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A R T I C L E   I N F O

A B S T R A C T

While the semantic approaches differ on whether there is a negative operator ($\neg$: Jespersen, 1917; Ross, 1969; McConnell-Ginet, 1973; Seuren, 1973; Klein, 1980; Stassen, 1984; Larson, 1988) or a non-negative inequality operator ($>$: Von Stechow, 1984; Rullmann, 1995; Kennedy, 1997a; Beck et al., 2004) in the comparative, various issues remain unresolved surrounding the "negativity" of comparatives. This paper proposes a novel dichotomy of comparatives between 'rhetorical' comparatives (RCs) and regular 'degree' comparatives (DCs), and shows that only RCs convey "negativity" in a way parallel to negativity in rhetorical questions; while regular DCs merely establish an ordering between two objects. The variation concerning negativity in turn squares neatly with the presupposition toward the content of the standard (negative presupposition in RCs and no presupposition in DCs). In exploring the semanticopragmatic properties of RCs, it is shown that rhetorical effects can be triggered by negative polarity items, expletive negation, and the subjunctive mood. This result supports an important insight that negative polarity items and the subjunctive are of similar nature (Giannakidou, 1994, 1995, 2009; Quer, 1998; Borschev et al., 2007), and goes one step further to suggest another important link between expletive negation and the subjunctive mood. This analysis implicates that the three components are closely connected under the principle of non-veridicality. The notion of RCs in the sense that we suggest here can give us a plausible foundation for the analysis of rhetorical effects in other environments, for instance, rhetorical questions.

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1. Introduction: debate on the negativity of comparatives

1.1. Negative analyses and their problems

The question of whether or not comparative clauses have a negative operator has divided the literature into two parties. Earlier researchers argue that comparatives have an underlying syntactic negative operator in a standard *than*-clause (Jespersen, 1917; Ross, 1969; McConnell-Ginet, 1973; Seuren, 1973; Klein, 1980; Stassen, 1984; Larson, 1988). As illustrated in Ross's deep structure (1), the negative analyses assume only one degree *d* to the extent that *John* is tall while denying the fact that *anyone* in the standard clause is tall to the same extent *d*.

(1)   John is taller than anyone.   *Negative Analysis*
       $\exists$ (*d* John is tall to extent *d* AND **NOT** [anyone else is ~~tall to extent *d*~~]   (Ross, 1969)

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The idea of positing an abstract negative operator for *than*-clauses has been motivated by the following empirical evidence (Joly, 1967; Seuren, 1973): (i) As shown in (2), *nor* is observed in lieu of *than* in various English dialects; (ii) Old English *þon-ne* 'by which not' is the etymology for *than*; and (iii) As shown in (3), a negative particle *ne* is obligatory in a *than*-clause in French (Seuren, 1973) as well as in many other Romance languages such as Catalan and Spanish (Price, 1990), which are similar to Cockney English as in (4) where *never* is used in comparatives.

(2)   He is richer **nor** you'll *ever* be.   [English dialects]

(3)   Jean est plus grand que je **ne**   pensais.   [French]
        Jean is taller   than I Neg thought
        'Jean is taller than I thought.'

(4)   She did a better job than what I **never** thought she would.   [Cockney English]

Further potential evidence for the negative analyses comes from NPI facts in comparatives. As shown in *anyone* in (1) and *ever* in (2) above, negative approaches generally deal with comparative sentences that contain NPIs in *than*-clauses and extend their analysis to the ones without NPIs. The logic goes as follows: consider that negative gradable adjectives such as *short/difficult/unjust/impossible* allow for NPIs to occur with them as shown in (5a) whereas neutral gradable adjectives such as *tall/easy/just/possible* do not as shown in (5b). However, a neutral gradable adjective like *tall* still licenses an NPI such as *anyone* in a comparative as shown in (5c). For this reason, negative analyses argue that NPI-licensing is indicative of the negative status of comparative *than*-clauses.

(5)   a.   It is **difficult** to *ever* get a straight answer from him.
        b.   *It is **easy** to *ever* get a straight answer from him.
        c.   John is **tall**er than *anyone*.

The negative analyses, however, encounter a number of empirical and theoretical problems. First, the assumption that NPIs are licensed by the syntactic negative operator seems problematic since the monotonicity status, i.e., downward or upward entailingness, or (non-)veridicality, of comparative clauses has been controversial in the literature and never completely understood (see Hoeksema, 1983; Larson, 1988; Rullmann, 1995; Hendriks, 1995; Schwarzschild and Wilkinson, 2002; Heim, 2006). Contra the traditional assumption that comparative clauses are downward entailing (i.e., NPI-licensing) contexts, some recent researchers claim that they are upward entailing (Larson, 1988; Schwarzschild and Wilkinson, 2002) or ambiguous (Rullmann, 1994; Hendriks, 1995; Heim, 2006). On this matter, Heim notes that Schwarzschild and Wilkinson's upward entailment (UE) analysis of comparative clauses is due to the fact that the *than*-clause takes widest scope. That is, inferences in (6a) and (6b) hold because the DPs are effectively interpreted with widest scope, but it does not mean that *than*-clauses are always UE. It has been noted that *than*-clauses are DE if they contain DE operators like negation or universal quantifiers.

(6)   a.   John is taller than *some* professional basketball players are.

                Therefore, he is taller than some professional athletes are.
        b.   John is taller than most of his ancestors were.

                Therefore, he is taller than some of his ancestors were.

Given that a comparative clause itself may vary in terms of DE or UE depending on the quantifiers it contains (Rullmann, 1994 for Dutch comparatives; Hendriks, 1995; Heim, 2006), monotonicity does not seem to be relevant in characterizing DCs versus RCs.

    Second, NPIs that need negation in languages like Greek and Korean do not get licensed in the comparative (Giannakidou and Yoon, 2010). Based on the fact that strict NPIs such as Greek KANENAS 'anyone', Korean *amwuto* 'anyone' and Greek and Korean minimizers like 'budge an inch' are uniformly ungrammatical in comparatives, Giannakidou and Yoon argue that regular comparative clauses do not contain a negative operator. They further show that the same argument applies to English since strict NPIs like *either* is ungrammatical in comparative sentence: "*John is taller than Bill (is) either*."

    Third, as Price (1990; cf. Gaatone, 1971; Napoli and Nespor, 1977) notes, negative analyses assuming a semantics like (1) above cannot account for the fact that a negative particle *ne* also appears in equatives, for instance, in French. (Further discussion will follow in section 4.2 regarding the appearance of a negative particle in comparatives):

(7)   Il   est aussi bon qu'ils   **ne**   puissant l'e?tre. [French]
        he is as   good as they Neg can.Subj 3sg be
        'He is as good as they could be.'

Fourth, in more recent analyses of comparatives, it is no longer believed that there is only one specific degree *d* and that an underlying negative operator indicates the failure of the comparative standard to reach the same degree *d*, since regular

(inequality) degree comparisons are normally made with at least two salient objects which display at least two distinct degrees. If there are two degrees that the speaker perceives when employing a comparative construction, both degrees must be encoded in the semantics of comparatives. In particular, a semantics that assumes only one degree d faces a significant challenge in the following cases, where two distinct degrees are forced to be present: (i) as Von Stechow (1984) notes, Russell's ambiguity in which both instances of *she* refer to the subject *Mary* with differing degrees in (8);[1] (ii) the differential reading which requires an extra semantic device for incorporating the exact amount of difference, while denoting a relation between degrees of height between two objects at the same time as in (9); and (iii) the subcomparative where each degree is computed over two separate dimensions of measurements as in (10) (Kennedy, 1997b).

(8)   Mary believes *she* is taller than *she* is.   [Russell's ambiguity]

(9)   John is *3 cm* taller than Tom.   [Differential comparative]

(10)   This door is *taller* than that window is *wide*.   [Subcomparative]

Although not entirely impossible, the underlying negative operator in negative approaches is difficult to provide a straightforward semantics for cases like these without causing a significant number of theoretical complications (C. Kennedy, p.c.): In addition to the basic semantics like the one in (1) above, it would require a separate set of semantic tools for being able to calculate the precise degree in standard or the degree difference between subject and standard. Such complex semantics is undesirably stipulative and implausible from a child language acquisition standpoint.

Finally, it will be shown in section 2 that, although negative polarity items seem to quite frequently occur in comparative clauses, their appearances are in fact not costless in terms of semanticopragmatic effects.

1.2. Non-negative analyses and their problems

Presumably for the aforementioned reasons, recent researchers no longer assume an underlying negative operator in comparatives, but instead posit a degree operator indicating an inequality relation ($>$) between two existing degrees such that d′ is greater than d″, as illustrated in (11) (Von Stechow, 1984; Rullmann, 1995; Kennedy, 1997a; Kennedy and McNally, 2002; Schwarzschild, 2005; Beck, 2009; Heim, 2006 among many others).

(11)   Kim is taller than Lee (is).   *Non-negative Analysis*
          $max\{d'|\ \text{tall}(kim) \geq d'\} > max\{d''\ |\ \text{tall}(lee) \geq d''\}$

The non-negative analyses are advantageous in affording a simpler and more straightforward semantics, without having to resort to an implicit negative element. Furthermore, the aforementioned problematic cases for the negative analyses such as Russell's ambiguity, differential readings, or subcomparatives are easily explained away within the non-negative analyses where a degree operator encodes an ordering relation between two explicit maximal degrees (d', d'').

Despite these merits, however, the non-negative analyses are also incomplete for the following reasons. First, the abovementioned controversy on the DEness or UEness of comparative clauses (Hoeksema, 1983; Rullmann, 1995; Hendriks, 1995; Larson, 1988; Schwarzschild and Wilkinson, 2002; Heim, 2006) casts doubt on the non-negative theories, just as it did for the negative theories: Given that the debate has been concluded that the comparative is not inherently monotonic, but depends on the kind of quantifier it contains (Rullmann, 1995; Hendriks, 1995; Heim, 2006), how come NPIs appear in the following comparatives which do not contain any DE operators like negation or universal quantifier?

