

# Superlative adjectives and the licensing of non-modal infinitival subject relatives\*

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**Abstract:** The present contribution proposes an analysis of adjectives that license non-modal infinitival relative clauses. I propose to reduce the uniqueness constraint on the noun phrase modified by non-modal infinitival relatives to licensing by a contrastive identificational focus. The contrastive component ensures that the licensing adjectives exclude the existence of a still higher or lower degree: uniqueness is due to selection of the endpoint of a scale. I further propose that superlatives and comparable modifiers are polysemous. In their positive use they assert a positive proposition and entail a negative one, in which case they function as identificational foci; in their negative use, on the other hand, they assert a negative proposition and entail a positive one, in which case they function as contrastive foci. The negative use of superlatives and equivalent modifiers licenses non-modal infinitival relatives, subjunctive relative clauses (e.g. in Romance) and negative polarity items like *ever*. The positive use of superlatives and comparable modifiers does not license non-modal infinitival relatives, subjunctive relative clauses, and negative polarity items, but only indicative relative clauses.

## 0. Introduction

This paper is concerned with the identification of the properties of a small class of adjectives, which allow them to license infinitival subject relative clauses.<sup>1</sup> With subject relative clauses, the head noun is interpreted as the subject of the relative clause. Subject relatives occur with active verbs, as in (1) and (2), and with passive verbs, as in (3) and (4):

- (1) He was the youngest child to have had that operation at that time.
- (2) John is the only man to really know her.
- (3) The first person to have been killed by an electric chair is William Lelmer.
- (4) The last person to have been seen with her was Robert Wood.

The subject relatives that are discussed in this paper depend on a head noun modified by a superlative or a comparable modifier, such as *only* or the ordinals *first* or *last*. They are called non-modal infinitival relative clauses in the literature and are distinguished from modal infinitival subject relative clauses as in (5) or infinitival object relative clauses as in (6), which are always modal and which are not licensed by a superlative adjective modifying the head noun (Kjellmer 1975, Geisler 1995, Bhatt 1999, 2006):<sup>2</sup>

- (5) The man to fix the sink is here. (= the man whose purpose is to fix the sink)

- (6) Jane found a book to draw cartoons in. (= Jane found a book one could/should draw cartoons in)

The goal of the paper is to account for the fact that superlative adjectives and equivalent modifiers license non-modal infinitival relative clauses. According to Kjellmer (1975:325), “it seems that it is the selective function of superlatives that is operative here”: In (1-4), *the youngest child* selects one out of several children, *the only man*, selects one out of many men, *the first person* or *the last person* selects one out of many persons.<sup>3</sup> Pesetsky & Torrego (2001) follow Kjellmer (1975) in assuming that the head of non-modal relatives asserts uniqueness, but state that it is puzzling why there is such a uniqueness constraint.

Kjellmer also notes that superlatives mark the end of a scale.<sup>4</sup> He furthermore points out that the adverb *ever* can be used with relative infinitives. Kjellmer states that *ever* is normally non-assertive, occurring in negative and/or interrogative clauses. In Kjellmer’s view, “it is therefore natural that *ever* should also be found in relative clauses, even positive and declarative ones, with superlative antecedents”. Kjellmer observes that (7) means ‘I haven’t ever tasted a better wine than this’:

- (7) This is the best wine I’ve ever tasted.

In this paper, I will reinterpret the uniqueness constraint on the noun phrase modified by non-modal infinitival relatives, i.e. the licensing of non-modal infinitival relatives by a head with a selective function, as licensing by an identificational focus. Secondly, I will claim that the identificational focus has to be a contrastive identificational focus, which is a reinterpretation of Kjellmer’s observation that superlatives mark the end of a scale, which implies that the existence of a still higher or lower degree is denied. I will argue furthermore that the feature [+contrastive] makes it possible to relate the non-modal infinitival relatives to the modal ones in some way. Data will come from English, French and Italian.

The paper is organized as follows. In §1, I discuss several constructions in which superlatives and equivalent modifiers such as ‘only’ and the superlative ordinals ‘first’ and ‘last’ have been related to focus. In §2, I identify constituents containing superlatives and their equivalent modifiers as identificational foci (Kiss 1998). In §3, I claim that non-modal infinitival relatives are licensed by a special type of identificational focus, viz. a contrastive identificational focus. In §4, I explain how the feature [+contrastive] permits to relate non-modal infinitival relatives to the modal ones. In §5, I argue that the focalized constituent licensing non-modal infinitival relatives moves to the specifier of FocusP (Rizzi 1997) either in syntax or at LF. Finally, in §6, the results of this paper are summarized.

## 1. Superlatives and focus

It was already observed by Ross (1964) that superlatives are focus-sensitive. They associate with a focused expression in the sentence. The focused expression is compared to a set of alternatives. However, the superlative DP itself can also be focused, which means that the head noun is compared to a set of alternatives.

### 1.1 Association with focus

Ross (1964), Jackendoff (1972), Rooth (1985), Szabolcsi (1986), Heim (1999), Bhatt (1999, 2006), Farkas & Kiss (2000), Sharvit & Stateva (2002), and others show that superlatives,

*only*, and ordinals can associate with a focused element in the sentence, which invokes a set of contextually relevant alternatives (Rooth 1985).

- (8) Joan<sub>F</sub> gave Caterina the most expensive present.  
≈ Some people gave Caterina presents. Of all these presents, the present that was given by Joan was the most expensive.
- (9) Joan gave Caterina<sub>F</sub> the most expensive present.  
≈ Joan gave some people presents. Of all those presents, the present Joan gave to Caterina was the most expensive.

Szabolcsi (1986) proposes that in order to associate with focus, the degree operator or *only* must take scope over the focused element at LF (but see Farkas & Kiss 2000 and Sharvit & Stateva 2002 for a different view). In (8), it adjoins to the clausal constituent and in (9) to VP.

The readings in (8) and (9) are relative or comparative readings. *Joan* in (8) and *Caterina* in (9) are compared to other people. Bhatt observes that an ‘absolute’ reading is also possible. As the paraphrase of (10) shows, in the absolute reading of (10) telescopes are compared:

- (10) Joan gave Mary the most expensive telescope.  
≈ The telescope given by Joan to Mary is the most expensive out of the telescopes Joan owns / Mary owns / the telescopes in the world.

Bhatt (1999, 2006) shows that the comparative reading is not available when the superlative, ordinal or *only* is followed by a non-modally interpreted infinitival relative clause. In that case the sentence has an absolute reading. In (11), telescopes that have been built in the 9<sup>th</sup> century are compared:

- (11) Joan gave Mary the most expensive telescope to be built in the 9<sup>th</sup> century.  
≈ The telescope given by Joan to Mary is the most expensive out of the telescopes that have been built in the 9<sup>th</sup> century.

According to Bhatt, the loss of the comparative reading, i.e. the association with focus reading, with non-modal infinitival relative clauses means that the superlative/ordinal/*only* is adjoined at LF to the infinitival clause in order to license it and cannot adjoin to higher constituents, such as the matrix clause or VP, in order to focalise elements by taking scope over them.

I take the focalized constituents in (8)-(11) to be identificational foci (Kiss 1998), a notion that will be defined in section 2. Superlatives/ordinals/*only* assign an identificational focus feature to an XP, creating a set of alternatives from which they serve to pick out an element. In (8) and (9), the identificational focus is a constituent outside the superlative DP. In (10) there is a set of telescopes (owned by Joan or Mary or consisting of all telescopes in the world) and in (11) there is a set of telescopes that have been built in the 9<sup>th</sup> century, in which the superlative serves to pick out an element. In the next two sections I discuss two other cases in which a superlative or a comparable modifier serves to pick out an element from a set of alternatives.

