertion (see coordination, for instance) and, crucially, some subordinate clauses are asserted. They thus provide a five-way division of predicates which has later been resumed by different authors for further discussion and elaboration (cf., among others, Vikner 1994, Reis 1997, Meinunger 2004, Heycock 2006).

As a positive environment we can say that [root] transformations operate only on Ss that are asserted. [...] some transformations are sensitive to more than just syntactic configurations. It does not seem possible to define the domain of an RT in terms of syntactic structures in any general way. However, [...], even if it were possible to define in syntactic terms the conditions under which RTs can apply, [...] the question of why these transformations can apply in certain syntactic environments and not others would still be unanswered (Hooper and Thompson 1973: 495).

This claim is supported by the observation that «root transformations» are actually allowed in syntactically embedded (non-root) clauses whose content constitutes the main assertion:

(1) It appears [that *this book* he read thoroughly]. (Hooper and Thompson 1973: 478)

This challenge was then taken up by different authors, who tried to elaborate a syntactic account for the relevant restriction. Emonds (1970, 1976) observed that for many speakers dependent clause contexts mimic the freedom of root structures in indirect discourse. However, root-like indirect discourse embedding is incompatible with most dependent clause positions; as a matter of fact, embedded TOP requires finite clauses (cf. (2a) vs. (2b)); it can be found in complements rather than adjuncts (2c) and excludes N or P governors (2d):

(2) a. Bill warned us that [*flights to Chicago* we should try to avoid].

b. \*Bill warned us [*flights to Chicago* to try to avoid].

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

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

(Emonds 2004: 77)

In order to account for this behaviour, Emonds proposes the existence of a Discourse Shell, “a categorically unspecified projection [... that] may immediately dominate only IPs specified as Discourse Projections” (Emonds 2004: 85). The Spec of this projections is proposed as the landing site for root movements like auxiliary inversion, exclamative wh-fronting and, more relevantly, topicalization. Iterated Discourse Shell Specifiers are also proposed as a natural device to account for the position of LD constituents. As for the latter, Emonds shows they can co-occur with, and must be exterior to, TOP elements – a restriction that the author attributes to trace binding (the Tensed S Constraint):

(3) a. [my supervisor]<sub>k</sub>, [*a man like that*]<sub>j</sub> she<sub>k</sub> would never hire t<sub>j</sub>

b. \*[*a man like that*]<sub>j</sub> [my supervisor]<sub>k</sub>, I don't think she<sub>k</sub> would hire t<sub>j</sub> (Emonds 2004: 107)



Focusing on the root properties of German V2 declaratives, a structural account is also proposed in Gärtner (2002) in terms of a hypotactic analysis involving syntactic variable sharing. Along these lines, the scopal behaviour of the relevant constructions is derived from their ‘assertional proto-force’. Meinunger (2004), on the other hand, proposes an extraposition analysis for dependent indicative V2 clauses in German, targeting a quasi-paratactic position from which the relevant clauses act as assertions. These analyses combine Emonds’s insight on the «root» nature of certain transformations (including TOP) and Hooper and Thompson’s insight that assertive force plays a key role. (This hypothesis will be re-examined in § 6).

## 2. An Interface Requirement?

The restriction of topics to «root» or «root-like» clauses which are (at least potentially) endowed with assertive force seems to comply with plausible interface requirements. This can be easily seen by considering the treatment of topics within the tradition of update semantics. The latter endorses a dynamic view of semantic interpretation, whereby the meaning of a sentence is its *update potential*: a function from an input context to an output context. The input context is the set of possible worlds that are compatible with the conversational common ground, i.e. the set of propositions that are taken to be presupposed, up to that point, by all the participants in the conversation. The updating effect of an assertion is that the asserted proposition, when accepted by all the participants, is admitted into the common ground, and thus discards from the input context all the possible worlds that are incompatible with it (technically, by intersection), yielding a «shrunked» output context.

In Stalnaker’s (1978) original definition, the common ground was simply the set of presupposed propositions. To this, Heim (1982) added a domain of discourse referents (technically, indices), which constitutes the universe of discourse: at a given point of the conversation, a discourse referent can be newly introduced into the domain (novel) or be already present (familiar). Furthermore, Roberts (1996) has proposed a «question under discussion stack» which keeps track of the questions that are introduced in the course of the conversation. Thus, the conversational context comprises various subcomponents (see Roberts 2004 for an overview). From now on we will use the term «common ground» (CG) in the broader sense, including all these components, and we will dub the first component «propositional CG».

Within this general approach, topics have been analysed as instructions to the hearers on *where* the propositional content expressed by the assertion act should fit in the CG.

## 2.1. Reinhart's Sentence Topic

The first example of this line of analysis is Reinhart's (1981) definition of sentence topic, which formally expresses the insight that the topic is the entity that the sentence is about. According to Reinhart, the propositional CG is not just an unordered set of propositions, but it is divided into subsets of propositions, which are stored under defining entries; these entries correspond to topic denotations.<sup>2</sup> Hence, a sentence topic identifies the entry under which the proposition expressed in the sentence should be stored in the CG.<sup>3</sup> Consider for instance the two examples in (4a-b), where the sentence topic corresponds to the syntactic subject:

- (4) a. [<sub>Top</sub> Lou Reed] [met David Bowie in 1971]  
b. [<sub>Top</sub> David Bowie] [met Lou Reed in 1971]

Since *meet* is a symmetric predicate, the two sentences express equivalent truth conditions; however, in the case of (4a) the proposition expressed will be stored in the CG as information about the entity L. Reed, whereas in the case of (4b), the proposition will be stored as information about the entity D. Bowie.

Reinhart's approach has been elaborated on by Portner and Yabushita (1998) in their analysis of Japanese *wa*-topics. These authors represent the CG as a set of infinite sequences of pairs, where each pair consists of an entity and a

---

<sup>2</sup> This is obviously reminiscent of the «file card» metaphor by Heim (1982).

<sup>3</sup> According to Reinhart, a sentence may have more than one potential (NP) topic, thus yielding multiple potential pragmatic assertions. In her own words (Reinhart 1981: 25):

To say that a sentence *S* uttered in a context *C* is about  $\alpha_i$ , i.e. that the pair  $\langle \alpha_i, \phi \rangle$  of Possible Pragmatic Assertions<sub>(S)</sub> is selected in *C*, is to say,

- (i) first, that if possible, the proposition  $\phi$  expressed in *S* will be assessed by the hearer in *C* with respect to the subset of propositions already listed in the context set [sic] under  $\alpha_i$ ,  
(ii) second, that if  $\phi$  is not rejected it will be added in the context set under the entry  $\alpha_i$ .

(Notice that Reinhart dubs «context set» what Stalnaker (1978) dubs «common ground».)



set of possible worlds representing the information we have about that entity.<sup>4</sup> The information in the CG is thus partitioned into various «file cards» – sets of possible worlds associated with the topic entities.<sup>5</sup> The updating function is then defined in such a way that the information expressed in a proposition will be stored in the file card corresponding to the topic entity (Portner and Yabushita's «link»). Even this rough sketch is sufficient to show that the sentence topic is conceived of as an instruction on how to update the CG: it indicates which file card will be modified by the asserted proposition.

## 2.2. Büring's (2003) Contrastive Topic

A different approach to topics has been proposed by D. Büring (1997 and subsequent works).<sup>6</sup> We focus here on Büring's (2003) analysis of contrastive topics (CT).

This analysis builds on Roberts's (1996) proposal that discourse is guided by strategies of inquiry, i.e. sets of questions hierarchically ordered by entailment relations. To illustrate informally,<sup>7</sup> a question like (5a) entails the two questions (5b) and (5c); any answer to (5a) will provide a complete answer for both the subquestions that it entails:

---

<sup>4</sup> [For any sequence A] Intuitively, for each  $i$ , all the pairs  $\langle e_{i,A}, I_{i,A} \rangle$  represent the  $i$ th file card. Encoded in  $I_{i,A}$  are the facts so far established about the  $i$ th discourse referent, and  $e_{i,A}$  is a candidate for being the actual thing that the discourse referent represents.' (Portner and Yabushita 1998: 141).

<sup>5</sup> It is still possible to construct a global context set by simply intersecting all the sets of worlds in a sequence A (for every  $A \in CG, \bigcap_{j \in N} I_{j,A}$ ). A consistency requirement makes sure that such an intersection of all the sets of possible worlds in each sequence be non-null: hence, each sequence represents a consistent state of information.

<sup>6</sup> In Portner and Yabushita's (1998) terms, Büring's approach endorses a question-based view of topics, as opposed to their own (and Reinhart's) entity-based view of topics.

<sup>7</sup> More formally: taking a question to denote a set of alternative propositions, a complete answer to a question is one which yields an evaluation (true or false) for all of these alternative propositions, whereas a partial answer is one which yields an evaluation for at least one such alternative. A question  $q_1$  entails another question  $q_2$  iff giving an answer to  $q_1$  yields a complete answer to  $q_2$ . In Roberts's actual implementation, the set of alternative propositions determines a partition of the set of possible worlds into disjoint cells; a partial answer rules out at least one such cell, whereas a complete answer eliminates all but one cell in the partition.

- (5) a. What do your siblings do?  
b. → What does your sister do?  
c. → What does your brother do?

The conversational CG keeps track of the questions that are introduced in the discourse: when a question is introduced by a speaker, it commits the other participants to providing an answer, and remains the «question under discussion» (QUD) until it has been answered or it has been shown to be presently unanswerable, at which point it will be removed, along with any subquestions that it entails. (As mentioned above, this is implemented through a QUD stack).

Büring (2003) represents strategies of inquiry by means of d(iscourse)-trees, where the hierarchical (entailment) structure is directly expressed by dominance relations. The function of contrastive topics is to indicate how the asserted proposition fits into a strategy of inquiry.

Within the general framework of alternative semantics, Büring defines the CT-value of a clause with contrastive topic marking as a set of questions. This can be obtained by two steps; consider the example in (6), where the subject is marked as a contrastive topic (by means of the so called B-accent) and the direct object is focussed:

- (6) [FRED]<sub>CT</sub> ate [the BEANS]<sub>F</sub> .

The first step is to replace the focussed term with a wh-word and front the latter, yielding the question: «what did Fred eat?». The second step is to form from this a set of alternative questions by replacing the contrastive topic with some alternative to it: this is a set of questions of the form «what did x eat»?<sup>8</sup>

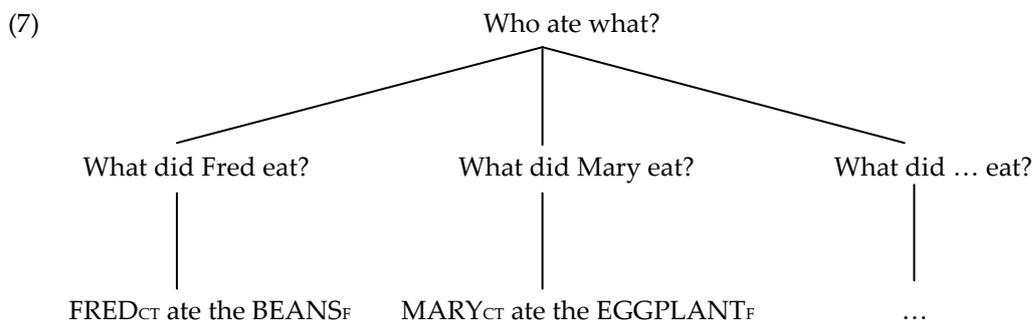
The CT-congruence requirement states (roughly) that every declarative clause containing a contrastive topic must be the answer to a question belonging to a set of alternative questions – either explicitly asked or implicitly

---

<sup>8</sup> More precisely: in the alternative semantics view, the focus value of a clause (as well as a question meaning) is a set of alternative propositions varying in the position marked by focus or wh: e.g., the denotation of the question «what did Fred eat?» is a set of propositions of the form «Fred ate y» : {Fred ate y | y ∈ D<sub>e</sub>}. Büring's CT-value is in turn a set of alternative question meanings varying in the CT-marked position, i.e. {{x ate y | y ∈ D<sub>e</sub>} | x ∈ D<sub>e</sub>}.



introduced – which are all part of a strategy to solve a super-question. Thus, a sentence like (6) (with the relevant CT and focus marking) must be part of a d-tree like (7) (Büring's 2003 (15)):



Once again, this is an extremely reduced synthesis: it is merely intended to show that Büring's contrastive topic provides an instruction for the hearer on how to relate the asserted proposition to a strategy of inquiry. As Krifka (2007) stresses, when the alternative subquestions are implicit, contrastive topics may effectively be used by a speaker to indicate a strategy of incremental answering to the superquestion. In other cases, a use of CT-marking not related to an already established strategy of inquiry may even induce the hearers to accommodate a strategy, with an indirect but nonetheless substantial impact on the ongoing discourse.