(12)   a.   Jack is taller than *ANYbody else* (is).
          b.   Jack is richer than you'll *EVer* be.
          c.   This work is more than I *can STANd*.
          d.   Grace's chicken was more than I *could be BOthered* eating.
          e.   Grace said the sky would sooner fall than she would *budge an inch*.
          f.   Jack does volunteer works more often than he *lifts a finger* to help his wife.
          g.   Jack would waste money on gambling more happily than he'd *give a penny* to a charity.
          h.   Jack helps other people more willingly than he pays *the least bit* of attention to his own family.

Here two things must be noted: first, we detect indeed a negativity that does not follow from the ordering alone. Second, the negativity seems to come form the NPIs themselves, which are all emphatic. Minimizers are emphatic anyway at all times, but with *any* and *ever* it is important to note the use of emphasis because they do not always come with it. These two

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[1] The sentence is ambiguous between two readings with consistent and inconsistent degrees of what the two instances of *she* denote.

properties, emphasis and negative effect, if properly analyzed, will be shown to be the key factors for producing the rhetorical effect, I will argue.

Another potential problem for the non-negative analyses is that they do not offer any explanation for the following questions which have been the original motivations for the negative analyses of comparatives: (i) Why do certain languages or dialects contain an overtly negative element within the comparative complementizer *than*? (Recall that some English dialects employ overt negative *nor*, instead of *than*); (ii) Why do languages like Old English, French, Spanish, and Catalan have a negative particle *ne* or *no* in comparatives?

One might wonder whether these occasional negatives necessarily deny the inequality operator ($>$) analyses, given that from a truth conditional perspective there is not an interesting difference between the negation analysis and the max analysis: since the relation in the max analysis logically entails that d'' is not as great as d', they are just different ways of representing the same truth conditions. However, the differences are certainly interesting if we think about bits of the actual linguistic representation as giving rise to one kind of meaning versus the other because then, depending on what the syntactic/morphological/semantic features of the different bits are, and what kinds of Logical Forms they allow, we can make different predictions (C. Kennedy, p.c.). For instance, saying '(i) Jack is tall to the degree d and everyone else is not as tall' or '(ii) the maximal degree d_1 to which Jack is tall is grater than the maximal degree d_2 to which everyone else is tall' makes no truth-conditional difference, which must be the reason why the representational difference did not receive much attention in the previous literature. The current study, however, focuses on the former meaning, arguing that the emergence of negation in the comparative clause across languages is not coincidental but necessary in order to convey a negative implicature toward the content of the comparative clause. In this spirit, the appearance of a negative particle in comparatives will be analyzed in section 4.2, where we assume that the comparatives with a negative element are only a special subtype of comparatives giving rise to rhetoricizing effects, which may have been accidentally spread to regular comparatives and sometimes even to equatives in certain languages and dialects.

As such, previous approaches leave behind a number of unresolved issues especially on the negativity of comparative clauses. As Von Stechow (1984) notes, different theories of comparatives better explain different areas of comparative data. This suggests that we need a more refined theory of the kinds of comparatives when it comes to capturing the negativity of comparatives that is shown in the examples with NPIs above.

1.3. Main ideas to be proposed: a split analysis

In exploring the properties of distinct kinds of comparatives at the level of the semantics-pragmatics interface, we identify a novel subtype of comparatives, namely 'rhetorical' comparatives (RCs), in contrast to regular 'degree' comparatives (DCs). These, we argue, convey more "negativity" than the mere DCs do, and they display a number of striking parallels to rhetorical questions (RQs), hence my calling them "rhetorical". The hallmark property for both RCs and RQs is, of course, the rhetorical flavor. Just as rhetorical force in questions is induced by NPIs in English, Serbian/Croatian, etc. (see Borkin, 1971; Lawler, 1971; Progovac, 1994; Den Dikken and Giannakidou, 2002), we propose that the presence of emphatic and strong NPIs in comparatives is the main ingredient for contributing to rhetorical force as well. Furthermore, it will be shown how the separation of rhetorical comparatives from regular comparatives opens the possibility of resolving various issues surrounding the semantic and pragmatic aspects of comparatives.

The purpose of this article is the following: First, in section 2, we use the distribution of polarity items as a departure point for developing a semantic analysis of rhetorical comparatives (RCs) that supports a divide between two types of comparatives. Our second goal in this article, in section 3, is to show that RCs are different from metalinguistic comparatives (MCs: Bresnan, 1973; McCawley, 1988; Embick, 2007; Giannakidou and Stavrou, 2008; Morzycki, 2008; Giannakidou and Yoon, 2009, in press). Third, section 4 demonstrates that there are three strategies for rhetoricizing comparatives that are largely predictable from their common property, i.e., non-veridicality. Finally, the result reinforces the larger claim advanced by Giannakidou (2009) that there is a fundamental connection between polarity phenomena and mood, and our innovation here is to suggest another important connection between expletive negation and mood, under the principle of nonveridicality.

2. Rhetorical comparatives

A primary motivation for the current proposal is the following. Comparative data are diverse with respect to negativity and cannot be captured by prior uniform analyses. We identify here a species of degree comparison that is more "negative" than the regular ordering ($>$) of the comparative makes us expect.

2.1. Empirical description of the rhetorical effect of an NPI in the comparative

RCs are illustrated in (13), repeated from (12):

(13)   *Rhetorical Comparatives*
   a.   Jack is taller than *ANYbody else* (is).
   b.   Jack is richer than you'*ll EVer* be.
   c.   This work is more than I *can STANd*.

    d.   Grace's chicken was more than I could be *BOthered eating*.

    e.   Grace said the sky would sooner fall than she would *budge* an inch.

    f.   Jack does volunteer works more often than he *lifts a finger* to help his wife.

    g.   Jack would waste money on gambling more happily than he'd *give a penny* to a charity.

    h.   Jack helps other people more willingly than he pays *the least bit* of attention to his own family.

In these examples, the presence of emphatic/strong NPIs gives rise to rhetorical effects. Pragmatic reasons to use RCs are to convey: (i) a negative implicature toward the content of the standard clause and/or (ii) a presupposition of a large difference, as given below of each sentence:

(14)   *Presuppositions in Rhetorical Comparatives*

    a.   Jack is taller than *ANYbody else* is.

    i)   Negative implicature: Everybody else is not going to be as tall as John is.

    ii)   Large difference presupposition: There is a significantly large difference in degree of height between Jack and everyone else.

    b.   Jack is richer than you'*ll EVer* be.

    i)   Negative implicature: You will never be as rich as John.

    ii)   Large difference presupposition: There is a significantly large difference in degree of wealth between Jack and you in any foreseeable future.

    c.   Jack does volunteer works more often than he *lifts a finger* to help his wife.

    i)   Negative implicature: Jack very rarely (or never) lifts a finger to help his wife.

    ii)   Large difference presupposition: There is a significantly large difference in frequency between Jack doing volunteer works and him helping his wife.

    d.   Jack would waste money on gambling more happily than he'd *give a penny* to a charity.

    i)   Negative implicature: You would never give a penny to charity.

    ii)   Large difference presupposition: There is a significantly large difference in degree of happiness that Jack would feel between wasting money on gambling and giving money to a charity.

The negativity of RCs originates from the negative implicature or negative bias. But what kind of implicature? In order to formulate the semantics of this novel subcategory of comparatives, it will be instructive to look at a strikingly similar phenomenon, namely rhetorical questions (RQs). As in (15), questions with strong NPIs/minimizers are RQs which strongly prefer a negative answer (Sadock, 1971, 1974; Linebarger, 1980, 1987; Kadmon and Landman, 1990; Progovac, 1994; Krifka, 1995; Lee, 1995; Han, 1997; Han and Siegel, 1998; Giannakidou, 1998, 1999; Guerzoni, 2001; Den Dikken and Giannakidou, 2002; cf. Ladusaw, 2004 for RQs as biased assertions, and Van Rooy, 2003 for RQs as constrained questions with information entropy).

(15)   Who could *sleep a wink* with this racket?   RQ

Just like in RCs, the negativity in RQ like (15) comes in the form of the negative implicature. This, however, is *implicature* not entailment since a positive answer like "I would" is possible in which case the implicature is cancelled (Den Dikken and Giannakidou, 2002).

    Then we propose that just like RQs, the hallmark property of RCs is the containment of a strong NPI in comparative clauses. We furthermore assume that NPIs with emphatic intonation in (13a–d) (Giannakidou, 1998 shows that strong NPIs crosslinguistically have emphatic intonation) and minimizer NPIs in English in (13e–h) (Krifka, 1995) fall under the category of strong NPIs.[2]

    On the other hand, just as questions with unstressed weak NPIs like *any* or *ever* can be regular information-seeking questions (Borkin, 1971; Heim, 1984), the following comparatives with *any* or *ever* could also be DCs that are purely informative of the relative ordering relation between two maximal degrees.

(16)   a.   Jack is taller than *anyone* else.   DCs

        b.   Jack is richer than I *ever* was.

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[2] In the category of strong NPIs that induce rhetorical effects here, NPIs that need negation such as English *either*, Greek *KANENAS*, or Korean *amwuto* are excluded. These NPIs should be categorized into superstrong NPIs (Zwarts, 1993) that can never occur in comparative clauses without being licensed by overt negation.

Note also that, besides the lexical strength or prosodic emphasis on NPIs, the presence of a modal plays an additional role in giving rise to rhetorical effects in comparatives. When a weak type of NPI *ever* is accompanied with a modal *will*, as in (17a), the resulting presupposition is equivalent to one with a strong NPI or an emphatic NPI, as in (17b).

(17)   a.   Jack is richer than you'*ll ever* be.   RCs
       b.   Jack is richer than you *EVer* were.