## 1.2 Nominal supersets and focalization

Barbaud (1976) claims that sentence-initial *de* ‘of’ + DP in French is licensed by a focalized element. The focalized elements are the following:

A SUPERLATIVE DP

- (12) Des deux bouquins, Ludovic a acheté le moins cher.  
of-the two books Ludovic has bought the less expensive  
'Of the two books, Ludovic has bought the cheapest one.'

A RESTRICTIVE CONSTRUCTION INVOLVING *NE ... QUE* 'ONLY'

- (13) De ces trois filles, Luc ne sort qu' avec Michèle.  
of these three girls Luc RESTR goes-out RESTR with Michèle  
'Of these three girls, Luc only dates Michèle.'

A CLEFTED CONSTITUENT

- (14) Des trois membres du commando, c'est le Japonais qui fut capturé.  
of-the three members of-the commando it is the Japanese who was captured  
'Of the three members of the commando, it was the Japanese man who was captured.'

A DEMONSTRATIVE OR A NOUN MODIFIED BY A RELATIVE CLAUSE

- (15) De toutes ces hypothèses, il faut choisir celle qui rend compte des faits.  
of all these hypotheses one must choose the-one that accounts of-the facts  
'Of all these hypotheses, you should choose the one that accounts for the facts.'
- (16) De tous ceux qu' on voulait me vendre, j'ai acheté le livre  
of all those that one wanted me sell I have bought the book  
que tu m' as conseillé.  
that you me have advised  
'Of all those that they wanted to sell me, I have bought the book that you advised me to buy.'

After the demonstrative pronoun, the relative clause can also be replaced by the deictic markers *-ci* 'here' or *-là* 'there':

- (17) De toutes ces hypothèses, il faut choisir plutôt celle-ci.  
of all these hypotheses one must choose rather this-here  
'Of all these hypotheses, you should rather choose this one.'

A 'NOMINALIZED' ADJECTIVE<sup>5</sup>

- (18) De ces deux robes, Marie préfère la turquoise.  
of these two dresses Marie prefers the turquoise.  
'Of these two dresses, Marie prefers the turquoise one.'

Barbaud shows that if the included element is not focalized, sentence-initial *de* + DP cannot be used:

- (19) \*De ces trois filles, Luc sort avec Michèle.  
of these three girls, Luc goes-out with Michèle
- (20) \*Des trois membres du commando, le Japonais fut capturé.  
of-the three members of-the commando, the Japanese was captured

Barbaud argues that *de* + N is base-generated in sentence-initial position in these sentences and is licensed by a focalized constituent. He does not specify, however, what he means by focalization. He notes that a constituent can be marked as being focalized through

the application of a special device, such as clefting, through the deletion of a noun (with superlatives, ‘nominalized’ adjectives and *lequel* ‘which one’) or through the presence of a relative clause, which identifies the head noun it modifies as a subset of the set formed by the sentence-initial nominal superset. I take the focalized constituent to be an identificational focus, a notion to be made precise in section 2. The presence of a superlative adjective, an ordinal or *only* as the modifier of a DP leads to an identificational focus interpretation of the DP.

### 1.3 Adjectival supersets and focalization

Azoulay-Vicente (1985) claims that *de* ‘of’ + adjective in French is also licensed by the focalization of a constituent. She shows that the focalized constituents licensing *de* + DP also license *de* + A:<sup>6</sup>

A RESTRICTIVE CONSTRUCTION INVOLVING *NE ... QUE* ‘ONLY’<sup>7</sup>

- (21) Je n’ ai que deux pizzas de chaudes.  
 I RESTR have RESTR two pizzas of hot  
 ‘I only have two hot pizzas.’

A CLEFTED CONSTITUENT

- (22) C’est deux revues que j’ai reçues d’intéressantes.  
 it is two journals that I have received of interesting  
 ‘It was two interesting journals that I received.’

A DEMONSTRATIVE PRONOUN

- (23) Je connais celui-ci d’intelligent  
 I know this-here of intelligent  
 ‘I know this intelligent one.’

A ‘NOMINALIZED’ ADJECTIVE

- (24) Le seul à être venu, de compétent, n’ est pas resté.  
 the only to are come of competent NEG is NEG stayed  
 ‘The only competent one to have come has not stayed.’

If a constituent is not focalized, *de* + A cannot be used:

- (25) \*J’ai deux pizzas de chaudes  
 I have two pizzas of hot

In Azoulay-Vicente’s analysis, *de* + A is the domain of a variable (see also Hulk & Verheugd 1994 for a similar analysis). The variable replaces the focalized constituent (Chomsky 1971, Jackendoff 1972). Azoulay-Vicente illustrates this with (26), which presupposes (27):

- (26) MARY baked the cake.  
 (27) Someone baked the cake.

*Someone* represents a variable and *Mary* has been chosen in a class of elements able to substitute for *someone*. Following Chomsky (1976), Azoulay-Vicente adopts the logical form in (29) for (28):



Since *only*-phrases in Hungarian must land in Spec,FocusP, Kiss assumes that *only*-phrases also function as identificational foci. Kiss supposes that “*only* lends them an identificational focus feature”. She assumes that, in English, *only*-phrases can move to Spec,FocusP at LF, after spell-out. She suggests “that the satisfaction of the focus criterion can be put off until LF (after spell-out) if the identificational focus feature of the given constituent is visible/audible in PF anyway”.<sup>9</sup>

Kiss argues that, semantically, *only*-phrases differ from bare identificational foci. She assumes that the identificational focus must quantify over an unordered set of distinct individuals, referring to Szabolcsi (1983) and Szabolcsi & Zwarts (1993), who argue that a Boolean operation such as complement formation, which is a crucial element of the exhaustive identification operation, can take place only in the case of unordered sets. Kiss argues that in the case of *only*-phrases the identificational focus quantifies over a scale, which is a partially ordered set (König 1991). *Only* introduces an evaluative presupposition into the meaning of the sentence. It expresses that the elements of the set on which exhaustive identification is performed are ordered along a scale, and the element identified as that for which the predicate exclusively holds represents a low value on this scale. In (33), the set of persons whom Mary could, in principle, love are ordered along a scale:

(33) Mary loves only John.

The total set of people whom Mary could love represents the highest value, and single individuals represent the lowest value. The identification of the lowest value of the scale (*John*) goes together with the exclusion of the higher values, the sets of two or more members.

Kiss observes that exhaustive identification among partially ordered elements is not specific to *only*-phrases. It applies to all scalar domains, such as the identificational focus in the Hungarian example (34), which contains a non-presupposed numeral and a presupposed NP:

(34) János **két** könyvet választott ki.  
 John **two** book.ACC choose PERF.  
 ‘It was **two** books that John chose.’

Here too, the identificational focus quantifies over sets of books of different cardinality.

In the previous section, I discussed three constructions containing focalized constituents, which I take to be identificational foci. In all three cases, the focalized constituent represents a subset of a set of contextually or situationally given elements for which the predicate phrase can potentially hold. In the comparative reading of the association with focus construction discussed in §1.1, there is a set of people giving presents or receiving presents, out of which a subset is formed, viz. the focalized constituent. In the *de* + DP and *de* + A constructions discussed in sections 1.2 and 1.3, the focalized constituent is included in, i.e. is a subset of, the inclusive *de* + DP or *de* + A set. In all three constructions, explicit focalizing devices are used: superlatives, ordinals, *only* or a comparable construction, the cleft construction, noun ellipsis, a relative clause or an comparable construction. They serve to create a set of alternatives on which they perform exhaustive identification.