### 2.3. CG-Management and the Root Restriction

We wish to relate these views of topics to a distinction recently proposed by Krifka (2007) in his overview of information structure phenomena. Krifka distinguishes two dimensions of the CG, which he calls *CG content* vs. *CG management*. Roughly, CG content is the truth-conditional information accumulated up to a given point in the conversation; CG management is the sequence of conversational moves performed by participants (assertions, questions...) that determines the way in which the CG content develops, and the information about these conversational moves that is reflexively stored in the CG.

Recall now that Reinhart's sentence topic indicates which file card in the propositional CG is going to be updated by the proposition expressed in the assertion act; Büring's contrastive topic indicates that the proposition expressed directly answers a (possibly implicit) subquestion belonging in a strategy of inquiry. Thus, it is clear that both these notions of topic pertain to the

dimension of CG management. Following Krifka (2007) and Frascarelli & Hinterhölzl (2007), we assume that the aboutness and the contrastive definition of topics are not mutually exclusive, but complementary, as their interpretation is relevant to the dynamic updating of different subcomponents of the CG (the propositional CG and the QUD stack, respectively). In § 3, we will see that the two types of topic can actually co-occur.

At this point we can reconsider the root restriction on the distribution of topics. Under both views, topic interpretation is directly related to a conversational move: it follows that topics are expected to appear only in clauses endowed with illocutive force, which realize a speech act implementing a conversational move:

(8) *Interface Root Restriction (IRR)*

Information structure phenomena that affect the conversational dynamics (Krifka's 2007 CG management) must occur in clauses that express nonreported speech acts. Nonreported speech acts are syntactically unembedded.

In this way, the root restriction can be directly derived from the interpretive properties of topics and the compositional nature<sup>9</sup> of interpretation.

### 3. An Apparent Counterexample: Romance Clitic Left Dislocation

But the empirical data seldom are as neat as our theories. Romance clitic dislocation is known to be a blatant counterexample to the root restriction: it is generally allowed in all finite subordinate clauses (cf. among others, Cinque 1990, Rizzi 1997, Frascarelli 2000, De Cat 2002):

- (9) a. *L'unica persona che a Gianni, non gli ha mai fatto un favore*  
 the only person that to Gianni not to-him.CL have.3SG ever done a favour  
 'The only person who never helped Gianni.'

(Cinque, 1990: 58 (1b))

- b. *Non so proprio chi, questo libro, potrebbe recensirlo per domani*  
 (I) don't know who this book could review-it.CL by tomorrow  
 'I don't know who could review this book by tomorrow.'

- (10) a. *Se gli esami finali non li superi, non otterrai il diploma*  
 if the exams final not them.CL pass.2SG, not obtain.FUT.2SG the degree  
 'If you don't pass the final exams, you won't get the degree.'

---

<sup>9</sup> One apparent violation of surface compositionality, i.e. Portner & Yabushita's (1998: 147) promotion of embedded topics to the root, will be discussed in §4.1.



- b. *Che questo problema gli studenti non l' abbiamo potuto*  
 that this problem the students not it.CL have.3PL can.PART  
*risolvere, mi sembra impossibile*  
 solve to-me.CL seem3SG impossible  
 'It seems impossible to me that the students weren't able to solve this problem.'
- c. *E' strano che questo problema gli studenti non l' abbiamo*  
 (it) is strange that this problem the students not it.CL have.3PL  
*potuto risolvere.*  
 can.PART solve  
 'It's strange that the students weren't able to solve this problem.'

Haegeman (2004) compares Romance Clitic Left Dislocation (CLLD) with English TOP, showing that the latter is blocked in adjunct clauses:

- (11) a. \*If these exams you don't pass, you won't get the degree. (=10a)  
 b. \*While her book Mary was writing this time last year, her children were staying with her mother.

TOP is nevertheless possible in some types of adverbial clauses namely, adversative clauses like (12a), *because* (12b) and conditional clauses (12c):

- (12) a. His face not many admired, while *his character* still fewer felt they could praise.  
 (Quirk et al 1985: 1378, via Haegeman 2004)  
 b. I think we have more or less solved the problem for donkeys here, because *those we haven't got*, we know about.  
 (*Guardian*, G2, 18.2.3, p. 3, col 2, via Haegeman 2004)  
 c. If *these problems* we cannot solve, there are many others that we can tackle immediately.  
 (Haegeman 2004: 160)

To account for this apparent discrepancy, Haegeman (2004) proposes a distinction between *central* and *peripheral* adverbial clauses: while the former are fully integrated in the host clauses and consequently interpreted as modifiers of the event expressed in the associated clause, the latter are «less tightly connected» and serve to provide the discourse frame against which the proposition expressed in the host clause is evaluated. In this sense, central adverbial clauses do not have independent illocutionary potential and are integrated in the speech act conveyed by the associate clause, while peripheral adverbial clauses have root properties and are endowed with a Force projection in their left periphery (cf. Haegeman 2004: 169-70). Following Bayer's (2001) suggestion of a link between the availability of TOP and the presence of illocutionary Force, Haegeman proposes that English TOP depends on the presence of Force and, as such, it is strictly a root phenomenon.

Italian CLLD, on the other hand, is not likewise restricted (cf. Cinque 1990)<sup>10</sup>, as shown by the comparison between (10a-c) and (11a-b). Haegeman attributes this distinction to the availability of a lower position for CLLD topics in the C-domain;<sup>11</sup> according to the author, the lower Top projection does not depend on Force, but is licensed through Fin: hence, the «low» CLLD is not subject to the root restriction.<sup>12</sup> Haegeman assumes that the lower Top projection is not available in English, but the reason for this asymmetry remains unexplained.

We will show that a fine-grained distinction between different types of topics can account for this discrepancy and open new perspectives of analysis.

### 3.1. Typology of Topics

In § 2 we discussed two different views of topics: the aboutness view proposed by Reinhart (1981) and Portner and Yabushita (1998), on the one hand, and the alternative semantics view proposed by Büring (1997, 2003), on the other. These two views are generally taken to be alternative. This is, we will

---

<sup>10</sup> 'The left dislocated phrase [in Italian] can occur at the front of virtually any subordinate clause type. Here again CLLD contrasts with LD, which typically occurs in root contexts and (to different degrees of marginality) in the complements of only a few clauses of propositional attitude verbs' (Cinque 1990: 58). Notice, however, that Cinque compares CLLD with LD, while Haegeman only deals with TOP. As we will see, this difference is not trivial.

<sup>11</sup> As shown by the fact that CLLD topics can occur below fronted adverbials hosted in the low Mod projection (Haegeman's 2004: (39), from Rizzi 2004: (49)):

(i) [<sub>ModP</sub> *Rapidamente*, [<sub>TopP</sub> *i libri* [<sub>FinP</sub> *li* *hanno rimessi a posto*]]]  
Quickly the books them.CL have.3PL put.PART.M.PL in order  
'The books, they quickly reordered them.'

<sup>12</sup> On the other hand, Haegeman (2004) assumes that the high Topic projection depends on Force in Italian as well as in English. In more recent work (Haegeman 2007, 2009), the impossibility of TOP (argument fronting) in «central» adverbial clauses (temporal and conditional) is due to an intervention effect of the topicalized constituent on the movement of the temporal/world operator to the left periphery:

(i) \*[<sub>CP</sub> OP<sub>w</sub> [if [<sub>TopP</sub> these exams [you don't pass in w]]]]

In this picture, the assumption of licensing of Top by assertive Force is no longer required; on the contrary, the lack of an assertion operator in Spec,ForceP of conditional clauses is derived from the intervention effect with respect to movement of the world operator. The question why Italian CLLD should be dispensed with the relevant effect remains open.



argue, a misconception, which is due to the prejudice that topic is a unique category, and thus susceptible of a single analysis. A different view of topics emerges, however, once we consider in detail their prosodic properties (prosodic phrasing and location of tonal events).

Several prosodic studies (cf. among others, Pierrehumbert & Hirschberg 1990; Féry 1992, Büring 1999) have distinguished different types of topics, although few attempts have been made to connect intonational properties to syntactic structures. In this respect, Frascarelli & Hinterhölzl (henceforth, F&H 2007) first showed that there is a systematic correlation between the formal properties of topics and their function in the discourse, which is encoded in a strict hierarchy in the C-domain (*contra* a free recursion analysis of TopP projections, cf. Rizzi 1997). They thus provide intonational and syntactic evidence that different types of TopP projections must be posited in the left periphery of the sentence. In particular, three tonal events can be distinguished, as illustrated below.<sup>13</sup>

### 3.1.1. A-Topics

When the aboutness quality (Reinhart 1981) is inherently associated with a shift in the conversation, the relevant topic in languages like Italian and German is signalled by a rise in the F0 contour that is aligned with the tonic vowel in its full extension (a complex L\*+H tone)<sup>14</sup>; hence, the specificity of so-called *Aboutness-shift Topic* (henceforth, A-Topic) is to newly propose or reintroduce a topic in the discourse. The A-Topic is therefore Reinhart's

---

<sup>13</sup> According to the ToBi system (Pierrehumbert 1980), tunes are described as sequences of *low* (L) and *high* (H) tones (which determine the shape of the F0 contour). According to this framework, there are six different types of pitch accent: two simple tones – high (H\*) and low (L\*) – and four complex (bitonal) ones. In this perspective, all pitch accents render prominent the material with which they are associated, regardless of the specific tonal event.

<sup>14</sup> The prosodic properties of topics are based on F&H's (2007) analysis, hence on Italian and German data, whose crosslinguistic validity has been recently supported by intonational studies on Somali (Frascarelli & Puglielli 2009) and Tagalog (Frascarelli in press). In this paper we will try to relate the relevant prosodic characterization to the English (syntactic) distinction between TOP and LD. Prosodic investigation on different types of topics in English is an important issue for future research.

sentence Topic<sup>15</sup> (cf. § 2.1): it is an instruction on how to update the propositional CG insofar as it identifies the entity under which the proposition expressed in the clause should be stored in the CG content; hence, the A-Topic pertains to CG management.

In order to provide an illustration of its contour and discourse function, consider example (13) below.<sup>16</sup> Here, a student is giving her opinion about the material of a self-learning course. For quite some time she talks in general terms; then, she interrupts her narration to introduce and speak about a new topic, namely *l'ultima unit* ('the last unit'):

- (13) *Il materiale era tantissimo quindi all'inizio l'ho fatto tutto di corsa cercando di impiegarci il tempo che dicevate voi magari facendolo un po' superficialmente pur di prendere tutto- l'ultima unit la sto facendo l'avevo lasciata un po' da parte [...]*

'The material was quite a lot, so at the beginning I did it all in a rush, trying to do it in the time that you had fixed, perhaps a little superficially, so as to do everything- **I'm doing the last unit now**, I had put it aside before [...]'

- (13') *l'ultima unit<sub>k</sub> la<sub>k</sub> sto facendo*  
 the last unit it.CL be.PRES.1SG do.GER

'The last unit, I'm doing it now.'