This is strongly reminiscent of Den Dikken and Giannakidou's (2002) observation that the following question (18b) with the weak NPI *any* plus the modal *would* is a RQ presupposing a negative answer, whereas no such presupposition exists in the absence of a modal in an information question (18a).

(18)   a.   Which student read *any* of the papers?   [information question]
       b.   Which student *would* read *any* of the papers?   [negative answer preferred]

This data provides a clear answer to the question of what exactly is responsible for the rhetorical flavor. Just like in RQs, we will propose that it is the contribution of the NPI itself that primarily creates rhetorical effects in RCs and the presence of a modal reinforces rhetorical effects when an NPI is too weak to trigger a rhetorical flavor by itself. More discussion on the semantic role of modals will follow in 2.2.2 and later in section 4.3.

Thus far we have shown that emphatic/strong NPIs contribute rhetorical effects in questions and comparatives. A question arises here: how precisely do these NPIs give rise to RCs?

The idea that we advance here is: what makes RCs special is the fact that they contain a 'non-referential' standard, and that strong/emphatic NPIs play a crucial role in altering a referential standard into a non-referential standard. Our conception of the non-referential standard refers to cases where the domain of what the standard denotes goes beyond its regular borderline of presupposed subset by an excessive size adjustment, and makes it difficult to make proper reference. This anti-anaphoric standard is what creates a non-veridical context in RCs. And there seems to be two ways to introduce a non-deictic standard.

The first strategy is to employ an enormously extended domain for the standard, which in turn renders itself referentially deficient. Such maximal domain extension can be accomplished either by prosodic emphasis on regular domain extenders such as *any, ever* (Kadmon and Landman, 1990, 1993; Krifka, 1990, 1992, 1995; Giannakidou, 1998), or by means of a weak NPI plus a modal (Den Dikken and Giannakidou, 2002).

Domain extension has been discussed in questions with NPIs, where a weak NPI like *ever* is used in an information-seeking question in order to turn a biased question into an unbiased one (Krifka, 1990, 1992, 1995; Kadmon and Landman, 1993; Van Rooy, 2003). Van Rooy notes that other things being equal, general questions are normally preferred to specific ones. (19a) asks about recent visits; (19b) is a more general question, concerning 'in your life'.

(19)   a.   Have you been to China?
       b.   Have you *ever* been to China?

Kadmon and Landman note that in contrast with a weaker expectation implicated in (20a), (20b) gives rise to a strong expectation that Sue does not have any potatoes whatsoever.

(20)   a.   Does Sue have *some* potatoes?
       b.   Does Sue have *any* potatoes?

They further argue that in a context where 'potatoes' should mean 'cooking potatoes', the presence of *any* reflects the expectation that Sue does not have any cooking potatoes, but it has been noted that Kadmon and Landman's claim on domain widening (and strengthening) holds only for stressed *ANY* (Rohrbaugh, 1993; Krifka, 1995; Van Rooy, 2003).

Once we take into account emphatic *ANY*, however, the size of the domain for potential referents can be divided into three categories depending on the selection of polarity items. First, (20a) is an information-seeking question with a specific narrow domain, triggered by a PPI *some*. Second, (20b) is also an information-seeking question where a general wide domain of potatoes, triggered by a NPI *any*, is calculated under normal circumstances. Thus, as Kadmon and Landman claim, it only concerns the presence of prototypical cooking potatoes, irrespective of the existence of other kinds of potatoes. Finally, we diverge from van Rooy by assuming that prosodic emphasis on weak NPIs like *ANY* reinforces the domain extension from a regular one, ranging over typical references, to a maximally wider one, even further than what a context may delimit. Thus (21) below constitutes a clear case of rhetorical question, where the domain of potatoes is extended to the maximal possible level, escaping out of the borderlines for prototypical potatoes.

(21)   Does Sue have *ANY* potatoes?   RQ

Hence it comes to include even the least likely ones such as stale potatoes, rotten potatoes, potatoes for industrial use, or even ones of negligible quantity such as an extremely thin sliver of potato, or ones of questionable boundaries like potato

powder or potato extract. This represents a ridiculously extended domain triggered by emphatic *ANY*, which is the main source for the rhetorical flavor.

In a similar respect, Den Dikken and Giannakidou discuss the domain extension of (22b) in which modification by *the hell* has the effect of extending the domain of quantification of *who* to a wider one including familiar and novel values (Heim, 1982).

(22)   a.   Who talked to Ariadne?
        b.   *Who the hell* talked to Ariadne?

Whereas regular wh-phrases quantify over a presupposed subset of the domain, the domain of quantification of *wh-the-hell* widens to the entire domain, becoming "the open set including all persons in the universe, and all possible values are available for x, even less likely or prototypical ones" (Den Dikken and Giannakidou, 2002:43). Then their intuition on *wh-the-hell* seems to be close to the domain of emphatic *ANY*. Thus the extreme domain extension produces rhetorical effects such that no one was supposed to talk to Ariadne.

The insight on rhetorical effects induced by radical domain extension in interrogatives is directly applicable to comparatives. Just like the above questions, comparatives with regular *any* versus emphatic *ANY* display a similar contrast, and it seems analogous to another weak NPI, *ever* versus emphatic *EVER*. In the following DC (23b), the domain for the denotation of "you ever were" receives a 'regular extension', covering the entire domain that is accessible in a given context.

(23)   a.   John is richer than *anyone* is.   DCs
        b.   John is richer than you *ever* were.

Even after the extension, it is still possible to refer to the maximal degree to which the wealth of the addressee peaked at some point in the past of his life. Being within appropriate boundaries of the domain is what makes the standard a referential and veridical context in DCs.

However, in the following RC with emphatic *EVER* (24a), the domain for the standard is excessively extended beyond its boundaries and therefore it becomes difficult to make reference to any particular temporal point when the addressee is d″ rich. On the other hand, though the non-emphatic *ever* in (24b) only triggers a regular domain extension, its association with the modal *will* boosts the effects of domain extension to the level of surpassing the highest endpoint of a scale associated with the addressee's wealth.[3] We thus propose that this 'extreme extension' of domain is a mode of establishing a non-referential domain for the standard, giving rise to rhetorical effects.

(24)   a.   John is richer than you *EVER* were.   RCs
        b.   John is richer than you'*ll* *ever* be.

The second strategy for a vague standard is to go in the opposite direction, i.e., to exploit an 'excessive shrinking' of the domain of the standard. Just like surpassing the maximal endpoint of a regular domain, playing down the minimal endpoint significantly decreases referentiality as well. This is typically shown in RCs with minimizers like *lift a finger, bat an eye, sleep a wink, budge an inch, give a penny*, or *the least bit*, as in (25). This extremely shrunk domain is another mode of establishing a non-referential domain for RCs.

(25)   a.   Grace said the sky would sooner fall than she would *budge an inch*.
        b.   Grace buys expensive presents for her assistant more often than she *lifts a finger* to help her husband.
        c.   Jack would waste money on gambling more happily than he'd *give a penny* to the charity.
        d.   Jack helps other people more willingly than he pay*s* *the least bit* of attention to his own family.

In accounting for why RQs are triggered by these minimizers, prior analyses diverge: (i) Krifka (1995; see also Guerzoni, 2001; Van Rooy, 2003) attributes the rhetorical force to the fact that the semantic meaning of strong NPIs like *lift a finger* denotes the minimal element of a scale; (ii) Karttunen and Peters (1979) argue that it is because these items share a presupposition with *even*; (iii) however, since the association of 'even' with the end of a scale is questioned by Kay (1990), Van Rooy (2003) argues that the rhetorical effect of the use of some NPIs in questions is reducible to domain widening in the sense of Kadmon and Landman (1990).

Our conception of excessive domain adjustment suggests a systematic refinement of these original ideas on the source of rhetorical effects, and the contribution of the current proposal is that such strengthening effects come not only from domain extension but also from domain shrinking. The bidirectional domain adjustment of these NPIs is a natural way of significantly reducing their referentiality, either maximizing them to be non-specific or minimizing them to be non-existent.

As such, our hybrid analysis predicts the regularity in the procedure of how strong and emphatic NPIs induce rhetorical effects in comparatives as well as in questions. Given that strong NPIs consistently reveal such a property, we can generalize

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[3] In terms of non-exhaustivity, it is possible to attribute this to the fact that, just like weak NPIs, modals introduce alternatives (Kratzer, 1981, 1991).

that non-referentiality is not delimited to a special set of lexical items in certain languages but rather a universal property for creating negative polarity in natural language. And this is the direction that we are pursuing. Furthermore, we assume that the negative rhetorical effects follow from the direct link between non-referentiality and negative polarity that has been proposed by variation approaches for polarity source (Giannakidou, 1998, 2009; cf. Haspelmath, 1997; Farkas, 2002).

2.2. Analysis: RC as a product of non-referential standard and NPI use

For the analysis of RCs, there will be three main ingredients: First, NPI is analyzed as containing a deficient, dependent, non-deictic variable (Giannakidou, 1998) which triggers the undefined standard of RCs in section 2.2.1. Second, negative implicature in RCs will be recast as a presupposition of negative attitude (in the sense of Den Dikken and Giannakidou, 2002) in section 2.2.2. Finally, rhetorical effects in RCs will be attributed to the semantics of RC with an undefined standard, and the presupposition of large difference is accounted for by the domain adjusting nature of NPIs.

2.2.1. Giannakidou 1998: NPIs containing non-referential, non-deictic variable

If the presence of strong/emphatic NPIs (and modals) renders comparatives rhetorical, as opposed to DCs, the next question is why such NPIs induce a rhetorical flavor. In order to see why, an understanding of the nature of polarity items is called for.