Kiss argues that there is variation in the feature content of identificational foci: the identificational focus can be specified for the positive value of the feature [contrastive]. Whereas the identificational foci in the three constructions discussed in the previous section are not necessarily positively specified for the feature [contrastive], I will claim in the next

section that non-modal infinitival relatives are licensed by a [+contrastive] identificational focus.

### 3. Contrastive identificational focus

In the previous section I showed that, according to Kiss (1998), an identificational focus involves two operations, viz. the identification of a subset of a relevant set, and the exclusion of the complementary subset. The latter operation ensures that identificational focus expresses exhaustive identification. In Kiss' view, exhaustive identification can be expressed by a constituent preposed into Spec,FocusP, as in the Hungarian examples (30) and (34) or the English examples (31-32) of a cleft, or by an explicit focalizer such as *only* in (33). Kiss argues that the identificational focus may involve the feature [+contrastive] or not. Kiss shows that the notion of contrast is a linguistically relevant phenomenon (see also Molnár 2001). In many languages contrastive foci are moved into a sentence-initial position in syntax. In Hungarian, however, an identificational focus does not need to involve the feature [+contrastive] to be moved to a sentence-initial position.

Kiss considers an identificational focus [+contrastive] if it operates on a closed set of entities whose members are known to the participants of the discourse (cf. also Szabolcsi & Zwarts 1993). In this case, the identification of a subset of the given set also identifies the contrasting complementary subset, as in (35):

- (35) a. I heard you invited John and Mary.  
b. I only invited John.

In Kiss' view, a non-contrastive identificational focus operates on an open set of entities. This type of focusing is [–contrastive] because the identification of the subset for which the predicate holds does not result in the delineation of a complementary subset with clearly identifiable elements, as in (36):

- (36) a. Who wrote War and Peace?  
b. It was Tolstoy who wrote War and Peace.

In the previous section I associated an identificational focus interpretation of the DP with the presence of a superlative adjective, an ordinal or 'only' as the modifier of the DP. These adjectives are all scalar. In the introduction to this paper, it was shown that superlatives or equivalent modifiers license non-modal infinitival relatives. The relevant examples are repeated below for convenience:

- (37) He was the youngest child to have had that operation at that time.  
(38) John is the only man to really know her.  
(39) The first person to have been killed by an electric chair is William Lemmer.  
(40) The last person to have been seen with her was Robert Wood.

Non-modal infinitival relatives can also depend on a head noun modified by *rare* and *few*.<sup>10</sup> These are also scalar:

- (41) He has been awarded two different Nobel Prizes in physics, one of the rare people to have this honor.

- (42) He is among the few people to have played in World Cup finals as a player and as a coach.

All adjectives licensing non-modal infinitival relatives are scalar in a special way. They represent the end of a scale. I claim that in the case of non-modal infinitival relatives we are dealing with an identificational focus with the feature [+contrastive]. Since superlatives and equivalent modifiers represent the end of a scale, a complement set consisting of members that represent a still higher or lower value on the scale can naturally be excluded as non-existing. Example (43), which repeats example (12), taken from Bhatt (1999, 2006), asserts that there is no telescope built in the 9<sup>th</sup> century that is more expensive than the one that Joan gave to Mary, (44) that there is no other cyclist than Indurain who has won two consecutive doubles Giro-Tour, (45) that no man has walked on the moon before Armstrong, (46) that no man has won both the Giro D'Italia and the Tour de France in the same year after Pantani, and (47) that almost no one else has owned the single. In all these cases, a complement set is thus excluded:

- (43) Joan gave Mary the most expensive telescope to be built in the 9th century.  
(44) Indurain is the only cyclist to have won two consecutive doubles Giro-Tour.  
(45) Neil Armstrong was the first man to have walked on the moon.  
(46) Pantani was the last man to have won both the Giro D'Italia and the Tour de France in the same year.  
(47) I am one of the rare people to have owned this single.

In semantic descriptions of superlatives and comparable modifiers, superlatives are often presented as degrees and compare entities having the property expressed by the superlative to a different extent. So, (48) is taken to mean that John is taller than all other boys that I have seen. But besides this positive contribution to a sentence, superlatives also provide a negative contribution to the sentence. Sentence (48) also means that I have never seen a boy who is taller than John:

- (48) John is the tallest boy that I have seen.

I propose that if the positive contribution is the assertion and the negative contribution the entailment, we are dealing with a simple identificational focus. A set is created which is an exhaustive subset of a set of elements of which the predicate phrase can potentially hold, boys that I have seen and which are tall to some extent. I propose furthermore that if the negative contribution is the assertion and the positive contribution the entailment, we are dealing with a contrastive identificational focus. The negative part of the meaning of the superlative explicitly excludes a contrasting complementary subset, which consists of members that represent a still higher or lower value on the scale than the superlative.<sup>11,12</sup>

If the negative part of the meaning of the superlative is the assertion, a negative polarity item can be used, such as *ever*, which is licensed by the negative assertion:

- (49) John is the tallest boy that I have ever seen.

I claim that a non-modal infinitive can be used instead of a tensed relative clause only if the negative part of the meaning of the superlative is the assertion. There has to be an explicit contrast with a complement set, i.e. a potential complement set consisting of members that represent a still higher or a still lower value has to be explicitly excluded. As (50) shows, negative polarity items such as *ever* can also be used with infinitival subject relative clauses,

which supports the claim that these are licensed by the negative part of the meaning of superlatives and equivalent modifiers, i.e. by the negative assertion:

- (50) You're the first person to have ever asked that question.  
(51) He is the only person ever to have escaped Alcatraz.

Evidence for the claim that the negative assertion of the superlative or comparable modifiers licenses the non-modal infinitive comes from the fact that with ordinals other than the superlative ordinals *first* or *last* a non-modal infinitive cannot be used.<sup>13</sup>

- (52) \*He is the seventh man to have captured that title multiple times.

*Ever* cannot be used with non-superlative ordinals either:

- (53) \*He is the seventh man who has ever said such a thing.

This suggests that in order to be able to license non-modal infinitives, ordinals must have the feature [+contrastive], and more specifically must exclude a complement set consisting of members that represent a still higher or lower value by virtue of the negative assertion that is part of their meaning, and must thus be superlative ordinals (*first* and *last*). In section 1, I discussed three constructions in which the adjective does not necessarily have to be [+contrastive]. In these constructions non-superlative ordinals can also be used, as exemplified by the French example (54), cf. (18):

- (54) De tous les livres de Zola, je préfère le troisième.  
'Of all of Zola's books, I prefer the third.'

I have claimed that in the three constructions discussed in section 1, the focus simply can be an identificational, i.e. non-contrastive, focus, whereas non-modal relatives are licensed by a special type of identificational focus, a [+contrastive] identificational focus, by means of the negative assertion associated with the contrastive focus. This is supported by the fact that, besides non-superlative ordinals, there are other focalizing elements licensing some of the constructions in French discussed in section 1, which do not license non-modal infinitives. These are "nominalized" adjectives such as color adjectives and the demonstrative pronoun *celui*.<sup>14,15</sup>

- (55) \*Je préfère la noire à avoir coûté 30 euros.  
I prefer the black to have cost 30 euros  
(56) \*Celui à avoir perdu a payé.  
the one to have lost has paid

We are dealing here with identificational foci, but not with [+contrastive] identificational foci in the sense described above.<sup>16</sup> Therefore non-modal infinitival relative clauses are not licensed in (55-56).