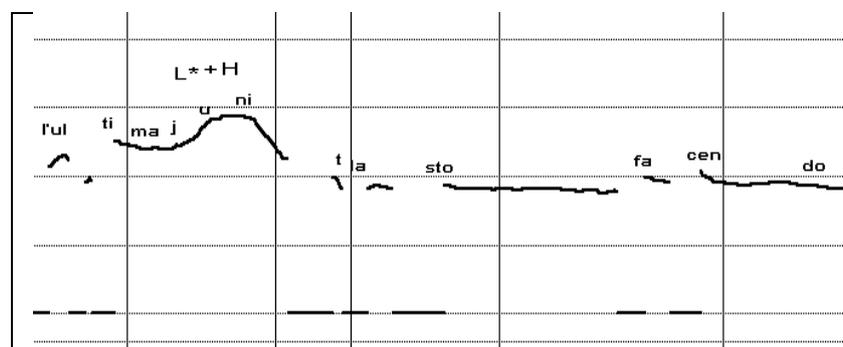


Figure 1 – A-Topic (L\*+H)

<sup>15</sup> The so called continuing topic is instead an already introduced aboutness topic, which seems to be merely «refreshed». Note that a continuing topic does not require the hearer to access a different file card from the one that is currently being updated; therefore, we contend, it does not have a real impact on CG management, in the sense discussed above. Accordingly, the continuing topic is not signalled by a rising tone: in F&H's analysis the continuing function is performed by Familiar topics, namely, low toned dislocated constituents (cf. § 3.1.3). On continuing topics in English, see also the discussion around (21)–(22) below.

<sup>16</sup> This and the following examples are drawn from the Italian corpus Bonvino (2006) studied in F&H (2007).



Notice that the new topic is signalled by a sharp rise in the F<sub>0</sub>, which is aligned with the diphthong [ju] and reaches its peak on the syllabic coda. The rest of the sentence (the ‘Comment’) does not present any significant tonal event and shows a final falling contour (as is the general case for broad Focus sentences; see D’Imperio 2002).

Syntactically, the A-Topic in Italian qualifies as a CLLD constituent: it is base-generated in the C-domain (Cinque 1990, Frascarelli 2000, 2004), resumed by a clitic (when available) and preceded by a preposition, if connected with an indirect object role.<sup>17</sup>

### 3.1.2. C-Topics

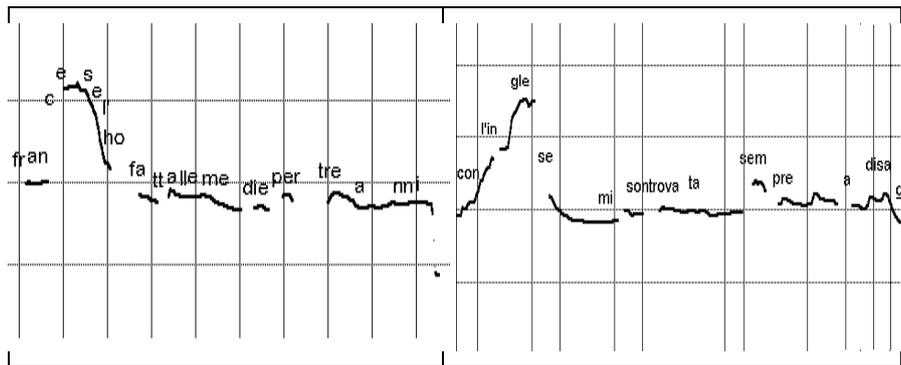
A H\* tone is on the other hand associated with CLLD Topics that induce alternatives in the discourse, which have no impact on the Focus value of the sentence and create oppositional pairs with respect to other topics. This prosodically distinguished type of topic can be analysed along the lines of Büring (2003), as discussed in detail in § 2.2: the C-Topic provides an instruction for the hearer on how to relate the asserted proposition(s) to a strategy of inquiry. Following Büring and also Kuno (1976), we will call this type of dislocated constituent *Contrastive Topic* (henceforth, C-Topic). A clear illustration is provided by the following text. Here speaker A explicitly proposes a superquestion (‘why did you study two languages, French and English?’) and, accordingly, speaker B answers opposing two C-Topics (*francese* and *inglese*, respectively). Each of them is marked by a high pitch and followed by a broad Focus sentence (the Comment) expressing the informative part of the relevant contrast:<sup>18</sup>

---

<sup>17</sup> For these properties, the A-Topic should not be confused with a Hanging Topic (cf. Benincà 2001). Hanging Topics are not preceded by prepositions and are obligatorily resumed, also in the case of complements for which resumption is not compulsory in CLLD. Moreover, Hanging Topics can be resumed by full pronouns, while this is excluded for A-Topics. The discourse functions of Hanging Topics is still to be investigated; however, in Frascarelli (2007) evidence is given that they are not equivalent to A-Topics.

<sup>18</sup> As we can see, unlike A-Topics (Figure 1), the rising contour of C-Topics is aligned with the pre-tonic syllable, while the tonic vowel marks the highest part of the relevant tonal event.

- (14) A: *come mai hai fatto due lingue, cioè, inglese e francese?*  
 B: *francese l'ho fatto alle medie per tre anni con una professoressa con cui mi sono trovata benissimo [...] - con l'inglese mi sono trovata sempre a disagio.*  
 A: Why did you study two languages, namely English and French?  
 B: 'French, I have studied at school for three years with a professor that I liked a lot [...] (while) **with English, I never felt at ease.**'
- (14') *francese<sub>k</sub> lk' ho fatto alle medie per tre anni*  
 French it.CL have.1SG done at.the school for three years  
*con l'inglese mi son trovata sempre a disagio*  
 with the English me.CL be.1SG found.F always uneasy  
 'French I have studied at school for three years [...] with English I never felt at ease.'



Figures 2a-b – C-Topics (H\*)

Büring's (2003) CT-congruence requirement is therefore fully satisfied. Notice, however, that speaker B only provides a partial answer to speaker's A wh-question ('why'). Indeed, after the first sentence, speaker B accommodates a different set of alternative questions, substituting 'why' with 'how well'. Her second sentence can be thus considered the answer to the (implicit) multiple wh-question like "how well did you learn which language?". This means that the relevant superquestion can be implicitly proposed by the speaker himself via accommodation, as discussed in § 2.2.

### 3.1.3. G-Topics

Besides A- and C-Topics, a third type of topic emerged from the analysis. This is F&H's (2007) Familiar Topic: a low-toned (L\*) CLLD constituent that is used to resume background information or for topic continuity (Givón 1983).<sup>19</sup>

<sup>19</sup> When located in the right periphery, a Familiar topic is also used with an 'afterthought' function. Right-hand Familiar topics, however, will not be treated in this paper.



We refer to this type of topic as Given (G-) Topic and characterize it as a given constituent in the sense of Schwarzschild (1999), that is to say:

- a) either it corefers with a salient antecedent (type e), or
- b) the result of replacing Focus-marked constituents with variables and existentially closing them is entailed by a salient antecedent, shifted to type t (conjoinable types).

To illustrate, in an Utterance like (15), the Existential F-closure of U is the result of replacing the F-marked phrase in U (*RED*) with variables and existentially closing the result. Further existential type-shifting is required if U is not of type t: for instance, in speaker B's utterance in (15), in order to determine that the VP counts as GIVEN, it is necessary to lift it to type t by existential closure of the external argument position: the result is entailed by the antecedent VP in speaker A's statement also lifted to type t. (Lifting to type t is obviously required in order for entailment to be defined.)<sup>20</sup>

(15) A: John [<sub>VP</sub> ate a green apple]  
 B: No, he [<sub>VP</sub> ate a RED<sub>F</sub> apple]

(16)  $\exists x[x \text{ ate a green apple}]$  (=  $\exists$  lifting of the antecedent VP) entails  
 $\exists Y[\exists x[x \text{ ate a } Y \text{ apple}]]$  (=  $\exists$ -F-closure and  $\exists$ - lifting of VP)

Notice that Givenness is calculated on the basis of the CG content, marking a contextually entailed element, and it does not affect the conversational dynamics. It is therefore clear that the G-Topic does not pertain to CG management.<sup>21</sup>

As an illustration, consider sentence (17) below, in which multiple G-Topics are realized in the left periphery, namely, the subject-Topic *l'autoapprendimento* ('self-learning') and the DO-Topic *questo* ('this'):

---

<sup>20</sup> More precisely (Schwarzschild 1999: (25)), an utterance U counts as Given iff it has a salient antecedent A and

- a) If U is of type e, then A and U corefer;
- b) Otherwise: modulo E-type shifting, A entails the Existential F-closure of U.

<sup>21</sup> Givenness, however, is not incompatible with CG management: C-Topics are typically given, as they relate to a contextually salient set of alternatives; however, their update potential is provided by contrast, not by mere givenness. A-Topics can be given or not (Reinhart 1981: 26). Also notice that we abstract from degrees of salience of given discourse referents.





The existence of a hierarchy implies that different types of topics can co-occur in the same clause and, consequently, that A- and C-Topics are not mutually exclusive. As a matter of fact, 5 cases of co-occurrence could be found in the Italian corpus, out of 112 total instances of A- and C-Topics. Consider, for instance, the following example:

(19) A: *insomma quindi familiarizzandoti un pochettino hai trovato che è cambiato qualcosa nel tuo modo di rapportarti al computer e ai programmi insomma trovi che ci sia stata un'evoluzione.*

B: *sì nel primo per esempio c'era diciamo a sinistra dello schermo la traduzione in italiano c'erano tutti i vari diciamo sistemi per avere informazioni in più e io lì non l'avevo capito insomma... invece nel terzo caso c'era di nuovo questa cosa e io mi sono trovata molto più diciamo tranquilla a mio agio perché finalmente avevo scoperto come funzionava.*

A: well, so being more familiar [with the program] you discovered that something changed in your way of approaching the computer, in other words, you think there was some evolution.

B: yes, in the first example there was, on the left of the screen, the Italian translation, there were all the different ways to get more information and, in short, **I did not understand it there...** on the contrary in the third example there was again this thing and in that occasion I was already much more self-confident, because finally I discovered how it worked.

(19') *io, lì non l'avevo capito, insomma.*

I there not it.CL had.1SG understand.PART in short

'In short, I did not understand it at that point.'

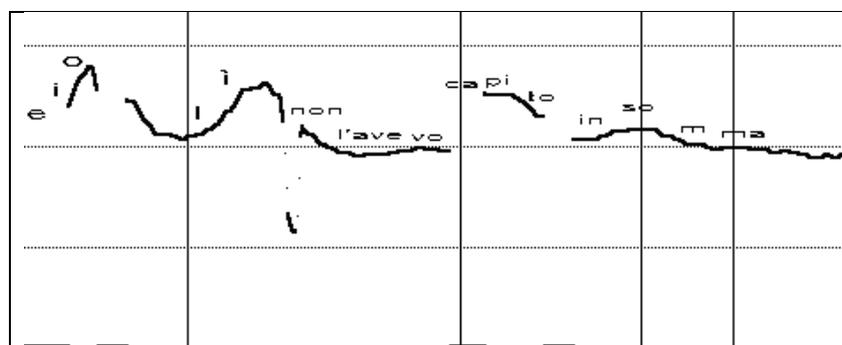


Figure 4 – A-Topic and C-Topic in a sequence

As we can see, in this sequence speaker B proposes a topic shift from the description of a language program to her personal viewpoint about it, and opposes as a C-Topic a specific exercise she had problem with (*lì* = the first example) with the *terzo caso* ('third example'). Accordingly, *io* is marked with a L\*+H contour, while *lì* shows a H\* tone. This is evidence that A- and C-can co-occur, consistent with the fact that they affect two different CG subcomponents (cf. § 2.3).