In the polarity literature, there is an ongoing debate on the sources of polarity between scalarity only approaches (Kadmon and Landman, 1993; Lee and Horn, 1994; Krifka, 1995; Lahiri, 1998; Chierchia, 2006; Farkas, 2006) which assume only a scalar focus particle (*even*) as the polarity source, and variation approaches (Giannakidou, 1998, 2009; cf. Haspelmath, 1997; Farkas, 2002) which also posit 'non-referentiality' as another source for polarity, in addition to scalarity. We follow the variation assumption for polarity sources that has been strongly supported with empirical evidence across languages, and it will be shown how non-referentiality plays a key role in establishing core properties of RCs.

To begin, note that there seems to be a direct link between *non-referentiality* and negative polarity. It has been argued that in a number of languages certain expressions become NPIs because they are referentially deficient, even though they are not scalar. For instance, *ku* in Salish is a determiner that "merely fails to positively assert the existence of an entity" (Matthewson, 1998:179). Another representative example of an NPI triggered by non-referentiality is *wh-the-hell* items in English. Den Dikken and Giannakidou (2002) argue that the negative polarity of *who the hell* is due to the fact that it cannot be anaphoric to a previously introduced discourse referent, as illustrated in (26).

(26)   Someone$_i$ bought that book. John knows {who$_i$/*who the hell}.

They further note that what is responsible for minimizers such as *budge an inch, sleep a wink, lift a finger* acting as NPIs is the indefinite part since *a finger* does not refer to a finger and *budge some inches* or *lift two fingers* loses its polarity. Giannakidou (1998:70) defines these items as a dependent variable $\exists(x_d$ which is still an existential quantifier but defective because the variable x_d cannot make reference to a discourse referent.

(27)   An existential quantifier is dependent iff the variable $\exists(x_d$ it contributes does not introduce a discourse
         referent in the main context.

The dependency in reference, however, does not mean that there is no reference: she notes that in Greek, *kanenan* gets to introduce a discourse referent as in (28).

(28)   An dhis kanenan$_1$,   pes tu$_1$ na me perimeni.   [Greek]
         If you see anybody, tell him   to wait for me.

However, this kind of variable is 'defective' in the sense that the assignment function *g* cannot receive a value in a main context, hence it may receive values only in an embedded domain. As given in (29), Giannakidou (2009) proposes that a defective reference yields a polarity-sensitive expression if it is uninterpretable as a free variable.

(29)   Non-deictic variables
         A variable *x* is non-deictic iff *x* cannot be interpreted as a free variable.

She further notes that such anaphoric dependency can be rescued: (i) if it is in the scope of a negative operator where the introduction of a discourse referent is not forced; or (ii) if it is under a nonveridical operator which is an embedding operator, hence it is not forced to introduce a discourse referent in the main context or to be existentially closed at the text level.

If non-referentiality is the main reason why lexical items like *ku* in Salish, Greek NPIs, and the above minimizers become NPIs, do other NPIs also display non-referentiality? The answer we will suggest is positive at least for emphatic and strong NPIs. We furthermore propose that rhetorical effects in RCs are natural consequences of containing expressions with extremely decreased referentiality in comparative clauses. In section 2.1, it was shown how emphatic and strong NPIs render the content of the whole clause exceedingly non-deictic by domain adjustment. In other words, a creation of anti-anaphoric

standard in RCs is a speaker's strategy to express negative implicature toward the content of the standard clause. On the other hand, we will argue that comparative clauses with weak NPIs such as non-emphatic *any* or *ever* may remain as DCs; though these weak NPIs induce domain widening of standard to some extent, the standard is still referential and lack non-deictic variable.

2.2.2. *Den Dikken and Giannakidou 2002: negative attitude triggered by NPIs and modals*

Given that the non-referential standard of comparatives is contributed primarily by the non-deictic properties of polarity items and secondarily from modals which become relevant only when the strength of the NPIs is weak, the next question to ponder upon is: How exactly do such items give rise to rhetorical effects? And what kind of implicature is conveyed in RCs?[4]

In accounting for lexical properties of the NPI *wh-the-hell* items, Den Dikken and Giannakidou (2002) suggest that it contributes a negative presupposition as in (30), which expresses a negative attitude of the speaker.

(30)   *Presupposition of negative attitude of* wh-the-hell

In the actual world w: If $\exists x \, [P(x)(w) \wedge Q(x)(w)] \to \text{SHOULD} \, \neg \, Q(x)(w)$, for all possible values of x.

(where x is the variable of *wh-the-hell*, P is the property denoted by the *wh-the-hell* phrase, and Q is the property denoted by the VP)   (Den Dikken and Giannakidou, 2002)

They define this presupposition as a modalized conditional statement such that "if any x such as x did what is expressed by the VP, then x should not have done it." This presupposition implies two important properties of NPIs. For one thing, they note that the presupposition conveys "uncertainty" about the actual existence of a value for x that can be associated with the property of VP, which makes *wh-the-hell* equivalent to *any*. The uncertainty property crucially indicates that, just like emphatic and minimizer NPIs, *wh-the-hell* is non-referential, hence containing a non-deictic variable in the sense of Giannakidou (1998) that is discussed in the previous section.

Furthermore, they note that the use of *wh-the-hell* conveys the proposition that "if there is indeed an x that did what the VP says, then x did something that should not have happened (Den Dikken and Giannakidou, 2002:43)." For instance, in (31), the speaker presupposes that if there is anyone who talked to Ariadne, that should not have happened.

(31)   *Who the hell* talked to Ariadne?

This presupposition conveyed by *wh-the-hell* items is defined as "negative attitude" as given below.

(32)   Negative attitude of (31)

If there is a person x in w, and x talked to Ariadne in w: x should not have talked to Ariadne in w.

(Den Dikken and Giannakidou, 2002)

The negative attitude is what makes (31) a negative rhetorical question which is generally assumed to presuppose a negative answer (Sadock, 1971, 1974; Linebarger, 1980, 1987; Kadmon and Landman, 1990; Progovac, 1994; Krifka, 1995; Lee, 1995; Han, 1997; Han and Siegel, 1998; Giannakidou, 1998, 1999; Guerzoni, 2001). Importantly, they further note that negative rhetorical effects become more visible with modals, illustrating how the negative answer arises in (33).

(33)   Who the hell *would* buy the book?

Since the role of modal *would* is introducing a set of possible worlds, i.e., its modal base K (Kratzer, 1981), they treat (33) as a case of explicit quantification over possible worlds and assume domain extension for the NPI. Given this, they propose the following negative attitude for a sentence with a modal.

(34)   *Presupposition of negative attitude of* wh-the-hell *with a modal*

$\forall w \in K \, [P(x)(w) \to Q(x)(w)]$, for all possible values of x.

(where x is the variable of wh-the-hell, P is the property denoted by the *wh-the-hell* phrase, and Q is the property denoted by the VP)   (Den Dikken and Giannakidou, 2002)

(35)   *Negative attitude of (33)*

$\forall w \in K$: If there is a person x in w, then x does not buy that book in w.

(Den Dikken and Giannakidou, 2002)

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[4] In fact the radical domain extension alone can explain the modalization effect of den Dikken and Giannakidou. They argued for domain opening in the RQ anyway, and domain opening does come with possibilities (thus modality).

Here modality is expressed as the negative attitude that is relativized to the worlds in the modal base. In particular, they assume that the necessity modal *would* translates into a universal quantifier, which implies that the negative presupposition must hold in every world in the modal base K. Given this, they account for how negative rhetorical reading is attained. In the case where the world variable is bound by the universal quantifier, the situation eventually becomes the one in which "in no world w would anybody buy that book" which corresponds with the negative rhetorical reading.

Thus far it was shown that NPIs trigger domain extension and convey a presupposition of negative attitude, but the negative rhetorical readings arise only when accompanied with a modal. Importantly, the negative attitude in RQs here will give us a plausible foundation for the analysis of negative rhetorical reading in RCs. We assume that the negative attitude in above rhetorical questions is strongly similar to the negative rhetorical effects in the comparative that are triggered by strong NPIs with non-deictic variables and modals.

Now recall that RCs convey negative implicature and large difference presupposition, as repeated below.

(36)   a.   Jack is richer than you'll EVer be.
        i)   Negative implicature: You will never be as rich as John.
        ii)   Large difference presupposition: There is a significantly large difference in degree of wealth between Jack and you in any foreseeable future.

        b.   Jack does volunteer works more often than he *lifts a finger* to help his wife.
        i)   Negative implicature: Jack very rarely (or never) lifts a finger to help his wife.
        ii)   Large difference presupposition: There is a significantly large difference in frequency between Jack doing volunteer works and him helping his wife.

The negative implicature here can be recast as "negative attitude" in RQs in the sense of Den Dikken and Giannakidou, except that in the case of RCs the negative attitude is on the basis of the large difference between the subject and the standard. For instance, in (36a) the speaker has a negative attitude about the financial status of the addressee. Since modality is involved here, the negative attitude is relativized to the worlds in the modal base of necessity. This yields the following negative rhetorical reading:

(37)   *Negative attitude of (36a)*
        $\forall w \in K$: If there is a degree d'' to which you will get rich, d'' is unimpressive or unimportant since it is significantly smaller than d' in w.

Unlike *wh-the-hell* which triggers negative rhetorical reading only in combination with modality, however, we assume that a comparative with a strong NPI like *lifts a finger* (and without a modal) falls under the category of RCs because it also conveys a negative attitude of the speaker and yields a negative rhetorical reading. The negative rhetorical reading of (36b) seems somewhat similar to the one in (37): it implies that in no world w would the frequency of Jack helping his wife, d'', would be impressive or important since it will be significantly smaller than the frequency of Jack's doing volunteer works, d'.