In this section, I have claimed that non-modal infinitival relatives are licensed by a contrastive identificational focus that explicitly excludes a complement set consisting of members that represent a still higher or lower value, which is expressed by a negative assertion. In the next section, I will argue that the negative assertion makes it possible to relate the non-modal infinitival relatives to the modal ones discussed in the introduction to this paper.

#### 4. Non-veridicality

In the previous section, I claimed that non-modal infinitives are licensed by a contrastive identificational focus explicitly excluding a complement set. More evidence for the claim that it is this negative meaning that is responsible for the licensing of non-modal infinitival relatives comes from the Romance languages. In these languages either an indicative or a subjunctive can be used in a tensed relative clause after a superlative or an equivalent modifier (Carlsson 1969), as exemplified by the following French sentences:

- (57) C' est le dernier livre qu' il a écrit.  
this is the last book that he has.IND written  
(= until now, i.e. comparison with all books that he has written before this one)
- (58) C' est le dernier livre qu' il ait écrit.  
This is the last book that he has.SUBJ written.  
(= ever, i.e. comparison with an empty set of books written after this one: he has never written or will never write another book in his life after this one)

After non-superlative ordinals, only the indicative can be used:<sup>17</sup>

- (59) C'est le troisième livre qu'il a /\*ait écrit.  
'This is the third book that he has.IND/has.SUBJ written.'

Farkas (1985) suggests that a negative existential is involved in sentences containing superlatives and associated modifiers and that this negative existential is responsible for the possibility of using subjunctive relatives in such cases. I claim that the head of the indicative relative clause is a non-contrastive identificational focus, which means in my analysis that the positive part of the meaning of the superlative or comparable modifiers is the assertion and the negative part the entailment. I claim furthermore that the head noun modified by the subjunctive clause is a [+contrastive] identificational focus, which means that the negative part of the meaning of the superlative or equivalent modifiers is the assertion and the positive part the entailment. According to Kampers-Manhe (1991), French non-modal infinitival subject relatives can only replace subjunctive sentences, but not indicative sentences:<sup>18</sup>

- (60) C' est la femme la plus âgée à avoir eu un enfant.  
this is the woman the most old to have had a child  
'She is the oldest woman to have given birth.'
- (61) C' est la femme la plus âgée qui ait eu un enfant. (= 60)  
this is the woman the most old who has.SUBJ had a child
- (62) C' est la femme la plus âgée qui a eu un enfant. (≠ 60)  
this is the woman the most old who has.IND had a child

In the French example (63), a non-modal infinitival relative clause and a subjunctive are used in coordination, which also suggests that there is a relation between the two:

- (63) La Douane de mer était le premier monument à l'accueillir sur cette Terre et Marie était la première femme qu'il eût jamais aperçue. (Jean d'Ormesson, *La Douane de mer*)

‘The sea customs service was the first monument to receive him on this Earth and Mary was the first woman that he had.SUBJ ever seen.’

Sentence (63) also shows that, just like non-modal infinitival relatives, the subjunctive can be combined with the negative polarity item *ever*. I have argued that non-modal infinitival relatives and *ever* are licensed by the negative assertion that is part of the meaning of the superlative. Giannakidou (1997) shows that, in Greek, polarity items are not only licensed by negative operators, but also by other operators such as modal verbs, disjunctions, interrogatives or the future tense. Giannakidou calls these operators non-veridical items. An operator is non-veridical if, *Op p* being true, *p* (=arbitrary proposition) is not necessarily true. *Paul wants Maria to come*, containing a modal verb as operator, does not necessarily entail that *Maria comes*. Averidical operators are a special subset of the non-veridical operators. In the case of averidical operators, *Op p* is true if *p* is not true. Negative operators are typical examples of averidical operators.

Giannakidou argues that, in Greek, polarity items are licensed, among others, by superlatives, because of the negative part of their meaning, which she analyzes as a negative implicature (but which I analyze as the assertion, see fn. 11 and 12). She shows that in Greek, but not in English, *only* does not license polarity items. She argues that although there is a negative implicature associated with *only*, *only* is at the same time a veridical operator: *only Theodora saw Roxanne* implies that *Theodora saw Roxanne*. This shows, according to Giannakidou, that the non-veridicality condition, which requires that polarity items be licensed by a non-veridical operator, is stronger than the negative implicature in Greek. The negative implicature does not suffice for licensing of polarity items in Greek. Although English *only* is also a veridical operator with a negative implicature, the negative implicature suffices to license polarity items, in Giannakidou’s view.

Yoshimura (2005) shows that in Japanese ‘only’ is expressed either by *-dake*, which has an ‘affirmative’ flavor or by *-shika*, which has a ‘negative’ flavor. Yoshimura proposes that *-dake* asserts an affirmative proposition and entails a negative one, while *-shika*, just like *only* in English (Horn 2002), asserts a negative proposition and entails a positive one.<sup>19</sup> Since the meaning of *-dake* on the one hand and *-shika* and English *only* on the other contains a positive and a negative part, they are all both a veridical and a non-veridical operator at the same time, but the strength of the positive or negative contribution varies, depending on what is asserted and what is entailed. Greek ‘only’ seems to be like *-dake*, whereas English *only* resembles *-shika*. Greek superlatives license negative polarity items, so that the negative contribution to their meaning must be the assertion.

In the previous section I have proposed that superlatives and comparable modifiers are polysemous. They have a positive flavor if they assert a positive proposition and entail a negative one, in which case they function as identificational foci, and they have a negative flavor if they assert a negative proposition and entail a positive one, in which case they function as contrastive foci. I have claimed that if the negative contribution is the assertion, superlatives and equivalent modifiers license non-modal infinitival relatives, subjunctive relative clauses (e.g. in Romance) and negative polarity items like *ever*. If the positive contribution is the assertion, superlatives and comparable modifiers do not license non-modal infinitival relatives, subjunctive relative clauses, and negative polarity items, but only indicative relative clauses.

The notion of non-veridicality makes it possible to establish a relation between non-modal infinitival relatives and the modal ones distinguished in the introduction to this paper. In Bhatt’s (1999, 2006) study of infinitival relatives, the non-modal ones and the modal ones seem to be totally unrelated. Giannakidou shows that, in Greek, polarity items are licensed, among others, by the negative part of the meaning of superlatives and by (deontic or

epistemic) modals. Modals are non-veridical operators and negation is an averidical operator, a special subcase of non-veridical operators. This means therefore that both non-modal and modal “bare” infinitives are licensed by (implicit) non-veridical operators.

In the previous section, I have interpreted a negative assertion as part of the meaning of superlatives and equivalent modifiers as a contrastive focus: a set is contrasted with a complement set. In the next section, I will argue that there is also syntactic support for the claim that non-modal infinitival relatives are licensed by a (contrastive) focus.

## 5. Movement to FocusP

Kiss considers identificational focus to be semantically an operator expressing exhaustive identification and syntactically a constituent preposed into the specifier position of a functional projection, FocusP. Preposing can occur in syntax or at LF. In this section, I will discuss several cases in which the head noun modified by a non-modal infinitival subject relative is preposed either in syntax or at LF.

Kiss shows that in Hungarian the whole focalized constituent moves to the Focus Phrase, as witnessed by (64):

- (64) Mari [<sub>FocusP</sub> egy kalapot [<sub>IP</sub> nézett ki magának]].  
 Mary a hat picked out herself.to  
 ‘It was a hat that Mary picked for herself.’

In this section, I will give some arguments for the assumption that with non-modal infinitival relatives the superlative or comparable modifiers can move alone to a focus position.