Finally, the possible co-occurrence between either A- or C-Topics and G-Topics goes without saying; indeed, it is very common in Italian naturalistic data. It is in fact quite normal to propose a shift (or a contrast) and, at the same time, to dislocate a given constituent that simply involves the retrieval of information already available in the CG content. Consider, for instance, the following passage from the corpus:

- (20) *Era tutto molto nuovo nel senso che comunque la lingua **inglese** attraverso i programmi sul computer diciamo non l'avevo mai- [...] comunque l'**inglese** risultava anche facendolo da solo più interessante [...] **io, inglese non- premetto non l'avevo mai fatto.***

Everything was totally new to me in the sense that I had never studied English through computer programs [...] and through self-learning English appeared more interesting to me [...] **I must say that I had never studied English before.**

- (20') [A-top *io*] [G-top *inglese*]<sub>k</sub> non- l' avevo mai fatto  
I English not it.CL had.1SG never do.PART  
'I had never studied English before.'

Clearly, *inglese*, a DO resumed by the clitic *lo*, is a G-Topic, while the subject-Topic *io* marks a shift in the conversation: the speaker is still talking about English but, at that point, she wants to comment on her personal relation to that language. Accordingly, *io* is characterized by an intonational rise (L\*+H), while the F0 on *inglese* remains on a low range.

### 3.2. English

As we have seen, Italian CLLD is the syntactic implementation for any type of topic: dislocated constituents are merged in the left periphery and resumed by a clitic pronoun (whenever available), independent of their discourse role. Their interpretation therefore relies on their distribution in the C-domain and intonational properties.

In English, on the other hand, different topic constructions seem to be associated with specific interpretations. In particular, LD conveys a shift with respect to the aboutness topic of the previous sentence (cf. Rodman 1974) and, in this sense, implements an A-Topic (cf. also Gregory and Michaelis' 2001 «topic promotion»), while TOP mainly implements C-Topics (Prince's 1998 «PO-set» relation). Nevertheless, Rodman (1974) also seems to suggest a continuing function for topicalized constituents; consider for instance the following examples:



- (21) What can you tell me about John?  
 a. John Mary kissed.  
 b. \*John, Mary kissed him.
- (22) What can you tell me about John?  
 a. \*Nothing. But Bill Mary kissed.  
 b. Nothing. But Bill, Mary kissed him.

The initial question in (21) and (22) is about John, which means that John is the A-Topic of the discourse (i.e., the information provided in the answer will update the file card corresponding to John). From the fact that (21b) and (22a) are inappropriate answers to (21)-(22), Rodman concludes that a topicalized NP implements an already established (continuing) topic, while LD induces a topic shift in the conversation. But is the continuing topic really not contrastive? As a matter of fact, a contrast is also implicit in (21a): the use of TOP induces the interpretation that John was kissed by Mary and somebody else wasn't. Indeed, the fact that a contrast is not available in (22a) (the speaker has nothing to say about John, but only about Bill) makes the relevant sentence ungrammatical. We therefore conclude the TOP mainly instantiates C-Topics in English; Rodman's suggestion about a continuity function can nevertheless be maintained as a secondary property of TOP.<sup>23</sup>

As already discussed with respect to Italian, A- and C-Topics can co-occur (cf. (19)). This possibility is also attested in English, and the hierarchical order is the expected one: the A-Topic (LD constituent) precedes the C-Topic (topicalized constituent), as shown in (3) above and in (23)-(24):

- (23) [A-top My son] [C-top beans] he likes, but [C-top peas] he hates.
- (24) a. (As for) Rosa, my next book I will dedicate to her. (Reinhart 1976)  
 b. \*My next book, Rosa, I will dedicate to her.

As for G-Topics, our data suggest that in English, no leftward topic structure is devoted to mere givenness marking (although givenness may be a concurrent property of topics, cf. note 21). The retrieval of given information in English is generally implemented through simple destressing (see, a.o., Neeleman & Reinhart 1998, Schwarzschild 1999) – a basic difference with

---

<sup>23</sup> Given the hierarchy proposed in (18), where different types of topics are encoded in specific functional projections, the possibility of a secondary interpretation implies that one and the same constituent can relate to more than one Topic head (maybe through Agree, cf. F&H 2007: § 5.3).

respect to Italian, which cannot be adequately explained within the limits of the present paper. Whatever its ultimate explanation, this asymmetry with respect to Italian will play a crucial role in our account of the different distributional properties of topics in the two languages, and in particular, the apparent lack of a root restriction in Italian, as opposed to English.

### 3.3. An Account of Crosslinguistic Differences

So far, we have seen that both English and Italian implement A- and C-Topics, in the same hierarchical order and with specific intonational profiles. In addition, however, Italian also implements G-Topics (F&H's Familiar topics), i.e. deaccented given constituents (in the sense of Schwarzschild 1999). Recall now that A-Topics have a special status and, together with C-Topics, pertain to CG management (§ 2.3), while G-Topics don't. We argue that this distinction yields different distributional properties of the three types of topics, which in turn account for the differences between English and Italian.

First of all, consider the uniqueness of A- and C-Topics, as opposed to G-Topics, which are instead recursive. This difference is a direct consequence of their different role with respect to the CG management. A-Topics identify the unique entry under which the asserted proposition must be stored in the propositional CG: therefore, there can be at most one A-Topic per clause (25a), although obviously it is possible to have a single A-Topic consisting of a plural individual, as in (25b) (Reinhart 1981, Krifka 2007):

- (25) a. \*(As for) Jack, (as for) Jill, he married her last year.  
b. As for Jack and Jill, they married last year.

As for C-Topics, recall from § 2.2 that they mark the position with respect to which the alternative subquestions differ; the varying position is characteristically unique:<sup>24</sup>

---

<sup>24</sup> The realization of multiple C-Topics is marginally possible in languages that allow for multiple wh-questions.: in English, for instance, the acceptability of a superquestion like 'who gave what to whom?' allows for the possibility of building alternative subquestions over ordered pairs of a theme and a recipient entity; as a consequence, we find multiple C-Topic constructions like (i) (Culicover 1996: (35)):

(i) I insisted that THAT book, to ME, MAXIM gave, and THIS book, to YOU, SASHA gave.



- (26) a. *Chi ha preparato la cena?*  
 'Who prepared for the dinner?'
- b. → Who prepared the pasta?
- c. → Who prepared the fish?
- d. [<sub>C-top</sub> *La pasta* *l'* *ha* *cucinata* *Leo, (e)* [<sub>C-top</sub> *al* *pesce*]  
 the pasta it.CL have.3SG cooked Leo, (and) to.the fish  
*ci* *ha* *pensato* *Mario.*  
 to-it.CL have.3SG thought Mario  
 'Leo cooked the pasta, and Mario prepared the fish.'
- e. \* [<sub>C-top</sub> *Leo*] [<sub>C-top</sub> *la pasta*] *l'* *ha* *cucinata, (e)* [<sub>C-top</sub> *Mario*]  
 Leo the pasta it.CL have.3SG cooked, (and) Mario  
 [<sub>C-top</sub> *al pesce*] *ci* *ha* *pensato.*  
 to.the fish to-it.CL have.3SG thought

On the contrary, G-Topic dislocation is a device to mark a given constituent; as there is no upper limit to the number of given elements in a clause, G-Topics can be multiple, cf. (17) above and (27):<sup>25</sup>

- (27) *Però* [<sub>G-top</sub> *io*] [<sub>G-top</sub> *quelle*] *le* *ho* *perse*  
 however I those them.CL have.1SG lost.F.PL  
 'Those, however, I lost.'

Thus, A- and C-Topics are unique per clause, whereas G-Topics can be multiple. We suggest that the well known asymmetry with respect to recursion between Italian CLLD and English topic constructions is due to the absence of leftward G-Topics in English. In other terms, the free recursion that is usually attribute to Italian CLLD as a structure is actually a property of one subtype of it, implementing G-Topics.

At this point we can go back to our main point, namely, the relevance of the Interface Root Restriction for English vs. Italian topic construction. Here too, we suggest that the difference concerns the availability of leftward G-Topics in Italian, as opposed to English. Recall that G-Topics simply involve the retrieval of information already present in the CG content, and they do not affect CG management: hence, according to our proposal (§ 2.3), they are not expected to

---

In languages like Italian, the absence of multiple wh-questions excludes this possibility.

<sup>25</sup> Interestingly, however, in the corpus examined no more than three G-Topics can be found in the same C-domain and these sequences are very rare. In particular we could find 5 multiple occurrences out of 23 cases of G-Topics in the left periphery.

be subject to the IRR. This is borne out by Italian data: the IRR is immaterial to G-Topics, which can occur in any type of subordinate clause, including non-finite complements (28), if-clauses (29), and «central» adverbial clauses (30).<sup>26</sup> (In the examples, the given – non-shifting, non-contrasting – quality of the embedded topics is made clear by the context; the figures indicate the acceptance rates.)

(28) A: *Ecco il pacco del riso. Ci pensi tu?*  
here the pack of.the rice. there.CL think you  
'Here you have the rice. Will you make it?'

B: *Sì, senti che idea: ho deciso, il riso, di cuocerlo a vapore.*  
yes, listen what idea: have.1SG decided, the rice, to steam-it.CL  
'I will. Listen to my idea: I have decided to steam it.' (89%, 16/18)

(29) A: *Il riso è già pronto.*  
the rice is already ready  
'The rice is ready.'

B: *Vabbé: se il riso l'hai già cotto, apparecchia la tavola.*  
well: if the rice it.CL have.2SG already cooked, dress.IMP the table  
'Well, if you've already cooked the rice, dress the table.' (100%, 9/9)

(30) A: *Devo guardare anche la torta?*  
must.1SG watch also the cake  
'Should I watch the cake too?'

B: *Sì, te l'ho detto: resta in cucina*  
yes to-you.CL it.CL have.1SG said stay.IMP in kitchen

*finché la torta non la vedi pronta da sfofnare.*  
until the cake not it.CL see.2SG ready to take out

'Yes, I told you: stay in the kitchen until you see the cake is ready.' (80%, 7/9)

Even though G-Topics are not always fully accepted, their degree of acceptability is significantly superior to that of C-Topics. This is shown by the following examples, where embedded C-Topics have been tested in structural contexts parallel to those in (28)-(30). The acceptance rates are much lower:

---

<sup>26</sup> G-Topics are also generally accepted in appositive relative clauses (70%), while only 50% of informants allow their presence in restrictive relatives and presentational clauses. Future research will be devoted to the understanding of this variation in acceptability.



- (31) *Ho deciso il riso di cuocerlo, e le verdure*  
 have.1SG decided the rice to cook-it.CL, and the vegetables  
*di metterle in frigo.*  
 to put-them.CL in fridge  
 'I have decided to cook the rice and to put the vegetables in the fridge.' (44%, 8/18)
- (32) *Se il riso lo cuoci e le verdure le prepari,*  
 if the rice it-CL cook.2SG and the vegetables them.CL prepare.2SG  
*riusciremo ad andare a tavola entro un'ora.*  
 be able.fut.1pl to go to table within an hour  
 'If you cook the rice and prepare the vegetables, we can have lunch in an hour.' (33%, 3/9)
- (33) *Resta in cucina finché il riso non l' avrai cotto*  
 stay in kitchen until the rice not it.CL have.FUT.2SG cooked  
*e la torta l' avrai tolta dal forno.*  
 and the cake it.CL have.FUT.2SG taken from-the oven  
 'Stay in the kitchen until you've cooked the rice and taken the cake from the oven.' (0%, 0/9)

By comparing the acceptance rates with the Fisher Exact Test, a significant difference emerged between the two conditions (G-Topic vs. C-Topic), both globally ((28)-(30): 32/36 vs. (31)-(33): 11/36,  $p = 0.000000$ ) and in each structural context ((28) vs. (31):  $p = 0.005348$ ; (29) vs. (32):  $p = 0.004524$ ; (30) vs. (33):  $p = 0.001131$ ).

This evidence is also supported by naturalistic data: in the Italian corpus studied by F&H, 6 embedded G-Topics were found (4 in complement clauses, 2 in adverbial clauses, out of a total of 23 G-Topics), while no case of embedded C-Topics is attested:

- (34) a. *Lui mi ha detto che la mia casa*  
 he to-me.CL have.3SG told that my house  
*la comprerebbe anche subito*  
 it.CL buy.COND.3SG even immediately  
 'He told me that he would buy my house immediately.'
- b. *perché questa, io l' avevo presa solo per fare una curva a U*  
 because this [road] I it.CL had.1SG taken only to make a U-turn  
 'Because I had taken this road in order to make a U turn.'