Then the next question is: How can the latter case without modality induce such negative rhetorical reading? The answer we suggest is that the source of negative rhetorical reading is different for RCs with minimizer NPIs – a presupposition of large difference. A detailed discussion is given in the following section.[5]

2.2.3. Putting it together: negative rhetorical effects and large difference

In this section, we will propose that the NPI-containing *than*-clause does not have a well defined standard, because of the non-referentiality of the NPI. This is why these cannot be regular comparatives. We further propose that because of the domain extending or shrinking nature of the NPI, we have a high or low value for the degree in standard, and this creates the large difference inference, which is the only sensible inference available in the sentences.

To begin, recall that the negative polarity of minimizers like *give a penny* is due to the indefinite part, and *give ten pennies* is no longer a NPI because it could be presuppositional and familiar, hence deictic. This predicts that in the following comparative with *gives ten pennies*, rhetorical effects disappear.

(38)   Grace buys expensive clothes more often than she *gives ten pennies* to the homeless.

The above sentence must be categorized as a regular DC, rather than a RC, since what the standard clause denotes is perfectly detectable in the context. The variable for the standard degree of frequency d'' to which she gives ten pennies to the homeless is a legitimate free variable since it is specific enough to be valued in a given context. That is, it could be linked to discourse familiar values.

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[5] This can be understood along the line of the fact that negative rhetorical questions can be formed when questions contain polarity items like *wh-the-hell* with modality as well as strong NPIs without modality such as "Did he lift a finger to help you?".

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Now consider the following comparative with a non-emphatic weak NPI *anyone*, which also lacks rhetorical effects:

(39)   Jack is taller than *anyone*.

Based on the observations so far, we propose that what is distinctive in RCs is their dependence on the *non-referentiality* of the standard, which is indeed a direct contribution of strong/emphatic NPIs. If the non-deictic standard fails to make reference to a specific discourse referent, it is impossible to posit two distinct degrees in the semantics of RCs.

In the semantics of comparatives by Kennedy and McNally (2002), the presupposed and familiar standard in DCs like (40) allows for introducing a discourse referent, hence enabling the computation of the maximal degree of what the content of the standard denotes. Thus we follow the standard non-negative analysis (41) for the semantics of DCs.

(40)   Kim is taller than Lee (is).   **Non-negative Analysis**
         $max\{d' |$ tall$(kim) \geq d'\} > max\{d'' |$ tall$(lee) \geq d''\}$

(41)   a. $[[_A$ tall$]] =$
              $\lambda d'' \lambda x.$tall$(s) \geq d'$
         b. $[[$than *wh* Lee ~~is t tall~~$]] =$
              $max \{d'' |$ tall$(Lee) \geq d''\}$
         c. $[[_{DegP} -er [$than *wh* Lee ~~is t tall~~$]]] =$
              $\lambda G \lambda x. (\exists d[d > max\{d'' |$ tall$(Lee) \geq d''\} \wedge G (d')(x)]$
         d. $[[_{AP} [_{DegP} -er$ than *wh* Lee ~~is t tall~~$]$ tall $]] =$
              $\lambda x. (\exists d' [d' > max\{d'' |$ tall$(Lee) \geq d''\} \wedge$ tall$(d') \geq d']$
         e. $[[(40)]] = 1$ iff
              $(\exists d' [d' > max\{d'' |$ tall$(Lee) \geq d''\} \wedge$ tall$(Kim) \geq d']$

On the other hand, we propose that the semantics of RCs consists of the following two parts: first, building upon Kennedy and McNally (2002), the semantics in (43a) represents the basic inequality relation of (42) which is truth-conditionally equivalent to that of DCs; second, since the *than*-clause contains a dependent variable, d_d'', the precise semantics in the standard is referentially undefined, as shown in (43b). This means that the maximal degree of what *ANYbody else* is tall is difficult to be gauged because the domain has been overly extended.

(42)   John is taller than *ANYbody (else)* is.

(43)   a. $[[_A$ tall$]] =$
              $\lambda d'' \lambda x.$tall$(s) \geq d'$
         b. $[[$than *wh* ANYbody else ~~is t tall~~$]]$
              $max \{d_d'' |$ tall$(ANYbody\ else) \geq d_d''\}$: **undefined**

As such, a semantics of RCs is similar to that of DCs except that the former contains a deficient variable, which renders the standard undefined in the context. Note further that these semantics for RCs and DCs tell us that the notion of downward entailment (DE) does not offer much help in characterizing comparatives (which turned out to be ambiguous depending on what kind of quantifier they contain as discussed above). Rather, we suggest that the relevant concept should be (non-) veridicality, which is directly linked to (non-)referentiality. In terms of veridicality, the comparative clause in (40) above is veridical since it is possible to refer to one particular maximal degree to which Lee is tall in a given context, and therefore it expresses certainty about, or commitment to, the truth of a sentence. In contrast, the comparative clause of RC in (42) is nonveridical because it contains a defective variable for which the assignment function g cannot assign a value in a main context. This means that the comparative clause can express neither certainty about nor commitment to the truth of a sentence. Based on the definition of non-deictic variable (Giannakidou, 2009) repeated below, we assume that the precise degree for d_d'' is unattainable in the context since it is difficult to make reference to every member in the ridiculously extended domain of *ANYbody (else)*.

(44)   Non-deictic variables
         A variable x is non-deictic iff x cannot be interpreted as a free variable.

And the defective variable can only be valued by being embedded by the negative attitude that is discussed in (37) above. This is consistent with our observation that negative rhetorical effects in RCs are triggered by emphatic/strong NPIs that render the content of the whole clause extremely non-referential. In other words, employment of an exaggerated standard in

RCs is a speaker's strategy for conveying a heightened emotional state, i.e., the negative attitude, toward the content of the standard clause, as seen in section 2.2.2.[6]

This seems to support the idea that the semantics of RCs will be in a way similar to what the negative analyses of comparatives posit, repeated below in (45).

(45)   John is taller than anyone.   **Negative Analysis**
        ($\exists e$ John is tall to extent e AND **NOT** [anyone else is ~~tall to extent e~~]   (Ross, 1969)

However, there are reasons to be cautious about the semantics with a negative operator. For one thing, we have shown that negativity is not involved in all comparatives but only in a special type of them, namely RCs. Second, even though some kind of negativity exists in RCs, it should not be posited at the level of the syntax of a comparative (as evidenced by Giannakidou and Yoon, 2010), contra what has been proposed by the negative analyses. Rather, we propose that it is located at the level of negative implicature that a RC carries. Furthermore, as already noted in the literature on polarity items in RQs (Krifka, 1990, 1992, 1995; Van Rooy, 2003), we assume that the rhetorical effect of a sentence like (45) can be achieved only when the NPI is either morphologically strong (*anybody else*) or prosodically emphatic (*ANYbody*).

Given this, the refinements that we suggest are the following: Negativity in the comparative is triggered only if a standard clause is non-referential, i.e., only for RCs: as noted in section 2.2.1, the vague standard is precisely due to the non-referentiality of the NPI. This accounts for why these cannot be regular comparatives, and also why a presupposition of large difference arises in RCs. Because of the bidirectional nature of the NPI – excessive domain extension or shrinking, we have a markedly high or low value, and this creates the *large difference inference* discussed in section 2.1. This assumption is in line with Giannakidou's analysis of NPIs like *even* and minimizers, showing how RQs emphasize the minimal amount.

Based on the discussion so far, we propose the rhetorical effects in RCs as below:

(46)   **Rhetorical effects in RCs:**
        (i)   *Non-referential standard:* There is no referential standard. The d'' cannot be defined within an appropriate domain in context.
        (ii)   *Large difference in degree:* Because of the strong NPI, you tend to look low or high end of the scale. This creates the large difference in degree.

Before closing the discussion, we present a piece of evidence for the non-referential standard of RCs: Differential measure phrases such as *2 pounds* are available only for DCs in which the standard d'' is anchored to a specific weight of Lee in the context. As illustrated in (47a), however, a RC with a measure phrase is ungrammatical because the maximal weight that Lee will ever reach is unfixed and immeasurable. Thus the vague standard in RCs is incompatible with differential measurements that require the presence of two specific degrees.

(47)   a.   *Kim is (exactly) 2 pounds heavier than Lee*'ll ever* be.   RC
        b.   Kim is (exactly) 2 pounds heavier than Lee is.   DC

Given this, various properties of RCs can be attributed to strong non-referentiality of the standard, which entails non-veridicality.

In section 2.2, we have shown the following: First, RCs are comparatives with a rhetorical flavor with respect to the content of the standard of comparison; Second, rhetorical effects are attained via comparison to a referentially defective standard; Third, a defective degree variable in a non-referential standard is salvaged by a negative implicature of RCs; Finally, non-referentiality can be achieved by employing an item that fails to introduce a familiar/presupposed referent or a specific referent within an appropriate domain in context.

3. RCs are not MCs

As a reviewer raises the question of what is the precise difference between RCs and metalinguistic comparatives (MCs: Bresnan, 1973; McCawley, 1988; Embick, 2007; Giannakidou and Stavrou, 2008; Morzycki, 2008), before moving on, we would like to note a few facts about comparative subtypes: DCs, RCs and MCs.

Metalinguistic comparatives as in (48) are defined as deviant comparatives in that they express disapproval as in (49), compared to regular comparatives.

(48)   a.   Your problems are financial more than legal.
        b.   Your problems are financial rather than legal.

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[6] See also Hoeksema (1984) which showed the phrasal comparative *any* to be a free choice item, and Giannakidou and Yoon (2010) who generalized the analysis.

(49)   "It is more appropriate for me to say that your problems are financial, than to say that your problems are legal."
(McCawley, 1988)

Based on the following contrasts, we argue that RCs are a subtype of DCs only with a non-referential standard, and an essentially different creature from MCs. In contrast with MCs, DCs and RCs do share properties in morphological, syntactic, and semantic aspects.

Just to name a few, first, it is well-known that in MCs it is impossible to have a synthetic comparative form -er (McCawley, 1988; Giannakidou and Stavrou, 2008; Morzycki, 2008), but DCs and RCs are possible with -er.