### 5.1 Adverbs

Bhatt (1999, 2006) shows that instead of (65) it is also possible to use (66), with a similar meaning, although Bhatt observes that speakers find (66) degraded.<sup>20</sup> Bhatt uses this pair of sentences as an argument for a reconstruction analysis. In (65) the constituent *first boy* and in (66) *boy* have been raised from inside the infinitival relative clause in syntax (Kayne 1994), and undergo Reconstruction into the relative clause at LF:

- (65) the [<sub>first boy</sub>]<sub>i</sub> to <sub>t<sub>i</sub></sub> climb Mount Everest  
 (66) the [<sub>boy</sub>]<sub>i</sub> to <sub>t<sub>i</sub></sub> climb Mount Everest first

Both in (65) and (66), *first* adjoins at LF to the relative clause (cf. Szabolcsi’s (1986) analysis of association with focus, see §1.1):

- (67) the [<sub>CP</sub> first<sub>i</sub> [<sub>CP</sub> to <sub>t<sub>i</sub></sub> boy climb Mount Everest]]  
 (68) the [<sub>CP</sub> first<sub>i</sub> [<sub>CP</sub> to boy climb Mount Everest <sub>t<sub>i</sub></sub>]]

I propose that *first* in (65) does not originate in the relative clause. Only the noun does:

- (69) the first [<sub>boy</sub>]<sub>i</sub> [<sub>CP</sub> to <sub>t<sub>i</sub></sub> climb Mount Everest]

I assume that both in (65) and in (66) *first* moves at LF to a Focus Phrase dominated by DP (see, a.o., Aboh 2003).<sup>21</sup>

- (70) [DP the [<sub>FocusP</sub> first<sub>i</sub> [<sub>AP</sub> t<sub>i</sub> [<sub>NumP</sub> boy<sub>j</sub> [<sub>CP</sub> to t<sub>j</sub> climb Mount Everest]]]]]  
 (71) [DP the [<sub>FocusP</sub> first<sub>i</sub> [<sub>NumP</sub> boy<sub>j</sub> [<sub>CP</sub> to t<sub>j</sub> climb Mount Everest t<sub>i</sub> ]]]]

According to Kiss, movement to FocusP can take place at LF if the identificational focus feature is visible/audible in PF anyway. In the case of *only* in English the identificational focus feature is morphologically marked, viz. by *only* itself. Since the identificational focus feature is also overtly expressed in the case of *first*, its movement to a DP-internal FocusP does not have to take place in syntax.

## 5.2 Clefts

In Italian (72), but not in English (73) or French (74), a cleft is able to license non-modal infinitival relatives.<sup>22</sup> In Kiss' analysis, a clefted constituent moves to or is base-generated in the specifier of a FocusP in syntax:

- (72) È stato [<sub>FocusP</sub> Gianni] a darmi la chiave.  
 is been Gianni to give-me the key  
 'It was Gianni who gave me the key.'  
 (73) \*It was John to have given me the key.  
 (74) \*C'est Jean à m'avoir donné la clé.

The distinction between Italian, English and French clefts recalls the distinction between 'only' in Greek and English (see §4). In Greek 'only' seems to assert an affirmative proposition, whereas in English *only* asserts a negative proposition, which would account for the fact that in English but not in Greek 'only' licenses negative polarity items.

A similar interpretation can be given of the data in (72-74). In English and French, clefts simply serve to identify: they assert an affirmative proposition and entail a negative one. In Italian clefts, a negative proposition is asserted and a positive one entailed, which licenses infinitival relatives. In Italian, the cleft is a contrastive focus. The negative assertion explicitly excludes a complement set.

Why should there be such a difference between Italian clefts on the one hand and English and French clefts on the other? A contrastive focus is semantically stronger than a non-contrastive, i.e. a normal identificational focus, because besides its identificational interpretation it explicitly excludes a complement set, which is expressed by the negative assertion. Kiss shows that in Italian the information focus stands behind the V and that the identificational focus is in a preverbal position:

- (75) Il vaso, l' ha rotto Maria. (= information focus)  
 the vase it has broken Maria  
 'Maria has broken the vase.'  
 (76) **Maria** ha rotto il vaso. (= identificational focus)  
 'It is Maria who has broken the vase.'

Besides these options, a third case is possible, the cleft, in which the clefted constituent is moved to Spec,FocusP:

- (77) È stata Maria che ha rotto il vaso. (= contrastive focus)  
 is been Maria who has broken the vase  
 'It was Maria who broke the vase.'

The cleft is semantically the strongest option. It expresses a contrast by means of a negative assertion which excludes a complement set. This is why the Italian cleft can license non-modal infinitival relatives.

In English (and French) there are only two options.<sup>23</sup> The information focus is in a preverbal position. The identificational focus is expressed by the cleft.<sup>24</sup> There is no special construction for the contrastive focus:

- (78) Maria has broken the vase. (= information focus)  
 (79) It is Maria who broke the vase. (=identificational or contrastive focus)

I claim that because the cleft in English (and French) is not explicitly contrastive, i.e. does not explicitly exclude a complement set, a non-modal infinitival relative cannot be used.

### 5.3 *Preposed quantificational adjectives*

Whereas in Hungarian a syntactically preposed constituent is not necessarily contrastive, in many of the languages Kiss discusses it is. In French, preposed *rare* or *numerous* license the use of infinitival subject relatives after a demonstrative pronoun or a noun:

- (80) *Nombreux sont ceux à avoir voulu tenter l'expérience.*  
 numerous are those to have wanted try the experiment  
 'Those who have wanted to try the experiment are numerous.'  
 (81) *Rares sont ceux à avoir pu l'observer en liberté.*  
 rare are those to have been-able to it-observe in liberty  
 'Those who have been able to see it living under natural conditions are rare.'  
 (82) *Rares sont les personnes à avoir les trois quarts des produits.*  
 rare are the persons to have the three quarters of-the products  
 'The persons that have three quarters of the products are rare.'

The preposing of the quantificational adjective seems to play an important role in the licensing of *à* + infinitive, as witnessed by the ungrammaticality of sentences (83-85) in which the quantificational adjective has not been preposed.<sup>25,26</sup>

- (83) \**Ceux à avoir voulu tenter l'expérience sont nombreux.*  
 those to have wanted try the experiment are numerous  
 (84) \**Ceux à avoir pu l'observer en liberté sont rares.*  
 those to have could it observe in liberty are rare  
 (85) \**Les personnes à avoir les trois quarts des produits sont rares.*  
 the persons to have the three quarters of-the products are rare

When a finite relative clause is used instead of *à* + infinitive, sentences (83-85) become grammatical, as witnessed by (86-88), which shows that it is the movement of the quantificational adjectives to the specifier of FocusP in syntax that licenses the use of *à* + infinitive in (80)-(82):

- (86) *Ceux qui ont voulu tenter l'expérience sont nombreux.*  
 'Those who have wanted to try the experiment are numerous.'  
 (87) *Ceux qui ont pu l'observer en liberté sont rares.*  
 'Those who have been able to observe it living under natural conditions are rare.'  
 (88) *Les personnes qui ont les trois quarts des produits sont rares.*

‘The persons who have three quarters of the products are rare.’

I contend that the movement of the quantificational adjectives marking the end of a scale to FocusP in syntax in (80-82) is associated with a special semantic effect. The focus has a contrastive interpretation, asserting that there is (almost) no one or nothing else (not) having the property under consideration, which licenses the infinitival clause.