At this point, the crosslinguistic asymmetry pointed out by Haegeman can be accounted for: since G-Topics are not realized in English, this explains the absence of topic constituents in English central adverbial clauses.

Thus, the present analysis sheds new light on a received generalization. So far, it has been generally assumed that in English, LD and TOP are restricted



to root (-like) clauses, while CLLD in Italian is generally allowed in subordinate clauses. According to the distinctions that we propose, the generalization is only partially correct: the wider distribution of Italian CLLD only concerns G-Topics. The crosslinguistic asymmetry is thus reduced to the parametrized availability of G-Topics in a language. (Recall that the realization of G-Topics in the left periphery has been also shown to be responsible for the possibility of topic recursion in Italian).

We conclude that Italian CLLD is not a real counterexample to the IRR. G-Topics are expected not to comply with it, because they do not pertain to the dimension of CG management: hence, they are not restricted to clauses endowed with illocutive force.

In the next section we turn to a more serious counterexample, by critically re-examining the status of embedded C-Topics. As discussed in § 1, the received view is that these can be embedded only in a clause that bears assertive force. However, we will see that this view is not quite correct, and that C-Topics turn out to violate the IRR in a well-defined subset of embedded contexts. This will force us to abandon our initial assumptions on the semantics of C-Topics, and to propose a revision of Büring's analysis.

#### 4. Embedded Topicalization in English

In the previous section we have argued that Romance CLLD is not a real counterexample to the IRR, because the type of topic that violates it, the G-Topic, does not pertain to the dimension of CG management. In this section we wish to take a closer look at embedded topics in English, a language where, we have argued, there are no (left-peripheral) G-Topics.

##### 4.1. The Hypothesis of Root Promotion

Notice that both Portner and Yabushita (1998) and Büring (2003) predict that topics should only be interpretable with root scope, namely, with scope over the whole proposition that constitutes the content of the relevant speech act. In order to explain away the apparent exception of embedded topics, Portner and Yabushita (1998: 147) propose a covert «promotion to the root», by means of which an embedded topic is actually interpreted with root scope. Evidence for this is given by the fact that an embedded *wa*-topic in Japanese



necessarily outscopes a matrix scope-bearing element. In (35) the embedded topic subject *Jon-dake-wa* (only John) necessarily takes wide scope with respect to the matrix attitude verb:

- (35) *Jon-dake-wa kuru to omotte-ita*  
 John-only-TOP come COMP think-PST  
 'John is the only one who I thought would come.'  
 #'I thought that only John would come.'

The authors do not dwell on the details, and it is not entirely clear whether this should be conceived of as the result of a covert syntactic promotion, akin to «long» Quantifier Raising, or of a purely semantic operation. Be this as it may, it is clear that root promotion violates surface compositionality.

Given our hypothesis that English TOP and LD pertain to CG management, the prediction is that, when syntactically embedded, they should be interpreted with root scope à la Portner and Yabushita.<sup>27</sup> This prediction has been systematically investigated by testing the scope interactions between a quantificational embedded topic (or left dislocated noun phrase) and a matrix quantifier.<sup>28</sup> We will first discuss embedded TOP; LD will be discussed in § 5.

In examples parallel to (36), with a matrix universal quantifier and an embedded existential topic, a distributive interpretation is readily available for our informants:

- (36) Every mechanic said [that *one of the motorbikes*, he can fix \_ in one day].

$$\forall > \exists = 17/25$$

The possibility of a distributive reading in (36) shows that promotion to the root of the embedded existential topic is not obligatory. Is it even impossible? In order to check for this, we reversed the positions of the quantifiers in the

<sup>27</sup> Unless an embedded clause can be endowed with illocutive force, as proposed in Krifka (2001). We leave aside this possibility for the time being.

<sup>28</sup> Notice that: a) all the situations that scope relation  $\exists > \forall$  also verify the inverse scope relation  $\forall > \exists$ ; b) an apparent «wide scope» reading of an  $\exists$  quantifier may be obtained by scope neutralization (cf. Schwarzschild 2002). Therefore, the crucial empirical evidence is the emergence of a distributive interpretation that is verified precisely by those situations that do not verify  $\exists > \forall$ , and can only arise by giving wide scope to the  $\forall$  quantifier.



relevant examples. The judgments thus obtained clearly attest that an embedded universal quantifier can *never* take scope over a matrix existential quantifier, contrary to what the hypothesis of root promotion would predict:

(37) A mechanic said [that *every one of the motorbikes*, he will fix \_ in one day].

$\forall > \exists = 0/28$

The distributive interpretation is instead available when the topicalized noun phrase is *overtly* moved to the left periphery of the root clause:

(38) *Every one of the motorbikes*, a mechanic said [that he will fix \_ in one day].

$\forall > \exists = 13/28$

The two-tail Fisher Exact test shows that the difference between the two conditions (embedded surface position, (37), vs. matrix surface position, (38)) is statistically significant ( $p < 0.0001$ ). Thus, we do not observe a «covert promotion» effect in the case of TOP: the scope data show that an embedded topic is interpreted within the boundaries of the embedded clause.

We then considered a number of complement clauses which, according to Meinunger (2004), are not endowed with assertive force: factive clauses (be glad, regret) (39a), complements to negative predicates (forget, conceal) (39b), bridge complements under a matrix negation (39c), and anti-factive volitional complements (39d). In all of these complement clauses, our informants tend to accept embedded TOP:

- (39) a. I am glad that this unrewarding job, she has finally decided to give \_ up. (12/15)
- b. He tried to conceal from his parents that the maths exam he had not passed \_ and the biology exam he had not even taken \_ . (13/15)
- c. Mary didn't tell us that Bill she had fired \_ , and John she had decided to promote \_ . (8/15)
- d. I hope that the past he will forget \_ , and the future he will face \_ bravely. (13/15)

The scope data show that embedded TOP do not undergo promotion to the root; the data in (39) then imply that embedded TOP (i.e. C-topics) can be interpreted within a *non-asserted* complement clause.

Finally, the embedded interpretation of C-Topics is also supported by the non-equivalence of a root vs. embedded realization. Consider the following sentences:



- (40) a. He held back when I told him that the staff, I myself would choose \_ (and the office, he would choose). (27/35)<sup>29</sup>
- b. ?He held back when the staff, I told him that I myself would choose \_ (# and the office, he would choose). (2/35)
- c. ??The staff, he held back when I told him that I myself would choose \_ (# and the office, he would choose). (0/7)

The contrastive interpretation is only available when the C-Topic is located in the most embedded clause (40a). Interestingly, if we promote the C-Topic to the superordinate clause (40b), not only is the contrast no longer available (as indicated by the ‘#’ symbol), but the sentence is considered as marginal. These values have been also checked through the Fisher Exact test, once again with significant results ( $p < 0.0001$ ). (The near ungrammaticality of promotion to the root in (40c) can be attributed to an island effect.)

This evidence leads us conclude that English TOP can be interpreted within the boundaries of an embedded non-asserted clause, i.e., it really violates the IRR. In the following section, we tentatively propose a semantic approach that is consistent with this conclusion. In § 5, we will eventually abandon the hypothesis of root promotion for LD as well, and we will propose a different account of the observed «promotion effect».

#### 4.2. A Revised Analysis for the C-Topic

In § 3 we have suggested that English TOP is essentially contrastive. Recall from § 2.2 that under Büring’s analysis, the CT-congruence requirement directly links the use of a C-Topic with an assertion move hierarchically embedded under a strategy of inquiry in the d-tree. As far as we can see, this analysis necessarily links C-Topics with illocutive force; it is therefore inconsistent with our observation that English TOP can happily survive in declarative complement clauses that do not bear assertive force (39).

On the other hand, note that even if TOP does not comply with the IRR, its distribution is not as free as that of Romance G-Topics, as discussed in § 3.3. In particular, TOP is completely excluded in central adverbial clauses, in Haegeman’s terms (cf. (31)-(33) above). We thus need a semantic analysis that

---

<sup>29</sup> In the case of (40a–b), the acceptance rates refer to sets of structurally parallel examples.

does not enforce the IRR, but is nevertheless not completely permissive. In a nutshell, we propose that C-Topics do not require illocutive force, but are restricted to clauses that denote propositions. Central adverbial clauses are not possible hosts because they do not denote propositions, but event modifiers.

Consider again a sequence of conjoined sentences introduced by C-Topics:

(41) [Fred]<sub>CT</sub> ate [the beans]<sub>F</sub>, and [Mary]<sub>CT</sub> ate [the eggplant]<sub>F</sub>

One point that is worth stressing is that the entities denoted by the C-Topics must be drawn from a contextually salient set: in other terms, the variable in the CT-marked position, which generated a set of alternative question meanings (cf. note 7), varies over a restricted and salient set. In this respect, we believe, the «question-based» approach proposed by Büring still incorporates an ingredient of an «entity-based» approach, insofar as a contextually salient set of entities must be presupposed in order to generate a bounded (and contextually salient!) set of alternative questions.<sup>30</sup>

Our idea is quite simple: suppose we have a salient set of entities, and we want to predicate something different of each of its members.<sup>31</sup> Clearly, this corresponds to complex truth conditions which cannot be expressed by a syntactically simple sentence. The only way to linguistically express this

---

<sup>30</sup> This suggestion comes very close to the analysis of focussed topics proposed in Portner & Yabushita (1998: 151) and Krifka (2007: 44). On their approach, a contrastive topic is an aboutness topic that contains a focus which “is doing what focus always does, namely indicating an alternative” (Krifka 2007: 44). In this case, it indicates alternative aboutness topics. We do not wish to analyse C-Topics as focussed A-Topics, because, as noted in § 3, A- and C-Topics have completely different properties and can co-occur. Furthermore, notice that from the perspective of the Structured Meaning approach (cf. Chomsky 1971, von Stechow 1990, Krifka 1992), focus on topics does not correspond to any partition of meaning into a focus part and a background part: a ‘presupposition skeleton’ (Jackendoff 1972) is missing, since the C-Topic is followed by new information (the ‘Comment’, corresponding to the (partial) answer to Büring’s superquestion).

<sup>31</sup> Of course the members of the set may be summed into plural individuals, as in e.g.:

(i) [Al and Ben]<sub>CT</sub> went to the movies, while [Carl]<sub>CT</sub> stayed home.



«complex proposition»<sup>32</sup> is to break it down into a conjunction of simpler propositions in each of which a predicate applies to a single member of the salient set.

One difficulty for this idea seems to be the trivial observation that it is perfectly possible to use a C-Topic in a single sentence, without any other conjoined sentence. However, as Buring (2003: 522–524) points out, such an «orphan» C-Topic gives rise to a clear implicature: the minimal implicature is that the predicate that holds true for the entity denoted by the C-Topic does *not* hold for the other members of the salient set. We surmise that in this case, the rest of the «complex proposition» is only partially specified via implicature (the speaker may be unable to provide information about the other members of the set, or a full specification may be deemed redundant for the purposes of the conversation). Anyway, the very fact that the implicature arises shows that the larger set of entities has been introduced in the semantic representation. At this point we leave open the question of how exactly it is introduced; one possibility is that an individual is eligible as a C-Topic only if it belongs in a salient set in the relevant context.<sup>33</sup>

From this perspective, the function of CT-marking is to signal that the topic denotation belongs to a contextually salient set, and that the proposition expressed is part of a larger proposition. The crucial point is that the interpretation of a clause (or conjunction of clauses) containing a C-Topic remains at the propositional level; we do not assume a CT-value of a higher type, as in the alternative semantics approach. This explains why C-Topics can occur in complement clauses that are embedded under proposition-taking verbs. On the other hand, a clause containing a C-Topic cannot denote anything «less» than a proposition: this accounts for why C-Topics cannot appear in central adverbial clauses, which denote predicates of events.<sup>34</sup>

---

<sup>32</sup> What we are trying to convey is, more or less, the idea of a sum proposition (cf. Krifka 2001: 32). We retain the quotation marks throughout.