(50)   a.   Serena is more smart than industrious.   MCs
        b.   *Serena is smarter than industrious.

(51)   a.   *Serena is more rich than Erik.   DCs
        b.   Serena is richer than Erik.

(52)   a.   *Serena is more rich than you'll ever be.   RCs
        b.   Serena is richer than you'll ever be.

Second, displacement of more to the right is possible in MCs (Giannakidou and Stavrou, 2008; Morzycki, 2008), but is impossible in DCs and RCs.

(53)   Your problems are financial more than legal.   MCs

(54)   *Your problems are serious more than mine.   DCs

(55)   *Your problems are serious more than mine will ever be.   RCs

Third, MCs are possible with adjectives that are not ordinarily gradable (McCawley, 1988; Morzycki, 2008), whereas DCs and RCs are impossible.

(56)   Your problems are more financial than legal.   (McCawley, 1988) MCs

(57)   *Your problems are more financial than mine.   DCs

(58)   *Your problems are more financial than mine will ever be.   RCs

Finally, MCs are impossible with comparison of deviation (Giannakidou and Stavrou, 2008; Morzycki, 2008) while DCs and RCs are possible. MCs like (59) can have only the metalinguistic meaning that it is more appropriate for me to say that this table is wide than to say that this table is long, while both DCs and RCs compare two degrees on different measurements.

(50)   This table is more wide than long.   (metalinguistic) MCs

(60)   This table is wider than it is long.   (Kennedy, 1997b, 2007)(COD) DCs

(61)   The sky would sooner fall than he would budge an inch.   (COD) RCs

According to Giannakidou and Stavrou (2008; Giannakidou and Yoon, 2009, in press), the comparative adverbial $MORE_{ML}$ in MC does not compare degrees of (the denotation of) the adjective, but degrees of appropriateness of statements, or preference. The metalinguistic meaning is attitudinal, and expresses a contrast between two propositions.

(62) $[[MORE_{ML}]] = \lambda p \lambda q. \exists d[R(a)(p)(d) \wedge d > max(\lambda d'[R(a)(q)(d')])]$ (GS, 2008) where R is a gradable propositional
        attitude supplied by the context: either epistemic, or preference (desiderative or volitional); a is the
        individual anchor (Farkas, 1992a,b; Giannakidou, 1998, 1999): typically, the speaker in this case.

It is defined that the metalinguistic MORE takes two propositional arguments: p (the proposition of the main clause), and q (the proposition of the than-clause) and compares the two propositions in terms of the degree that the speaker believes, prefers, or is willing to assert them.

Given that MCs are more about comparison of degrees of appropriateness of statements, or preference on a separate dimension at an 'epistemic' level, we assume that just like DCs, RCs are about comparison of degrees of the denotation of the adjective, only with vague standards. We have shown in section 2.2 that in RCs the non-referentiality of the standard is the main ingredient that is precisely responsible for triggering a rhetorical flavor that is similar to a negative assertion.

Now that we know RCs and MCs exist on different levels, we can answer another question raised by a reviewer: how are NPIs licensed in each comparative type? We have seen that what licenses NPIs in RCs is a non-referential standard that gives

rise to non-veridicality in the semantics. However, when MCs license NPIs, the licensing force must come from a certain epistemic component that expresses strong inappropriateness of statements, or dispreference. In this respect, NPIs in MCs seem to be indirectly rescued on an attitudinal level (see Giannakidou, 2009 for 'rescuing of NPIs'), whereas NPIs in RCs are legitimately licensed on a semantic level.

4. Rhetoricizing the standard: NPIs, expletive negation, and the subjunctive

In this section, we extend the analysis and propose that there are three strategies for rhetoricizing the standard in RCs in natural language. The first strategy is to employ strong/emphatic NPIs, as we have seen so far. The second strategy is to incorporate expletive negation in comparatives which typically gives rise to emphatic effects elsewhere. Finally, though English does not provide direct evidence for this, the third strategy is to select for the subjunctive mood.

4.1. Negative polarity items

Polarity item licensing in questions and comparatives shares similar problems. Standard analyses have difficulty explaining why questions license NPIs since questions are neither necessarily negative nor downward entailing in any straightforward way (Klima, 1964; Van Rooy, 2003). An important problem is that questions, typically with explicit negation, license positive polarity items such as *rather* or *pretty*, as shown in (63). Then an immediate question arises: Do all questions freely allow polarity items?

(63)   a.   Would(n't) you *rather* stay here?
        b.   Aren't you *pretty* tired?

To answer this question, we need to look beyond the basic meaning of questions. It is generally believed that the semantics of each question is equivalent to a set of possible answers, including positive and negative answers. Then, if it is a true information-seeking question, say "are you tired?", its meaning should be a set with multiple values: {yes, I am; maybe; . . .; no, I'm not}. However, if a speaker has a certain expectation of a positive or negative answer, this kind of presupposition of an expected answer has the power to license positive or negative polarity items, respectively (see Borkin, 1971; Van Rooy, 2003; Ladusaw, 2004 for detailed discussion). Thus it has been established that when it comes to polarity item licensing in questions, the crucial factor is the speaker's presupposition regarding the expected answer, rather than the broad meaning of the question itself.

Now turning to the long-standing debate on polarity item licensing in comparatives, we find a fascinating resemblance with the above debate on questions. The problems are: NPIs in clausal comparatives seem to occur quite freely (e.g., Hoeksema, 1984), and it is not obvious how comparatives are negative, DE, or nonveridical. As discussed in section 2.1, the current consensus seems to be that comparative clause itself may vary in terms of DE or UE depending on the quantifiers it contains (Rullmann, 1994 for Dutch comparatives; Hendriks, 1995; Heim, 2006). Hence monotonicity does not seem to be relevant in characterizing DCs versus RCs.

One important consequence of the current proposal, however, is to open the possibility of resolving the variation issues surrounding NPI/PPI-licensing in comparatives at the semantics-pragmatics interface. First, in terms of the polarity item licenser, the current system requires a conceptual transition from the traditional monotonicity into the more recent notion of (non-)veridicality (Zwarts, 1995; Giannakidou, 1998, 2009). Giannakidou defines veridicality as in (64), stating that a propositional operator F is veridical iff from the truth of Fp we can infer that p is true according to some individual x in his or her epistemic model. This inference can be either an entailment or a presupposition of the sentence where F occurs. On the other hand, F is non-veridical when an inference to the truth of p under F is not possible, and hence non-veridicality indicates a state of unknown or undefined truth value. And a subtype of non-veridicality is anti-veridicality which entails the falsity of p.

(64)   DEFINITION 1. (Non)veridicality for propositional operators

i.   A propositional operator F is veridical iff Fp entails or presupposes that p is true in some individual's epistemic model $M_E(x)$; otherwise F is nonveridical.

ii.   A nonveridical operator F is *anti*veridical iff Fp entails that *not* p in some individual's epistemic model: $Fp \rightarrow \neg p$ in some $M_E(x)$.

Given this, let us see how distributions of polarity items are explained under the current system. For instance, (65a) provided by the UE analyses, licenses a PPI *some* because it is a DC with a specific degree that the speaker can refer to. The lack of polarity item in (65b) also indicates that it is a DC.

(65)   a.   John is taller than *some* professional basketball players are.
        b.   John is taller than most of his ancestors were.

We assume these DCs with PPIs or no NPIs to be 'veridical' in the sense that the comparison is based on a definite standard. And the following comparatives with non-emphatic weak NPIs in (66) are DCs as well because the domain for the standard, receiving a regular extension, is still referential.

(66)   a.   John is taller than *anyone* is.
        b.   He is richer than you *ever* were.

On the other hand, RCs are non-veridical environments which license strong/emphatic NPIs, as shown in Rullmann's (1995) examples:

(67)   a.   He told me more jokes than I *cared to* write down.
        b.   He said the sky would sooner fall than he would *budge an inch*.
        c.   John would sooner roast in Hell than *give a penny* to the Nader campaign.
        d.   Mary buys expensive presents for her assistant more often than she *lifts a finger* to help her husband.

As already noted, the current proposal on non-referential standards in rhetorical comparatives is partly in line with the previous negative approaches to comparatives (Jespersen, 1917; Ross, 1969; McConnell-Ginet, 1973; Seuren, 1973; Klein, 1980; Stassen, 1984; Larson, 1988). A striking parallel between our proposal and the negative analyses is that RCs are characterized as typically involving NPIs and sometimes modals, just as most data presented by the previous negative approaches uniformly contain NPIs in *than*-clauses as in (68–70), repeated from section 2.1.

(68)   John is taller than *anyone*.
        ∃(e John is tall to extent e AND **NOT** [anyone else is ~~tall to extent e~~]

(69)   He is richer nor you'*ll ever* be.   [English dialects]

(70)   She did a better job than what I *never* thought she would.   [Cockney English]

We further assume that their intuition on *anyone* in (68) was based on emphatic *ANYONE* (our assumption here is in line with the insight for questions in Rohrbaugh, 1993; Krifka, 1995; Van Rooy, 2003). Instead of their syntactic negative operator, however, all these examples with NPIs are now categorized as rhetorical subtypes in which NPIs are licensed by the non-veridicality driven from a non-referential standard. Furthermore, our analysis crucially diverges from the negative approaches in that such negativity is not assumed for regular DCs, which predicts the distribution of PPIs therein.

4.2. Expletive negation

Given the current proposal on RCs, we are now able to account for the reason why a negative element such as *nor*, *ne*, or *never* is observed in comparatives of some languages or dialects. Presenting the data in (71–73), the negative approaches in section 2.1 claim that these negatives directly indicate the presence of an underlying negative operator in comparatives (Jespersen, 1917; Ross, 1969; McConnell-Ginet, 1973; Seuren, 1973; Klein, 1980; Stassen, 1984; Larson, 1988).