#### 5.4 *Non-inverted copula constructions*

The last case of anteposition to the specifier of FocusP licensing non-modal infinitival subject relatives is provided by non-inverted copula constructions, again in French. Examples are given in (89)-(95):

- (89) Elles sont trois à avoir remporté les premiers prix.  
they are three to have taken the first prizes  
‘Three have taken the first prizes.’
- (90) Les membres actifs sont seuls à avoir le droit de vote.  
the members active are only to have the right of vote  
‘The active members are the only ones to have the right to vote.’
- (91) Ils sont plusieurs à avoir joué le jeu.  
they are several to have played the game  
‘Several have played the game.’
- (92) Ils sont rares à avoir des enfants.  
they are rare to have INDEF.ART children.  
‘Few of them have children.’
- (93) Vous avez été des milliers à avoir réagi.  
you have been INDEF.ART thousands to have reacted  
‘Thousands of you have reacted’
- (94) Ils sont 30 pour cent à fréquenter ce type d’école.  
they are 30 percent to go to this type of school  
‘30 percent go to this type of school.’
- (95) Combien sont-ils à savoir la réponse?  
how-many are they to know the answer  
‘How many are those who know the answer?’

The use of *à* + infinitive differs from the other cases discussed so far in that the class of quantifiers that licenses *à* + infinitive is larger. Even cardinal numbers and quantifiers such as *plusieurs* license the use of *à* + infinitive, when they are used as a predicate.

Apparently, in (89-95), the infinitival clause seems to be the complement of the predicate, just as in (96):

- (96) Elle est apte à faire ce travail.  
‘She is able to do this work.’

The following sentences show, however, that the quantificational predicate can also be used in combination with a finite relative clause instead of an infinitival clause:

- (97) Ils sont nombreux qui poursuivent une bonne carrière politique.  
they are numerous who pursue a good career political

- ‘Numerous are the people who pursue a good political career.’
- (98) Les spécialistes sont rares qui se risquent à l’analyser.  
the specialists are rare who themselves risk to it analyze  
‘Rare are the specialists who dare analyze it.’
- (99) Ils sont des milliers qui attendent un nouveau foyer.  
they are INDEF.ART thousands who wait a new home  
‘Thousands of them wait for a new home.’

In (96), however, the infinitival clause cannot be replaced by a finite relative clause:

- (100) \*Elle est apte qui fait ce travail.  
She is capable who does this work

Also, pseudoclefts show that *apte à faire ce travail* in (96) is a constituent, but that the quantificational predicate and the relative clause are not.<sup>27</sup>

- (101) Ce qu’elle est, c’est apte à faire ce travail.  
what she is that is able to do this work  
‘She is able to do this work.’
- (102) \*Ce qu’ils sont, c’est rares à avoir des enfants.  
what they are that is rare to have INDEF. children
- (103) \*Ce qu’ils sont, c’est nombreux qui poursuivent une bonne carrière politique.  
what they are that is numerous who pursue a good career political

Furthermore, whereas in (96) the infinitival clause introduced by *à* can be replaced by the clitic pronoun *y*, as (104) shows, this is not possible in combination with a quantificational predicate, as witnessed by the ungrammaticality of (105):

- (104) Elle y est apte.  
she therein is capable  
‘She is able to do it.’
- (105) \*Elles y sont trois/rares/nombreux/plusieurs.  
they therein are three/rare/numerous/several

This suggests that the infinitival relative clause does not depend on the quantificational predicate, but depends on the pronoun or on the noun, just like the finite relative clause in (97-99). For (89-95), I propose the following analysis. The infinitival or relative clause is the complement of the determiner (Kayne 1994), with the noun raising to a sentence-initial position within the relative clause and subsequently moving to NumP:

- (106) [<sub>DP</sub> les [<sub>NumP</sub> membres actifs<sub>i</sub> [<sub>t<sub>i</sub></sub> à t<sub>i</sub> avoir le droit de vote]]]

Besides being the complement of a determiner, as in (106), the relative clause can also be the complement of a pronoun:

- (107) [<sub>DP</sub> ils [<sub>à</sub> avoir des enfants]]

The DP and the quantificational predicate form a small clause that is the complement of the copula.<sup>28</sup>

- (108) sont [<sub>SC</sub> DP rares ]  
 (109) sont [<sub>SC</sub> [<sub>DP</sub> ils [à avoir des enfants]] rares ]

In Kayne & Pollock's (2001, 2005) analysis of stylistic inversion in French, the DP subject starts out as the specifier of a silent subject clitic that heads a larger DP. The lexical subject moves to a high position above IP, leaving the silent subject clitic in Spec,IP. The (remnant) IP then moves leftward past the landing site of the subject, creating stylistic inversion:

- (110) [<sub>IP</sub> Jean-SCL a téléphoné] →  
           Jean      has telephoned  
           [<sub>FP</sub> Jean<sub>i</sub> F° [<sub>IP</sub> t<sub>i</sub>-SCL a téléphoné]] →  
           [<sub>GP</sub> [<sub>IP</sub> t<sub>i</sub>-SCL a téléphoné]<sub>j</sub> G° [<sub>FP</sub> Jean<sub>i</sub> F° t<sub>j</sub>]]

I assume that the left periphery of the clause contains a high and a low TopP, which sandwich around a FocusP (Rizzi 1997). The DP in (108-109) moves to Spec,IP, which is followed by remnant movement of the small clause to the specifier position of FocusP. The infinitival clause moves out of the DP to the specifier position of the lower TopP (Rizzi 1997). This is followed by remnant movement of the DP to the specifier position of the higher TopP. The copula moves to the head of the higher TopP. This leads to the following configuration:

- (111) [<sub>TopP</sub> ils [<sub>Top°</sub> sont [<sub>FocusP</sub> rares [<sub>TopP</sub> à avoir des enfants ...]]]]

The infinitival clause is licensed in this structure by a c-commanding constituent in the specifier position of FocusP.

The anteposition in syntax is associated with a contrastive interpretation of the focus, explicitly excluding a complement set. This case can be compared to the Italian cleft in (77).<sup>29</sup>

- (112) È stato Gianni a darmi la chiave. (and not anyone else)  
       'It was Gianni who gave me the key.'  
 (113) Ils sont trois à le savoir. (and not any other number)  
       they are three to it know  
       'Three people know it.'

In French, a negative assertion seems thus to be associated with this construction, licensing the non-modal infinitival relative clause. This property relates the construction considered here to the other ones discussed in this paper.

## 6. Conclusion

In this paper, I have claimed that non-modal infinitival subject relative clauses are licensed by a focalized head noun explicitly expressing a contrast with a complement set by means of a negative assertion, i.e. a contrastive focus (Kiss 1998). I have argued that all adjectives licensing non-modal infinitival subject relatives (such as superlatives, superlative ordinals, *only* and the quantificational adjectives *rare* and *few*) represent the end of a scale, so that a complement set consisting of members that represent a still higher or lower value on the scale can naturally be excluded.

Evidence for the claim that it is this negative assertion that is responsible for the licensing of non-modal infinitival subject relatives came from the Romance languages. In these languages either an indicative or a subjunctive can be used in a tensed relative clause after a superlative or equivalent modifiers. Non-modal infinitival subject relatives can only replace subjunctive, but not indicative sentences. I have followed Farkas (1985), who suggests that a negative existential is involved in sentences containing superlatives and comparable modifiers and that this negative existential is responsible for the possibility of using subjunctive relatives in such cases. I have claimed that the negative existential also licenses non-modal infinitival relative clauses.