<sup>33</sup> That is, membership into a contextually salient set is a presupposition that restricts the domain of the C-Topic operator.

<sup>34</sup> One interesting problem that we leave aside for the time being is infinitival clauses. According to Emonds (2004), control infinitival clauses disallow TOP to their left periphery, while C-Topics are possible for some Italian speaker, cf. (31).

Our proposal retains Buring's insight that C-Topics are a device to break down a complex meaning; instead of breaking down a superquestion into distinct subquestions, we propose that they break down a proposition into a conjunction of linguistically simpler entailed propositions. Thus, C-Topics do not have an impact on CG management in themselves: their interpretation does not require a necessary association with illocutive force.

This analysis is also compatible with the idea (Truckenbrodt 2009) that attitude verbs do not simply take a proposition, but they introduce a «shifted» context against which the embedded proposition is interpreted. More precisely, Truckenbrodt represents the context as a Kaplanian sequence of indices (author, world, time) augmented with a stalnakerian context set (CS) of possible worlds; an attitude verb like *believe* introduces a context whose CS is the set of worlds compatible with the beliefs of the individual denoted by the grammatical subject of the attitude verb (corresponding to the attitude holder). The proposition expressed by the embedded clause is then «placed» in this CS.<sup>35</sup> We may then assume that C-Topics can be interpreted against the shifted contexts introduced by attitude verbs. From this perspective, the relevant set of entities would be contextually salient with respect to the shifted context. This is intuitively correct; consider for instance the Italian equivalent of (39c):

- (42) *Maria non ci disse che Gianni lo aveva*  
Maria not to us.CL told.3SG that Gianni him.CL had.3SG  
*licenziato e Leo lo aveva promosso*  
fired and Leo him.CL had.3SG promoted  
'Maria didn't tell us that she had fired Gianni and promoted Leo.'

This attitude report is perfectly coherent, even if, with respect to the current common ground, Gianni and Leo no longer belong in any one contextually salient set (one of them may have died long ago); the crucial point is that they did belong in a contextually salient set in the context of Maria's reported speech act (presumably, the set of Maria's employees at the time of that context). In this picture, embedded C-Topics are interpreted with respect to the CS determined by the subject's beliefs.

---

<sup>35</sup> In particular, Truckenbrodt (2009) assumes the existence of a hidden context variable in the embedded clause. This requires an antecedent which is found in connection with the matrix attitude verb or the root speech act.



On the other hand, when C-Topics appear in root sentences they are interpreted with respect to the current common ground, and they do have a specific impact on CG management, as Büring and Krifka convincingly point out. We suggest that this impact results from the interplay between the intrinsic semantic contribution of the C-Topic, as outlined above, and the assertive force of the root declarative clause that hosts it.

Following Roberts (1996) and Büring (2003), a.o., any assertion in a discourse (except perhaps for a completely «out of the blue» assertion) constitutes the answer to a possibly implicit QUD: this is what accounts for its relevance to the current discourse.<sup>36</sup> Consider again from this perspective example (41), repeated here:

(41) [<sub>S1</sub>[Fred]<sub>CT</sub> ate the beans], and [<sub>S2</sub>[Mary]<sub>CT</sub> ate the eggplant].

Each of the two conjoined sentences, S1 and S2, will be interpreted as the congruent answer to some (possibly implicit) immediate QUD; since each of S1 and S2 is part of the larger (sum) proposition about all the members of a contextually salient set, the questions evoked by S1 and S2 will both be entailed by a possibly implicit superquestion for which the larger proposition constitutes a complete answer. Thus, a strategy of inquiry is evoked as a result of the assertive force of S1 and S2.<sup>37</sup>

In conclusion, our approach can account for the non-root occurrences of C-Topics, while still explaining their impact on CG management when they occur in root clauses.

One interesting consequence of this approach is that the C-Topic is *internal* to the root speech act; from the viewpoint of surface compositionality,

---

<sup>36</sup> 'Assertions are, as for Stalnaker, choices among alternatives. If accepted, they are added to the common ground, and thereby shrink the context set. In order for discourse to be coherent (obey Relevance), it must be clear what alternatives... a given assertion selects among. The relevant alternatives are those proffered by the question, or topic, under discussion. That's the sense in which assertions are payoff moves – they choose among the alternatives proffered by a setup move/question, and in so doing they further the goals of the game.' (Roberts 1996: § 1). See also Büring (2003: 517–518).

<sup>37</sup> If we attribute assertive force to the whole conjunction [S1 and S2], rather than to each conjunct, then only the superquestion is evoked, but not each subquestion separately.

this would imply that it is syntactically lower than the assertion operator.<sup>38</sup> A different view has been proposed for the A-Topic, to which we now return.

## 5. Another Look at the A-Topic

In § 4, we argued that C-Topics are not intrinsically dependent on illocutive force: they allow for a genuinely embedded, non-root interpretation, and when they appear in a root clause, they are internal to the speech act that it conveys.

Let us now consider the behaviour of embedded LD. One important proviso, to which we return below, is that most of our English informants did not easily accept embedded LD as such. However, the judgements that we elicited by applying the same tests previously applied are strikingly different from the results that we obtained with embedded TOP.

Consider first scopal interactions. Recall that in (36), repeated here as (43a), a topicalized existential quantifier in the embedded clause could be interpreted within the scope of a matrix universal quantifier. On the contrary, a LD existential noun phrase appearing in the embedded clause is interpreted with wide scope with respect to a matrix universal quantifier in the 84% of cases (43b); this means that a distributive interpretation is nearly impossible, despite the surface prominent position of the universal quantifier:

- (43) a. Every mechanic said [that *one of the motorbikes*, he can fix \_ in one day].  
 $\forall > \exists = 17/25$
- b. Every mechanic said [that *one of the motorbikes*, he can fix it in one day].  
 $\forall > \exists = 4/25$

The two-tail Fisher Exact p-value shows that the difference between the two conditions is statistically significant ( $p = 0.0002$ ): in the case of embedded LD, contrary to embedded TOP, there appears to be promotion to the root.

However, if we reverse the order of the quantifiers, the hypothesis of root promotion makes a clear prediction: an embedded left-dislocated universal

---

<sup>38</sup> Notice that the assertion operator cannot be identified with the Force head proposed by Rizzi (1997 and subsequent work), which is assumed to occur also in embedded clauses that lack illocutive force. In this respect, Haegeman (2007) distinguishes the Force head proper from a Sub(ordination) head.



quantifier should scope over a matrix existential quantifier, allowing for a distributive reading. But this prediction is incorrect:

(44) One compiler said [that *everyone of these entries*, we should thoroughly revise it].  
 $\forall > \exists = 0/20$

This suggests that what looked like a promotion effect in (43b) is actually a consequence of the *lack of scopal interaction* between the matrix and the embedded LD quantifier.

Consider then embedding in non-asserted complement clauses. Recall from (39) above, repeated here, that embedded TOP is possible. On the contrary, in these complement clauses embedded LD is uniformly rejected, as shown in (45):

- (39) a. I am glad that this unrewarding job, she has finally decided to give \_ up. (12/15)  
 b. He tried to conceal from his parents that the maths exam he had not passed \_ and the biology exam he had not even taken \_ . (13/15)  
 c. Mary didn't tell us that Bill she had fired \_ and John she had decided to promote \_ . (8/15)  
 d. I hope that the past he will forget \_ and the future he will face \_ bravely.
- (45) a. I am glad that this unrewarding job, she has finally decided to give it up. (0/15)  
 b. He tried to conceal from his parents that the maths exam he had not passed it. (0/15)  
 c. Mary didn't tell us that Bill she had fired him. (0/15)  
 d. I hope that the past he will forget it soon, so as to bravely face the future. (0/15)

The two tail Fisher Exact Test shows that the difference between the two conditions (embedded TOP vs. embedded LD) is highly significant: factive clauses (44a)/(45a)  $p = .000005$ ; complements to negative predicates (44b)/(45b)  $p = 0.0000008$ ; bridge complements under matrix negation (44c)/(45c)  $p = 0.001$ ;<sup>39</sup> antifactive volitional complements (44d)/(45d)  $p = 0.0000008$ .

Under the promotion hypothesis, the impossibility of embedded LD could be accounted for by stipulating that these embedded clauses block covert

---

<sup>39</sup> In this set of examples the contrast is less clear (we are still below the threshold of 0.05). One of the three examples of embedded topicalization was rejected by all five informants:

(i) I don't think that the maths exam he has passed.

promotion to the root. However, we have seen that the promotion hypothesis cannot account for (43). Therefore, we wish to explore an alternative hypothesis.

The starting point is the observation that the A-Topic seems not to belong in the sentential domain it is associated with. First, A-Topics are independent of the illocutionary force of the following sentence (46), while C-Topics are more restricted (47):

- (46) a. This book, leave it on the table! (imperative)  
b. Those petunias, did John plant them? (interrogative)  
c. Those petunias, when did John plant them?
- (47) a. \*This book, leave on the table! (imperative)  
b. \*Those petunias, did John plant? (interrogative)  
c. \*Those petunias, when did John plant?

Secondly, Chomsky (1977) already noticed that LD can violate the Complex NP Constraint. Contrast this with TOP, which is subject to whatever constraint movement transformations in general are subject to:

- (48) a. This book, I accept the argument that John should read \*(it).  
b. This book, I wonder who read \*(it).

Clearly, a left dislocated constituent is not as closely related to the remaining sentence as a topicalized constituent (cf. also Jackendoff 1972, Rodman 1974). Furthermore, in the Italian naturalistic corpus, only three instances of embedded A-Topics were found (out of a total of 76), and interestingly, they precede the complementizer:

- (49) *Mi dicono* [A-top *un gran turismo*][*che due mattine fa*  
to-me.CL tell.3PL a tourist bus that two days ago  
*han dovuto farlo rientrare dal giro di città*].  
had.3PL had make-it go back from the city tour  
'I am told that two days ago, they had a tourist bus go back from the city tour.'

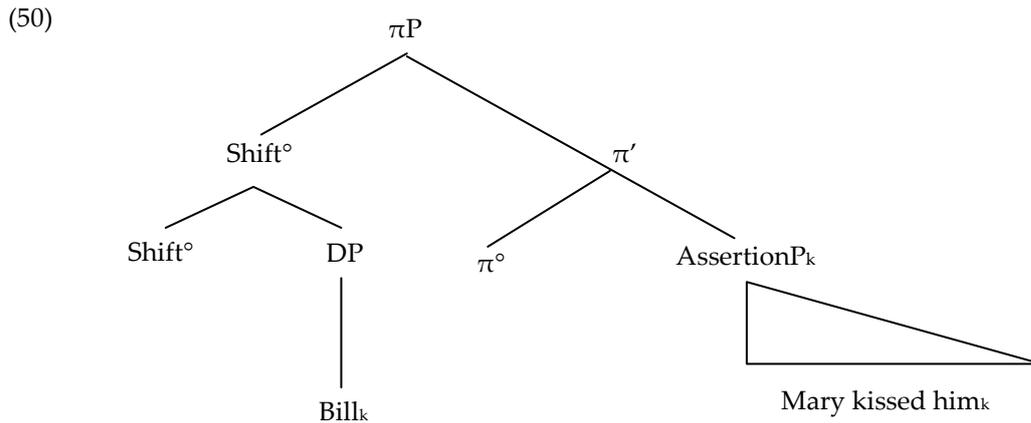
One interesting possibility is to adopt Krifka's (2001: 25–26) suggestion that the A-Topic constitutes a speech act on its own, introduced by a dedicated speech act operator and conjoined to the speech act expressed by the following sentence:

Topic selection is a speech act itself, an initiating speech act that requires a subsequent speech act like an assertion, question, command, or curse about the entity that was selected. (Krifka 2001: 25)



We identify the A-Topic as a Shift operator:<sup>40</sup> the speaker's conversational move is to signal a shift in the direction of the conversation, and hence the necessity to access a different file card in the propositional CG.