(71)   He is richer **nor** 'you'll *ever* be.   [English dialects]

(72)   Jean est plus   grand que je **ne**   pensais.   [French]
        Jean is   taller   than I   Neg thought
        'Jean is   taller
        than I thought.'

(73)   She did a better job than what I **never** thought she would.   [Cockney English]

However, we have seen in section 2.1 that uniformly positing a negative operator in comparatives is problematic in many respects.

Another interesting view on the presence of a negative in comparatives is that it is a marker of comparison. For instance, Price (1990) claims that since languages like French do not have a unique marker of inequality (like *than* in English), the marker of comparison is not *que* but rather the negative *ne*. However, Campos and Sachs (1995) raise a question of why *ne* is needed as a comparative marker if one still has *plus* or *aussi* as markers, and they note that a more serious problem for this view is that languages like Italian and Spanish that do have a unique comparative marker still exhibit such negative particles in comparatives.

If it is neither a syntactic negative operator nor a comparative marker, why do some languages contain a negative in comparatives? Based on the contrast with the following contentful negation in English, it has been suggested that the above cases are expletive negation (EN) (Von Stechow, 1984; Rullmann, 1995; Beck et al., 2004).[7]

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[7] Furthermore, Donati (2000) notes that negation in comparative is syntactically distinguished from real negation in that it does not draw up a negative island in Italian.

(74)   a.   * I need more salt than I don't need pepper.

        b.   * John is taller than I didn't think.

Such negation is traditionally termed expletive negation because it is void of a logical negative force at syntax and semantic interpretation, but it is not strictly 'explicit' since it certainly conveys pragmatic emphatic effects. Furthermore, the emphatic effects seem very similar to rhetorical effects that we find in RCs: The occurrence of negatives in comparatives might seem extraordinary at first glance, but it is not surprising at all if we look at the distribution of such negative elements in other environments. As illustrated in (75), EN frequently appears in exclamatives, questions, and subordinate clauses of certain predicates, uniformly encoding a speaker's negative presupposition toward the content of a proposition (Van der Wouden and Zwarts, 1993; Van der Wouden, 1994; Brown and Franks, 1997; Brown, 1999; Portner and Zanuttini, 1999, 2000 among many others).

(75)   *Expletive Negation in various environments*

a.   *exclamatives*

        No ga-lo   magnà tuto!   [Paduan Italian] (Portner and Zanuttini, 2000)

        Neg has-S.Cl eaten   everything

        'He's eaten everything!'

b.   *interrogatives*

        Ne   dopustil li kto-nibud' ošibki?   [Russian] (Brown, 1999)

        Neg allow   Q who-any   mistake.Gen

        'Could someone have made a mistake?'

c.   *subordinate clauses of adversative predicates*

        Þan I have no doubt   Þat it **ne**   schal wel kun   telle Þee of hem.   [Old/Middle English]

        than I have no doubt that it Neg will   fully be-able tell   you of them

        'Then I have no doubt that it will be able to tell you about them.'

                                                (Cloud of Unknowing 92, 6–7; Van der Wouden and Zwarts, 1993)

According to Portner and Zanuttini, a negative presupposition in (75a) is posited on a likelihood scale such that it is less likely that he's eaten everything, hence the negative *no* marks a speaker's strong surprise, and similar emphatic effects arise from EN in (75b) and (75c).

    Furthermore, Yoon (2010) shows that what has been called expletive negation is in fact quite meaningful since crosslinguistically it triggers an emphatic effect in various environments by conveying a negative presupposition. If the negative elements observed in the above comparative data are the same creature, then we can conclude that EN in comparatives is adopted to convey emphatic effects with regard to the contrast between two objects that are being compared. And the analysis we are pursuing offers the following solution: The negative *nor* in (76), repeated below, is not semantically pleonastic, but rather encode negative rhetorical force toward the content of *than*-clause. Consequently, EN offers another important strategy for rhetoricizing comparatives, together with the employment of strong/emphatic NPIs.

(76)   He is richer **nor** you'll *ever* be.   [English dialects]

More crucially, analogous effects triggered by EN are observed in rhetorical questions in English (77a) and Russian (77b), and in a dubious question in Russian (77c) (Brown and Franks, 1995, 1997).

(77)   a.   Who did**n't** sleep with Mary?!

        b.   Nu   **ne**   govoril **li** ja tebe?   [Russian]
              well Neg told   Q I   you
              'Well, didn't I tell you?!'

        c.   **Ne**   dopustil **li** kto-nibud? ošibki?
              Neg allowed Q who-any   mistake.Gen
              'Maybe someone made a mistake?'

A view very close in spirit is found in earlier claims regarding EN (Van der Wouden, 1994; Espinal, 2000) where EN is treated as a kind of NPI since both EN and NPIs display similar distributions such as in exclamatives, questions, and clauses under certain negative predicates. Though we do not attempt to directly argue that EN is a type of NPI, it is worthwhile to note that

Table 1
Morphosyntactic categories and polarity sensitivity (Levinson, 2006).

Category	Positive polarity	Negative polarity
Mood	Realis (indicative)	Irrealis (subjunctive)

they have further similarities besides the distributional facts: (i) As we argue, EN gives rise to emphatic effects the way that NPIs do in questions and comparatives; (ii) Both EN and NPIs are never obligatory; and (iii) It will be shown in the following subsection that they typically co-occur with the subjunctive mood.

Before closing the discussion on EN, however, it should be noted that the rhetorical force cannot account for all instances of EN in comparatives. As shown in the following sentence (Espinal, 2000), EN seems to appear in regular comparatives without necessarily having rhetorical effects.

(78)   Maria è più   alta di quanto   (**non**) lo sia Giovanni.   (Donati, 2000) [Italian]
         Maria is more tall of how-much   neg   it is Giovanni
         'Maria is taller than Giovanni is.'

There seems to be two possible explanations for the emergence of EN in regular comparatives. First, the appearance of negative markers irrespective of comparative subtypes in certain dialects or languages can be thought of as a remnant of the manifestation of emphatic effects which has originated in emphatic comparatives and been stretched to regular degree comparatives via a historical spread or analogy. Another possibility is to extend the flexibility on the kinds of scales that EN triggers. For instance, EN in regular degree comparatives like (78) is assumed to mark the inequality relation between the two degrees. Then again, the dual marking on one semantic relation, i.e., the inequality relation in degree, brings the consequence of putting an emphasis on that semantics.

4.3. Subjunctive mood

In addition to the employment of NPIs and EN, we suggest that adoption of the subjunctive mood is the third component contributing to the rhetoricization of comparatives. The idea that mood is relevant to the distinction between RCs and DCs relies on an important insight that mood selection seems to be linked to polarity in terms of (non-)veridicality – the indicative mood corresponds to the notion of veridicality while the subjunctive mood corresponds to non-veridicality in languages like Spanish, Italian, French, Greek (Giannakidou, 1994, 1995, 2009; Quer, 1998; Borschev et al., 2007 for Russian subjunctive). Just as polarity items are dependent variables that are referentially deficient and cannot be interpreted deictically, Giannakidou (2009) notes that the subjunctive mood represents a non-deictic time, hence an instance of a polarity dependency of the temporal kind. The assumption relies on the pronominal theory of tense (Partee, 1973, 1984; Kratzer, 1998) and her earlier idea that the emergence of some polarity items is due to referential deficiency.

Furthermore, the assumption that, just like NPI-licensing, the subjunctive mood introduces RCs is consistent with the following empirical links between the subjunctive mood and NPIs that have been proposed in the literature. Nathan and Epro (1984:522) note that "many of the constructions that trigger NPIs in English also license the subjunctive mood in Romance languages." Furthermore, the close connections between indicative mood and PPIs and between subjunctive mood and NPIs are proposed by a recent study of crosslinguistic polarity properties by Levinson (2006), as given in Table 1 (other categories are omitted).

On the other hand, it is important for our purposes to note that a number of important empirical connections between (expletive) negation and the subjunctive have been already noticed in the literature. Although the exact nature of this dependency requires further investigation, it will provide at least empirical support for the current proposal that both EN and the subjunctive will trigger an analogous semanticopragmatic contribution for RCs. As illustrated below, the connection is found from typologically unrelated languages. In Spanish, for instance, a negative clause (79) normally takes the subjunctive (Travis, 2003; Allan, 2006) while a positive one (80) the indicative.[8] It is analogous for other Romance languages and Greek (Giannakidou, 1995; Quer, 1998).

(79)   Pienso que **está**   dormida.   [Spanish]
         I.think that 3sg.be.Ind asleep.Fem
         'I think she is asleep.'

(80)   **No** pienso que **esté**   dormida.
         not I.think that 3sg.be.Subj asleep.Fem
         'I don't think she is asleep.'

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[8] Although it is not always the case, exceptions induce different semantic effects. For a meaning shift driven by mood choice, see Quer (1998, 2009).

More surprisingly, a subjunctive marker itself sometimes mimics negation. In (81), the Greek subjunctive mood in the *na*-clause is interpreted as negative despite the absence of a negative element anywhere within the sentence (A. Giannakidou, p.c.), which mirrors the effect of EN whereby negation acts like a subjunctive marker.

(81)   Éxo   **na**   ton   dho   íkosi   xrónia.   [Greek]
       have.1sg Subj him.Acc see.Pnp twenty   years
       'I have not seen him for 20 years.'

Note also that there is a direct dependency between the subjunctive mood and EN. It is widely assumed that subjunctive mood triggers EN in Romance (Gaatone, 1971; Muller, 1978) as well as other languages. Observe that EN can occur in subjunctive mood clauses in Catalan (82a) and Polish (82b) (data taken from Jabłónska, 2003) but cannot in indicative ones.