I have argued that in some cases the negative existential may be asserted whereas in others it is entailed, which would account for the parametric variation between languages in the licensing of non-modal infinitival relatives in these constructions.

Furthermore, I have claimed that the contrastive interpretation of the focus is related to its movement in syntax or at LF to Spec,FocusP, a position in the left periphery of the clause or the DP.

I have shown that a unified account of the licensing of modal and non-modal infinitival relatives becomes possible with this approach of the licensing of non-modal infinitival relative clauses. I have argued that both non-modal and modal infinitives are licensed by (implicit) non-veridical operators (Giannakidou 1997). Modal verbs are non-veridical operators and negation, implicitly present in superlatives and equivalent modifiers, is an averidical operator, a special subcase of non-veridical operators.

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<sup>1</sup> I will show in this paper that apart from adjectives there are some other elements or constructions that license infinitival subject relatives, such as the restrictive particle construction *ne...que* 'only' in French, or a clefted constituent in Italian, which means that in fact the adjectives are only a (large) subgroup of the licensors of infinitival subject relatives. I will claim, however, that all licensors possess the same property that allows them to license infinitival subject relatives.

<sup>2</sup> Infinitival subject relatives depending on a head noun modified by a superlative or a comparable modifier can also have a modal interpretation. Kjellmer (1975) observes that the infinitive in (i) can mean either 'which has been considered', i.e. have a non-modal interpretation, or 'which ought/is to be considered', in which case it has a modal interpretation.

(i) This is the best argument to be considered by the committee.

<sup>3</sup> Kjellmer states that selection can be brought about by other linguistic means than superlatives, as in (i) or (ii):

(i) He is one of the businessmen to hold a top post in America.

(ii) Mr and Mrs Warburton were among the guests to arrive later.

Bhatt (1999, 2006) finds these examples less than perfect. Their degraded acceptability will follow from the analysis of non-modal infinitival relatives presented in this paper (see also fn. 10).

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<sup>4</sup> Like superlatives, the ordinals *first* and *last* also mark the end of scale. However, Kjellmer also gives an example of a non-modal infinitival relative depending on a head noun modified by the ordinal *fourth*, which does not mark the end of a scale:

(i) He is the fourth Democrat to turn down Senator McGovern's offer.

In most examples of non-modal infinitival relatives with a head noun modified by an ordinal found in the literature, the ordinal is *first* or *last*. Sometimes examples with other ordinals are found, in which, however, the ordinal expresses the end of a scale in some sense. *The third woman* in (ii) means 'only the third woman', i.e. 'almost the first':

(ii) She was the third woman to have been nominated in this category.

The marginal acceptability of ordinals other than *first* or *last* in combination with non-modal infinitival relatives will follow from the analysis presented in this paper.

<sup>5</sup> In fact, the adjective has not been nominalized, but is used without a noun. We are thus dealing with noun ellipsis here. In French only a limited class of adjectives can be used in a noun ellipsis construction, as observed by Barbaud: *prochain* 'next', *suivant* 'following', *seul* 'sole', *premier* 'first', *dernier* 'last', and some other adjectives such as color adjectives. (see Sleeman 1996 for an analysis of noun ellipsis in French).

<sup>6</sup> Whereas with a superlative the use of sentence-initial *de* + DP is possible (see 12), the use of *de* + A, however, is not:

(i) \*Marie est la plus intelligente, de belle.

Mary is the most intelligent of beautiful

<sup>7</sup> In the restrictive construction it is not obligatory to use *de* 'of' before the adjective:

(i) Je n'ai que deux pizzas chaudes.

'I only have two hot pizzas.'

In (i) the restriction concerns the whole DP including the adjective, whereas in (21) it concerns the DP without the adjective, the adjective being a separate constituent, as in *You want something hot? I only have two pizzas*. Notice that since all kinds of (predicative) adjectives can be used in the *de* + adjective construction, we are not dealing here with noun ellipsis, which is licensed by only a small class of adjectives in French, see fn. 5.

<sup>8</sup> Kiss states that universal quantifiers, *also*-phrases and *even*-phrases cannot function as identificational foci. She shows that in Hungarian, they cannot be preposed into Spec,FocusP and in English, they are barred in the cleft construction. This is captured by Kiss' definition of identificational focus. The universal quantifier, *also* and *even* perform identification without exclusion. As observed by one of the reviewers, in this way Kiss' definition does not work for all focus-sensitive operators. Rooth's (1985) Alternative Semantics framework, in contrast, accounts for the fact that both *only* and *even* can associate with focus. In both cases there is a set of alternatives.

<sup>9</sup> This type of movement should be distinguished from the adjunction of the focused phrase to *only* at LF in association with focus sentences (Anderson 1972), an analysis that has been criticized by Rooth (1985). In Anderson's approach, the focus phrase adjoins to *only* or *even*, which should lead to the violation of an island constraint (complex NP constraint) in *You can do lots of things with bananas; I even know a guy who SMOKEs them*, contrary to fact. In Kiss' paper, movement concerns an *only*-phrase to Spec,FocusP, which takes place in syntax in Hungarian and at LF in English. Since this is not a case of association with focus, island constraints are not violated (if the *only*-phrase moves to Spec,FocusP of its own clause).

<sup>10</sup> Bhatt (1999, 2006) also mentions *many* and numerals (in collocation with *one of the*, cf. fn. 3) as licensors of non-modal infinitival relatives:

(i) When Revlon Chairman Ronald Perelman recently hinted that he might try to acquire an industrial or manufacturing company, one of the **many** stocks to wiggle upward was Allied-Signal.

(ii) Alan Greenberg, chairman of Bear Stearns, one of the **five** dealers to curtail its program trading, said that if the market's course has been smoother in the past two weeks, its was only "a coincidence", and not a result of the pullback.

On the Internet I found relatively few examples like these, which suggests that they are rather marginal, but it could be argued that in collocation with *one of the* numerals or adjectives (see fn. 17) come close to superlatives.

<sup>11</sup> In the negative reading, Fauconnier (1980), Linebarger (1980, 1987) and Giannakidou (1997) analyze the negative part of the meaning of the superlative as the negative implicature of the assertion, which would then only consist of the positive part of the meaning of the superlative. Following Yoshikura (2005) I will use the notion ‘entailment’ instead of ‘implicature’, and I will consider the positive part of the meaning of the superlative in (49) as the entailment, see fn. 12. De Swart (1998), who clearly explains the difference between the notions of presupposition, entailment and implicature, defines Grice’s (1975) notion of implicature as a non-logical inference, which comes about as a result of embedding the statement in a particular conversational context. As such, implicatures can typically be cancelled or suspended without generating a contradiction. De Swart defines entailments as a strong form of implication. They cannot be cancelled or suspended without generating a contradiction.

<sup>12</sup> Heycock (2005) gives the definition in (ii) of sentence (i) containing a superlative. In this definition  $g$  and  $k$  are degrees,  $g > k$ . Parts  $a$  and  $b$  form the positive contribution to the sentence and  $c$  forms the negative contribution (cf. Giannakidou 1997:126, who analyzes  $c$  as a negative implicature, see fn. 11):

- (i) Anna Karenina is the longest book that Tolstoy wrote.
- (ii) a. Anna Karenina is  $g$  long.
- b. All books  $x$  other than Anna Karenina that Tolstoy wrote are such that there is a degree  $k$  such that the degree of  $x$ ’s length does not exceed  $k$
- c.  $\neg$  [Tolstoy wrote a book other than Anna Karenina  $g$  long]

Instead of  $c$  I would rather like to propose  $c'$ :

- $c'$   $\neg$  [Tolstoy wrote a book  $x$  such that the degree of  $x$ ’s length exceeds  $g$ ]

I propose that if  $a$  and  $b$  are the assertion and if  $c'$  is the entailment, we are dealing with an identificational focus. If  $c'$  is the assertion and if  $a$  and  $b$  are the entailment, we are dealing with a contrastive focus.