From the syntactic viewpoint, this hypothesis requires a modification of F&H's (2007) topic hierarchy (18): as independent speech acts, A-Topics cannot belong in the left periphery of the clause. We tentatively propose the following syntactic implementation of Krifka's suggestion:



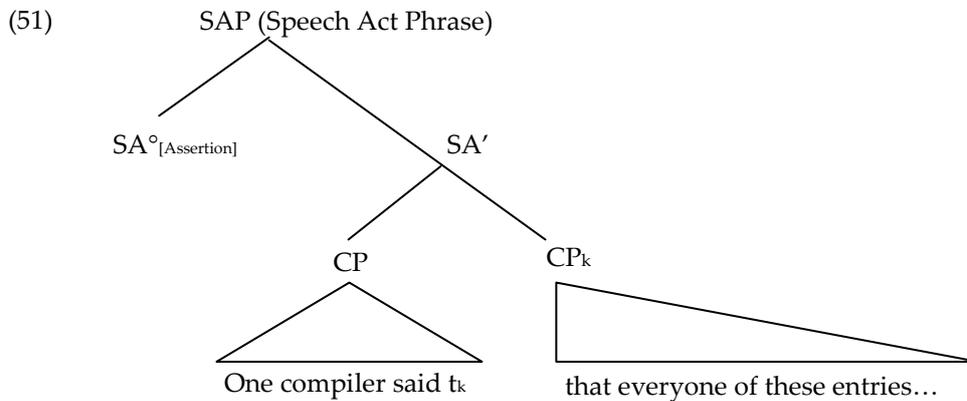
The  $\pi$  head is reminiscent of Gärtner's (2002) paratactic head, but it is actually an implementation of speech act conjunction, equivalent to the consecutive performance of the two speech acts (cf. Krifka 2001: (44)).

The analysis sketched in (50) accounts for the properties observed above. The A-Topic can precede a sentence with any type of illocutive force, and is syntactically external to it. (50) also accounts for the IRR: the A-Topic is merged in the structure as an independent speech act, and it can only be conjoined to a root (-like) clause implementing another speech act, affecting CG management; thus, it is a root phenomenon by definition, unlike C-Topics (§ 4) and G-Topics (§ 3.1.3). This accounts for the observed marginality of embedded LD in (45). LD can be felicitously embedded only in complement clauses that bear assertive force, in the sense of Hooper & Thomson (1973) (see § 6 below for more discussion).

The coordination analysis does not in itself explain the lack of scopal interaction between an embedded LD quantifier and a matrix quantifier (42)–

<sup>40</sup> Recall from § 3.3.1 that the A-Topic is not merely an aboutness topic, but an aboutness *shift*.

(43). Alternatively, if we retain the earlier analysis of the A-Topic as part of the C-domain of the clause (cf. (18)), we may derive the lack of scopal interaction by invoking Meinunger's (2004: 476) proposal that root-like embedded clauses move and adjoin to a position which is in the immediate scope of the main assertion operator, so as to be turned into speaker assertions:



The lack of scopal interaction would then derive from the fact that the two quantifiers are contained in two parallel branches of the structure.

To summarize, the view of the A-Topic as a conjoined speech act accounts very well for its intrinsically root nature and its syntactic independence from the following clause, though it cannot easily accommodate embedded A-Topics. As we have seen, the latter are only allowed in subordinate root-like clauses. Before closing our discussion, we take a closer look at these.

## 6. «Almost Asserted» Clauses

Up to now we have assumed, following Hooper & Thompson's insight, that subordinate root-like clauses bear assertive force; but as various authors stress, this is not quite realistic: in many cases the root-like clause seems not to be asserted as such by the speaker.<sup>41</sup> One relevant example is (52):

- (52) A: *Was ist mi Hans los? E sieht so zufrieden aus...*  
 What is with Hans PRT? He looks so content PRT  
 'What's up with Hans? He seems to happy...'

<sup>41</sup> See in particular Wiklund et al. (2009), Bentzen (2009).



B: *Maria meint, [er habe /hätte im Lotto gewonnen].*  
 Maria thinks he have.KON1.3SG /has.KON2.3SG in.the Lottery won  
 ‘Mary thinks that he won the lottery.’

(Meinunger 2004: 47)

Since we have derived the root restriction from the necessity of illocutive force (i.e., impact on CG management), such root-like clauses constitute a nontrivial problem for our approach. At present we can only offer the sketch of a solution.

In order to tackle this problem, it is useful to think a little bit about the nature of belief reports in general: what is the purpose of making a belief report? One obvious purpose is to causally explain (or to predict) the behaviour of the attitude holder, as in the following case:

(53) A: Why has Mary been spending such an enormous amount of money lately?

B: She believes that her husband won the lottery.

Intuitively, however, this is *not* the purpose of speaker B’s assertion in (52). Here we are dealing with a special kind of attitude report: Maria’s attitudinal state is not described in order to explain or predict her behaviour; rather, it is used as a source of information that may potentially update the CG (and answer speaker A’s question). In other words, Maria’s belief state is used by the speaker as circumstantial evidence, as it were, that may support the truth of the proposition expressed by the complement clause (the proposition that Hans won the lottery).<sup>42</sup>

We surmise that this kind of attitude report conveys a marked conversational move. The speaker doesn’t mean to assert the proposition expressed by the complement clause; rather, he invites the other participants to look for further evidence that may decide on its inclusion in the CG. In this case, the update of the CG will be brought about by a collective negotiation involving all the participants, and the speaker will not be responsible as the source of

---

<sup>42</sup> This seems plausible given that, as Stalnaker (2002) stresses, his view of conversation is actually a model of belief transfer. The unmarked source for an assertion is the speaker’s own belief state. The choice of mood on the embedded verb form in (52) seems to indicate to what extent the speaker himself is confident about the truth of this proposition, or agrees with Maria’s belief state. We leave this aside, merely noting the connection with the general problem of evidentiality.

information.<sup>43</sup> However complex this kind of move may be, it seems intuitively clear that its propositional content is precisely the proposition expressed by the complement clause.<sup>44</sup> It is the latter's update potential that is at stake: whence its root-like character.

This idea is very close to the notion of «quasi-subordinate» clause proposed in Dayal & Grimshaw (2009). In their terms, «a quasi-subordinate [QS] clause is a subordinate clause that participates dynamically in discourse in the same way as a main clause» [p. 2]. However, QS clauses participate *indirectly* since their integration in the CG depends «on how discourse participants related to the root subject» [p. 3]. Therefore, the authors claim:

We are not proposing that the speaker asserts or questions the content of the subordinate clause. Rather the speaker invites the hearer to treat the content of the subordinate clause as discourse active. (Dayal & Grimshaw 2009: 4)

Dayal and Grimshaw argue that the discourse dynamic status of the subordinate clause accounts for main clause syntax (such as subject-auxiliary inversion in English embedded interrogatives or *that*-deletion in embedded declaratives<sup>45</sup>). Their proposal converges with ours in granting a crucial role to the «root» discourse context.<sup>46</sup>

---

<sup>43</sup> Notice that although it is used to answer a question, this marked move is not a straightforward «payoff» move (in the sense of Roberts 1996; cf. Krifka's (2001: 13) responding speech act), but it calls for a rejoinder, and hence also constitutes a «setup» (initiating) move. If no rejoinder occurs after B's utterance in (52), we get the feeling of an abrupt interruption of the conversation, as with a question left unanswered.

<sup>44</sup> This corresponds to Meinunger's (2004: 481) insight that the proposition expressed by the embedded V2 clause is «new information».

<sup>45</sup> Dayal and Grimshaw's analysis of *that*-deletion leads us to expect that «zero» complement clauses should allow for topics (left dislocation and *a fortiori* topicalization). However, it is often claimed in the literature that these clauses disallow fronting structures like negative preposing and topicalization. We leave the issue for future research.

<sup>46</sup> However, it is possible that other «root phenomena» are not exclusively linked to the discourse context, but can also appear in clauses that are interpreted with respect to the shifted context introduced by some attitude verbs, along the lines of Truckenbrodt (2009) (cf § 4.2). Again, we leave this question for future research.



## 7. Summary and Concluding Remarks

To summarize, in this paper we have discussed an interface conception of the root restriction:

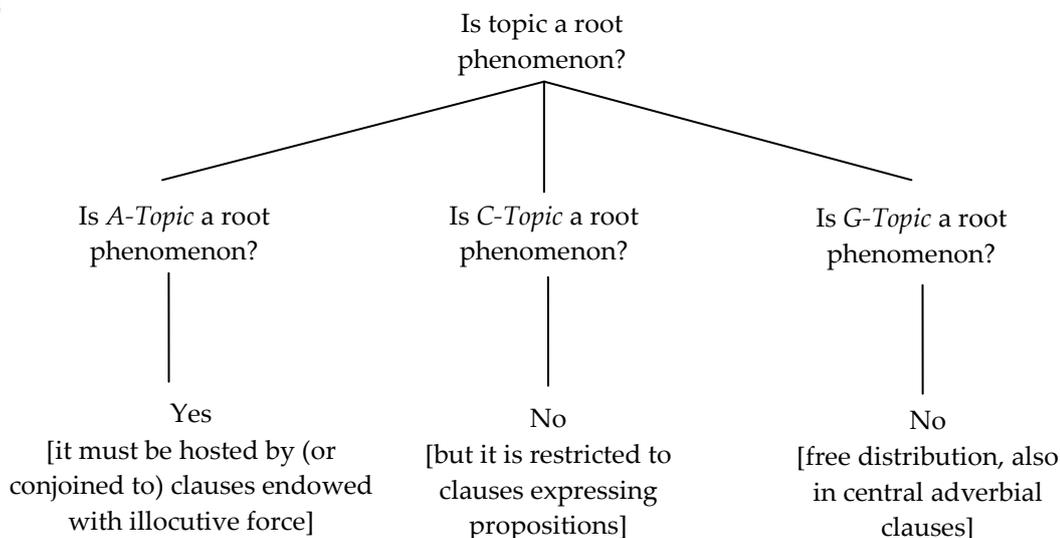
(54) *Interface Root Restriction (final version)*

Information structure phenomena that affect the conversational dynamics (CG management) must occur in clauses endowed with illocutive force that implement a conversational move, i.e. a nonreported speech act.

Under the standard assumption that nonreported speech acts cannot be syntactically embedded, such syntactic positions are always roots (or adjoined to the root, as in (51)).<sup>47</sup> Notice that the relevance of assertive force has been recast in terms of update potential, i.e., impact on the conversational dynamics, and more importantly, it has been directly related to the semantics of various types of topics.

In this way, the title question turned out to be a super-question. Having extensively explored a typology of topics along the lines of F&H (2007), we divided it into three subquestions:

(55)



From the viewpoint of syntactic structure, it is interesting to notice that «root-like behaviour» is observed in the highest and most peripheral (or even clause-external) position, that of A-Topics. Our evidence thus calls into question the widespread assumption that the topic projection(s) are recursive and

<sup>47</sup> On syntactically embedded *reported* speech acts, cf. Krifka (2001).



undifferentiated, and that specific topic interpretations are freely assigned on a contextual basis. On the contrary, syntactic structures appear to encode the relevant distinctions in a well-defined layering, in compliance with interface requirements.

Of course, our IRR (54) has been tested against a very limited empirical domain; as it stands it cannot yet be extended to a more general account of root phenomena. Anyway, we feel that our attempt at taking into account both the PF interface (prosody) and the semantic-pragmatic interface, far from trivializing the role of syntax, has allowed us to integrate and refine insights from many different sources in a way that is, we hope, at least promising.