(82)   a. Tenia   por que   **no**   **escollissin**   un nou director.   [Catalan]
          I.had   fear that   Neg   they.elected.Subj a new director
          'I was afraid that a new director would be elected.'
       b. Boję   się **żebi**   ktoś   **nie**   przyszedł.   [Polish]
          scare.1sg Refl that.Subj someone   Neg   come.3sg.Pst
          'I am afraid that someone (might) come.'

Furthermore, instances of negation as a subjunctive mood marker are observed in Old and Modern Japanese. Frellesvig (2008:223) notes that, as illustrated in the following text (83), Old Japanese optative forms are realized as synchronically identical to the negative *na* or *ne*.

(83)   Kwo   mo yo   mi-kwo   moti   pukusi   mo   yo   mi-bukusi moti
       basket Foc Emph Hon-basket hold.Inf shovel   Foc   Emph   Hon-shovel hold.Inf
       ko   no woka ni na   tuma-su   kwo ipye kika**na**   nora-sa**ne**.
       this Gen hill Dat greens   pinch-Hon.Adn child home ask.**Opt** tell-Hon.**Opt**
       'Girl with your basket, with your pretty basket, with your shovel, with your pretty shovel, gathering shoots on the hillside here, I want to ask your home. Tell me your name!'

                                                         (Levy, 1981; Frellesvig, 2008)[Old Japanese]

He (p.c.) further assumes that these forms must derive from older negative formations; they are in other words diachronically related to the old negative forms. In short, these optative forms must originate in negative expressions which have lost their negative meaning and have been reinterpreted as modal forms.

In Modern Japanese also, optative forms are realized with the employment of negation.

(84)   Mary-ga   ko-nai   ka-**naa**!   [Japanese]
       Mary-Nom come-Neg(EN) Nonfactive.Comp-**Opt**
       'Oh, how I wish Mary comes (although it is less likely to be realized)!'

More crucially, a tight connection between the two is revealed in comparatives. Though both EN and the subjunctive mood are optional in Italian, they have a strong tendency to co-occur (Napoli and Nespor, 1976, 1977; Price, 1990). Given the crosslinguistically persistent parallels between the subjunctive and NPIs, and between the subjunctive and (expletive) negation, we can infer that selection of the subjunctive mood would be an additional strategy for rhetoricizing comparatives, creating a non-veridical context.

This is a welcome result because the use of the subjunctive mood as a rhetorical device is in fact written in the grammars of languages with morphological mood markers: Such rhetorical effects are triggered by the present and imperfect subjunctive mood in (85), as noted in Latin grammars, which is called deliberative subjunctive because it is used to deliberate or doubt about something.

(85)   a. Quid   faciam?   [Latin]
          what.Sg.Neut.Nom do.1sg.Pres.Subj.Act
          'What am I to do?'
       b. Quid   facerem?
          what.Sg.Neut.Nom do.1sg.Impf.Subj.Act
          'What was I to do?'

Similar effects are conveyed by deliberative subjunctive in rhetorical questions and emphatic negation subjunctive in Greek, and it is analogous in French.

Then we can expect that certain languages display a corresponding phenomenon in comparatives as well, and this is indeed the case. A selection of the subjunctive mood seems relevant to emphatic effects: In Italian, Napoli and Nespor (1976, 1977; Von Stechow, 1984) note that there is a semantic difference between comparatives with the indicative (86a) and with the subjunctive and EN (86b) in that only the latter entails a contradictive presupposition.

(86)   Maria è più intelligente (a) di quanto è Carlo/(b) di quanto **non** sia Carlo.   [Italian]
         'Mary is more intelligent (a) than Carlo is/(b) Carlo (not) is.'

In similar spirit, Battaglia and Pernicone (1965) note that the subjunctive mood in Italian emphasizes the hypothetical nature of the comparison (Price, 1990:153). Furthermore, in Latin and Greek, comparatives with the subjunctive are characterized as imaginative comparison (Hale, 1892).

(87)   a.   Noli timere quasi assem elephanto des.   [Latin]
              'Don't be afraid as if you were giving a penny to an elephant.'
         b.   Serviam tibi tam quasi emeris me argento.
              'I shall serve you as though you had bought me with silver.'

Given that mood also plays a role in rhetoricizing comparatives, we suggest an extension from grammatical mood to notional subjunctive mood for capturing the asymmetries in comparatives in other languages. Here the crucial concept that we depend on is 'notional mood' (Jespersen, 1924; Portner, 1997; Giorgi and Pianesi, 1998). Notional mood is distinguished from grammatical mood in the sense of Portner (1997:182) who states "the firmest definition it (notional mood) can be given is as concerning aspects of meaning (broadly construed) which contribute to the conversational force of a clause or which constrain the attitude someone has toward what it expresses. Nothing more uniform is possible because those aspects involve both semantic and pragmatic factors, and only these factors have theoretical status." Thus our assumption on notional mood is a broad conception incorporating the semanticopragmatic aspects of mood as well as traditional grammatical mood. The extension of subjunctive-like properties to languages without grammatical subjunctive mood distinction is in part supported by Sigurþsson's (1990) observation regarding Faroese (a language related to Icelandic). In this language, despite the lack of subjunctive mood marker, the same verbs as Icelandic subjunctive verbs show subjunctive like properties. Also, Progovac (1994) notes that volitional verbs in Serbian/Croatian act like subjunctives even without morphological subjunctive marking.

The proposed dichotomy of comparatives is therefore applicable to languages with impoverished mood morphology. For instance, though RCs in English do not offer any explicit grammatical subjunctive marker, we suggest that the fact that modals contribute to rhetorical force as in (88) must be along the lines of what the subjunctive mood does in other languages.

(88)   a.   Jack is richer than you'**ll** ever be.   RCs
         b.   This work is more than I **can** stand.
         c.   Grace's chicken was more than I **could** be bothered eating.

The idea is based on the semantic framework in which notional mood is treated as a manifestation of modality (Farkas, 1985, 1992a,b; Portner, 1994, 1997; Giorgi and Pianesi, 1998; Roussou, 2000). Portner (1997:192), for instance, illustrates the mood-indicating modals with may, noting that "mood indicating may does not carry modal force of its own, but simply indicates that its clause has a particular conversational use or is in a certain kind of semantic context" (i.e., mood):

(89)   Mood-Indicating May
         a.   In a formal style, occurs inverted in matrix clauses ((90a)) to express a wish.
         b.   Occurs embedded under certain operators which express desires ((90b–c)) or epistemic possibility ((90d)).

(90)   a.   May you have a pleasant journey!
         b.   Jack wishes that you may be happy.
         c.   I pray that God may bless you. (from Palmer, 1990)
         d.   It is possible that Sue may win the race.   (Portner, 1997:41–42)

He further argues that may in (90d) lacks modal force because it is already expressed in the matrix clause ('is possible'), hence the redundant use of may in the embedded clause indicates properties of modal context for its clause.

In section 4, in examining what contributes to triggering RCs, we have suggested that the notion of NPIs, EN, and subjunctive mood must be understood as a family of phenomena that are uniformly associated with non-veridicality in natural language.

5. Conclusion

In exploring the behaviours of comparatives, the main goal of this paper was to show that the negativity-related properties in comparatives are quite complex, certainly much more than expected by the unitary negative (Jespersen, 1917; Ross, 1969; Seuren, 1973; Klein, 1980; Larson, 1988) or non-negative analyses (Von Stechow, 1984; Rullmann, 1995; Kennedy, 1997a; Beck et al., 2004). In trying to go beyond the puzzle of negative-like versus non-negative properties in comparative clauses, we proposed that, instead of talking about a unitary phenomenon, it is preferable to delimit the negative-like properties to a subtype of them, RCs.

We addressed the question of what the meaning of RCs is and how exactly this meaning is responsible for the properties of RCs, as opposed to DCs. A great part of the discussion was devoted to showing that the containment of strong/emphatic NPIs introduces an extremely fuzzy standard for RCs. We suggested that such fuzziness can be understood as the conception of unfamiliarity (Heim, 1982), non-specificity, and non-exhaustivity (Krifka, 1995), and showed how the bidirectional domain surpassing of strong/emphatic NPIs triggers such properties. Essentially, these properties contribute to extreme non-referentiality, hence non-veridicality of the standard. This is consistent with the fact that RCs are unavailable under comparatives with differential measurements. The driving idea in this paper is to show that a negative presupposition concerning the content of the standard in RCs follows directly from a comparison to a non-referential vague standard.

We furthermore attempt to explore the analogy between what gives rise to rhetorical flavor in English as well as other languages, and we have identified three such components – negative polarity items, expletive negation, and subjunctive mood. The analysis we advanced here has a number of potentially revealing implications for our understanding of the notion of non-veridicality, suggesting the crucial link between polarity, mood, and negation. This result supports earlier observations that the subjunctive behaves like negative polarity items, marking non-veridicality (Giannakidou, 1994, 1995, 2009; Quer, 1998; Borschev et al., 2007), and our innovation in this paper is to suggest that expletive negation is another component belonging to such a category. By positing distinct semanticopragmatic properties for DCs and RCs, the current proposal leads us to predict the systematic asymmetries between comparatives. It thus becomes clear why, as Von Stechow (1984) notes, the previous negative approaches are descriptively adequate for data with NPIs while the non-negative approaches are not.

The notion of RCs in the sense that we suggest here, importantly, can give us a plausible foundation for the analysis of rhetorical effects in other environments. Another likely domain in which to explore the consequences of this analysis is interrogatives. Although we have shown that RQs share a number of properties with RCs, how far the non-veridicality dependency analysis of polarity items, mood, and negation can be extended to questions remains to be established by future research. If the connection between rhetorical flavor and the other two components turns out to be robust in other environments also, then we can conclude that the conception of non-veridicality can be reducible to at least three types of deficiency: (i) deficiency in pronominal referentiality, marked by NPIs; (ii) deficiency in tense, marked by the subjunctive; and (iii) deficiency in presuppositional polarity, marked by EN.

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