<sup>13</sup> Geisler (1995) distinguishes three groups of licensors of non-modal infinitives: adjectives denoting the extreme end of a scale (such as superlatives), items denoting uniqueness (such as *only*) and adjectives denoting an ordinal concept such as 295<sup>th</sup> in the example (i), which Geisler took from a live radio commentary:

- (i) Dreadnought is the two hundred and ninety-fifth submarine to be launched at Barrow.
- In all other examples Geisler gives, however, the ordinal is *first* or *last*, which suggests that (i) is a very marginal example (see also fn. 4). Bhatt (1999, 2006) also almost exclusively provides examples in which the ordinal is *first* or *last*. In (i) the ordinal is a very high number, which might account for the use of the infinitival relative in this case: it marks an extreme end of a scale. This might also explain why there are speakers who find (ii) acceptable: ‘this man was one of the first to have done this, there was almost no one before him who stepped on the moon’:
- (ii) Buzz Aldrin is the second man to have stepped on the moon.

<sup>14</sup> In French, non-modal infinitival relatives are licensed by adjectives that represent the end of a scale, just as in English. Just as in English, negative polarity items are also licensed in these contexts in French (see (i)):

- (i) Il est le soliste le plus jeune à avoir jamais joué avec cet orchestre.  
‘He is the youngest soloist to have ever played with this orchestra.’
- (ii) Armstrong fut le premier à avoir marché sur la lune.  
‘Armstrong was the first to have walked on the moon.’
- (iii) Suis-je le seul à avoir ce problème?  
‘Am I the only one to have this problem?’
- (iv) Il est un des rares à posséder cette compétence.  
‘He is one of the rare people to have this competence.’

<sup>15</sup> In section 5, it will be shown that the demonstrative pronoun can be followed by a non-modal infinitival relative clause. However, I will argue that the infinitival clause is not licensed by the demonstrative pronoun, but by another focalizing element.

<sup>16</sup> This is also supported by the fact that negative polarity items are not licensed in these contexts:

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- (i) \*Son nom restera à jamais associé à celui du second personnage qu'elle a jamais interprété.

her name will be forever associated to the one of the second personage that she has ever interpreted.

<sup>17</sup> Grevisse (1980) observes that in literary texts the subjunctive is also used in a relative clause with a head noun modified by a non-superlative adjective preceded by 'one of' or with a head noun preceded by 'all' (cf. fn. 10):

- (i) C'est une des grandes erreurs qui soient parmi les hommes. (Molière, Dom Juan)  
It is one of the big errors that are.IND among the men  
'This is one of the big human errors that exist.'
- (iii) tout le ressentiment qu'une âme puisse avoir (Molière, Dom Garcie)  
all the grateful memory that a soul may.IND have  
'all the gratitude that one can have'

Delibes (1920) associates cases like these to the superlative construction and similarly to what I propose in this paper, relates the use of the subjunctive in the relative clause to the presence of a negation in the meaning of the superlative ('He is the wisest man that has ever lived' being equivalent to 'There has never been a man wiser than he').

<sup>18</sup> See also Brunot (1922: 743), who states that in French an infinitival complement can be used after the adjectives that can be used with a subjunctive complement, such as *first*, *last* or *only*.

<sup>19</sup> Yoshimura illustrates the difference between *-dake* and *-shika* with examples such as (i) and (ii):

- (i) Ie-no roon-dake zeikin menjo da.  
'Only home loans are tax-deductible.'  
(Asserted) Home loans are tax-deductible.  
(Entailed) No other loans besides home loans are tax-deductible.
- (ii) Ie no roon-shika zeikin menjo dewa-nai.  
'Only home loans are tax-deductible.'  
(Asserted) No other loans besides home loans are tax-deductible.  
(Entailed) Home loans are tax-deductible.

<sup>20</sup> One of the reviewers observes that there seems to be a difference in interpretation between (65) and (66). (65) can be uttered if no one else has climbed Mt. Everest, but this seems not to be possible in (66).

<sup>21</sup> As observed by Bhatt, speakers find (66) less acceptable than (65). This might follow from the fact that, although in (71) the non-modal infinitival relative is syntactically licensed by the raised ordinal, *first* does not have the negative interpretation required to license the relative clause (see fn. 20).

<sup>22</sup> Just as in English and French, in Italian non-modal infinitival relative clauses are licensed by adjectives that represent the end of a scale:

- (i) Il più giovane a raggiungere la cima è stato un giovane di 11 anni.  
'The youngest one to reach the top was an 11 year old child.'
- (ii) Il primo a entrare è il primo a uscire.  
'First in, last out.'
- (iii) Non sono il solo a pensare così.  
'I am not the only one to think so.'
- (iv) Gianni è tra i pochi a aver letto il libro.  
'Gianni is one of the few to have read the book.'

<sup>23</sup> See also Belletti (2005), in which differences between answering strategies among Italian, French and English speakers are discussed. According to Belletti, whereas in Italian an information focus expressed by a postverbal subject (*È partito Gianni* 'Gianni left') is used to answer the question 'Who left?', in French a cleft or a truncated cleft is used (*C'est Jean (qui est parti)* 'It is Jean (who left)'), and in English the SV order is used (*John left*), cf. fn. 24.

<sup>24</sup> Instead of a cleft, a preverbal subject with a pitch accent on the subject can also be used, expressing both an identificational and a contrastive focus.

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<sup>25</sup> Half of the French speakers that one of the reviewers consulted accepted sentences (83)-(85). I have not found any example in the database of French literary texts Frantext, however, and almost no example by searching the Internet with Google.

<sup>26</sup> There are native speakers of French who accept the use of an infinitival relative clause after *un de ceux* ‘one of those’, cf. fn. 3. On the Web, but not in Frantext, I found examples like (i). Interestingly, in most of the examples that I found, the relative clause contains a superlative, as in (ii), which suggests that a negative assertion is involved in the licensing of the infinitival relative clause (in (ii), there is almost no one who has better illustrated this principle):

- (i) Mozart fut un de ceux à introduire la technique cyclique dans la musique classique.  
Mozart was one of those to introduce the technique cyclic in the music classical  
‘Mozart was one of those who have introduced the cyclic technique in classical music.’
- (ii) Il est un de ceux à avoir le mieux illustré ce principe.  
he is one of those to have the best illustrated this principle  
‘He is one of those who have best illustrated this principle.’

<sup>27</sup> I am grateful to one of the reviewers for having pointed this out to me.

<sup>28</sup> In French, quantifiers can function as predicates even in the absence of a non-modal infinitival relative clause:

- (i) Ils étaient trois/plusieurs.  
‘There were three/several of them.’
- (ii) Ils sont rares/nombreux.  
‘They are rare/numerous.’
- (iii) Les enseignants l’ont essayé, mais ils sont seuls.  
‘The teachers have tried it, but they are the only ones.’

<sup>29</sup> One of the reviewers suggests an alternative and simpler account: the infinitival relative clause, which is the complement of the subject, is extraposed and ends up in a position where it is c-commanded by the quantifier. The reason why I propose the analysis in (111), however, is that a parallel can be drawn with the cleft-construction in Italian. Both in the analysis of the cleft construction that I presented in (31) and in the analysis in (111) a constituent raises to Spec,FocusP in syntax.