### REFERENCES

- Bayer, Josef. 2001. Asymmetry in emphatic topicalization. In Caroline Féry & Wolfgang Sternefeld (eds.), *Audiatur Vox Sapientiae. Studia Grammatica* 52, 15–47.
- Benincà, Paola. 2001. The Position of Topic and Focus in the left periphery. In Guglielmo Cinque & Giampaolo Salvi (eds.), *Current Studies in Italian Syntax. Essays offered to Lorenzo Renzi*, 39–64. Amsterdam/ London: Elsevier.
- Bentzen, Kristine. 2009. Embedded root phenomena, assertion, presupposition, and main point of utterance. Paper presented at the Workshop on Root Phenomena, Berlin, ZAS, September 2009.
- Bianchi, Valentina & Mara Frascarelli. 2009. The dark side of the Phase: cyclic access is not “blind”. Paper presented at GLOW XXXII, University of Nantes.
- Bonvino, Elisabetta. 2006. *Le sujet postverbal en italien parlé: syntaxe, zones et intonation*. Bibliothèque des Faits de Langue. Paris : Ophrys.
- Büring, Daniel. 1997. *The meaning of Topic and Focus – the 59<sup>th</sup> Street Bridge Accent*. London: Routledge.
- Büring, Daniel. 1999. Topic. In Peter Bosch & Rob van der Sandt (eds.), *Focus. Linguistic Cognitive and Computational Perspectives*, 142–165. Cambridge: Cambridge University Press.
- Büring, Daniel. 2003. On D-trees, beans, and B-Accents, *Linguistics and Philosophy* 26, 511–545.
- Chomsky, Noam. 1971. Deep Structure, Surface Structure and semantic interpretation. In Noam Chomsky (ed.), *Studies on Semantics in Generative Grammar*, 62–119. The Hague: Mouton.



- Chomsky, Noam. 1977. On wh-movement. In Peter W. Culicover, Thomas Wasow & Adrian Akmajian (eds.), *Formal Syntax*, 71–132. New York: Academic Press.
- Cinque, Guglielmo. 1990. *Types of A'-Dependencies*. Cambridge, MA: MIT Press.
- Culicover, Peter. 1996. On distinguishing A'-movements, *Linguistic Inquiry* 27, 445–463.
- Dayal, Veneeta & Jane Grimshaw. 2009. Subordination at the interface: the Quasi-Subordination Hypothesis. Ms., Rutgers University.
- De Cat, Cécile. 2002. *French Dislocation*. Ph.D. Dissertation, University of York.
- D'Imperio, Maria Paola. 2002. Italian intonation: An overview and some questions. *Probus* 14, 37–69.
- Emonds, Joseph. 1970. *Root and Structure-Preserving Transformations*. Ph.D. Dissertation, MIT.
- Emonds, Joseph. 1976. *A Transformational Approach to English Syntax: Root, Structure-preserving, and Local Transformations*. New York: Academic Press.
- Emonds, Joseph. 2004. Unspecified categories as the key to root constructions. In David Adger, Cécile de Cat & Georges Tsoulas (eds.), *Peripheries: Syntactic Edges and their Effects*, 75–120. Dordrecht: Kluwer Academic Publishers.
- Féry, Caroline. 1992. Focus, Topic and intonation in German. *Arbeitspapiere des Sonder-forschungsbereichs* 340, 20.
- Frascarelli, Mara. 2000. *The Syntax-Phonology Interface in Focus and Topic Constructions in Italian*. Dordrecht: Kluwer Academic Publishers.
- Frascarelli, Mara. 2004. Dislocation, clitic resumption and minimality: A comparative analysis of left and right Topic constructions in Italian. In Reineke Bok-Bennema, Bart Hollebrandse, Brigitte Kampers-Manhe & Petra Sleeman (eds.), *Romance Languages and Linguistic Theory 2002*, 99–118. Amsterdam/Philadelphia: John Benjamins.
- Frascarelli, Mara. 2007. Subjects, topics and the interpretation of referential pro, *Natural Language and Linguistic Theory* 25, 691–734.
- Frascarelli, Mara. In press. Intonation, Information Structure and the Derivation of Inverse VO Languages: An Interface Analysis of Tagalog and Malagasy. In Raphael Mercado, Eric Potsdam & Lisa Travis (eds.), *Austronesian and Theoretical Linguistics*. Amsterdam/Philadelphia: John Benjamins.
- Frascarelli, Mara & Roland Hinterhölzl. 2007. Types of Topics in German and Italian. In Susanne Winkler & Kerstin Schwabe (eds.), *On Information Structure, Meaning and Form*, 87–116. Amsterdam/ Philadelphia: John Benjamins.



- Frascarelli, Mara & Annarita Puglielli. 2009. Position, function and interpretation of Topics in Somali. In Lunella Mereu (ed.), *Information Structure and Its Interfaces*, 325–348. Berlin: Mouton de Gruyter.
- Gärtner, Hans-Martin. 2001. Are there V2 relative clauses in German?, *Journal of Comparative Germanic Linguistics* 3, 97–141.
- Gärtner, Hans-Martin. 2002. On the force of V-2 declaratives, *Theoretical Linguistics* 28, 33–42.
- Givón, Talmy. 1983. Topic continuity in discourse: An introduction. In Talmy Givón (ed.), *Topic Continuity in Discourse: A Quantitative Cross-Language Study*, 5–41. Amsterdam/ Philadelphia: John Benjamins.
- Gregory, Michelle & Laura Michaelis. 2001. Topicalization and Left Dislocation: A functional opposition revisited, *Journal of Pragmatics* 33, 1665–1706.
- Haegeman, Liliane. 2002. Anchoring to Speaker, adverbial clauses and the structure of CP. In Simon Mauck & Jenny Mittelstaedt (eds.), *Georgetown University Working Papers in Theoretical Linguistics* 2, 117–180.
- Haegeman, Liliane. 2004. Topicalization, CLLD and the left periphery. In Claudia Maienborn, Werner Frey & Benjamin Shaer (eds.), *ZAS Papers in Linguistics 35: Proceedings of the Dislocated Elements Workshop*, 157–192.
- Haegeman, Liliane. 2007. The syntax of adverbial clauses. Ms., University Ch. De Gaulle, Lille.
- Haegeman, Liliane. 2009. Main clause phenomena and intervention. Paper presented at the Workshop on Root Phenomena, Berlin, ZAS, September 2009.
- Heim, Irene. 1982. *The Semantics of Definites and Indefinites Noun Phrases*. Ph.D. Dissertation, University of Massachusetts, Amherst.
- Heycock, Caroline. 2006. Embedded Root Phenomena. In Martin Everaert & Henk van Riemsdijk (eds.), *The Blackwell Companion to Syntax, Vol. II*, 174–209. Oxford: Basic Blackwell.
- Hooper, Joan & Sandra Thompson. 1973. On the applicability of root transformations, *Linguistic Inquiry* 4, 465–497.
- Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge: Cambridge University Press.
- Krifka, Manfred. 1992. A compositional semantics for multiple Focus constructions. In Joachim Jacobs (ed.), *Informationsstruktur und Grammatik*, 17–53. Opladen: Westdeutscher Verlag.
- Krifka, Manfred. 2001. Quantifying into question acts, *Natural Language Semantics* 9, 1–40.
- Krifka, Manfred. 2007. Basic notions of information structure. In Caroline Féry, Gisbert Fanselow & Manfred Krifka (eds.), *Interdisciplinary Studies on*



- Information Structure. Vol. 6.* ISIS, Working Papers of the SFB 632, University of Potsdam.
- Kuno, Susumo. 1976. Subject, Theme, and the Speaker's Empathy. A reexamination of relativization phenomena. In Li, Charles N. (ed.), *Subject and Topic*, 417–444. New York: Academic Press.
- Maki, Hideki, Lizanne Kaiser & Masao Ochi (1999). Embedded topicalization in English and Japanese, *Lingua* 109, 1–14.
- Meinunger, André. 2004. Verb position, verbal mood and the anchoring (potential) of sentences. In Horst Lohnstein & Susanne Trissler (eds.), *The Syntax and Semantics of the Left Periphery*, 313–341. Berlin: Mouton de Gruyter.
- Neeleman, Ad & Tanya Reinhart. 1998. Scrambling at the PF interface. In Wilhelm Geuder & Miriam Butts (eds.), *The Projections of Arguments: Lexical and Compositional Factors*. Stanford: CSLI.
- Pierrehumbert, Janet. 1980. *The Phonology and Phonetics of English Intonation*. Ph.D. Dissertation, MIT.
- Pierrehumbert, Janet & Julia Hirschberg. 1990. The meaning of intonational contours in the interpretation of discourse. In Philip R. Cohen, Jerry Morgan & Martha Pollack (eds.), *Intentions in Communication*, 271–311. Cambridge, MA: MIT Press.
- Portner, Paul & Katsuhiko Yabushita. 1998. The semantics and pragmatics of Topic phrases, *Linguistics and Philosophy* 21, 117–157.
- Prince, Ellen. 1998. On the limits of syntax, with reference to Left-Dislocation and Topicalization. In Peter Culicover & Louise McNally (eds.), *Syntax and Semantics 29: The Limits of Syntax*, 281–302. New York: Academic Press.
- Reinhart, Tanya. 1976. *The Syntactic Domain of Anaphora*. Ph.D. Dissertation, MIT.
- Reinhart, Tanya. 1981. Pragmatics and linguistics: an analysis of sentence Topics, *Philosophica* 27, 53–94.
- Reis, Marga. 1997. Zum syntaktisches Status unselbständiger Verbzweit Sätze. In C. Dürscheid (ed.), *Sprache im Fokus*, 121–144. Tübingen: Niemeyer.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed.), *Elements of grammar. Handbook in Generative Syntax*, 281–337. Dordrecht: Kluwer.
- Rizzi, Luigi. 2004. Locality and Left Periphery. In Adriana Belletti (ed.), *The Cartography of Syntactic Structures. Vol. 3: Structures and Beyond*, 223–251. Oxford/New York: Oxford University Press.
- Roberts, Craige. 1996. Information structure: Towards an integrated formal theory of pragmatics. In Jae Hak Yoon & Andreas Kathol (eds.), *OSUWPL*



*Volume 49: Papers in Semantics.* The Ohio State University Department of Linguistics.

- Roberts, Craige. 2004. Context in dynamic interpretation. In Laurence R. Horn and Gregory L. Ward (eds.), *Handbook of Pragmatics*, 197–220. London: Basil Blackwell.
- Rodman, Robert. 1974. On Left Dislocation. *Papers in Linguistics* 7, 437–466.
- Schwarzschild, Roger. 1999. GIVENnes, AvoidF and other constraints on the placement of accent, *Natural Language Semantics* 7, 141–177.
- Schwarzschild, Roger. 2002. Singleton indefinites, *Journal of Semantics* 19, 289–314.
- Stalnaker, Robert. 1978. Assertion. In Peter Cole (ed.), *Syntax and Semantics 9: Pragmatics*, 315–332. New York: Academic Press.
- Stalnaker, Robert. 2002. Common Ground, *Linguistics and Philosophy* 25, 701–721.
- von Stechow, Arnim. 1990. Focusing and backgrounding operators. In Werner Abraham (ed.), *Discourse Particles*, 37–84. Amsterdam/Philadelphia: John Benjamins.
- Truckenbrodt, Hubert. 2009. Root phenomena and verbal mood at the syntax-semantics interface. Paper presented at the Workshop on Root Phenomena, Berlin, ZAS, September 2009.
- Vikner, Sten. 1994. *Verb Movement and Expletive Subjects in the Germanic Languages*. Oxford/New York: Oxford University Press.
- Wiklund, Anna Lena, Kristine Bentzen, Gunnar Hrafn Hrafnbjargarson & Þorbjörg Hróarsdóttir. 2009. On the distribution and illocution of V2 in Scandinavian that-clauses. *Lingua* 119, 1914–1938.

**Valentina Bianchi**

bianchi10@unisi.it

Università di Siena

**Mara Frascarelli**

frascare@uniroma3.it

Università Roma Tre