NEGATIVES IN COMPARATIVES

DONNA JO NAPOLI MARINA NESPOR

Georgetown University Universiteit van Amsterdam

The negative element non appears in Italian comparatives when the speaker presupposes that his statement contradicts someone else's or his own previously held belief. Though this non appears in the comparative clause in the surface, it originates in a higher abstract S in embedded position. By proposing an abstract S in embedded position, we can account in a unified way for many sets of facts which would go unrelated in either a presupposition-dependent syntax model or an interpretive approach. This use of non is thus an example of a presuppositional fact which is accounted for by a syntactic analysis.*

1. INTRODUCTION. The Italian word non is often used as a negative element similar to not in English. Thus, in 1–2, the b examples are the negative counterparts to the a examples; 1b shows S negation and 2b shows NP negation:

(1) a. Maria viene.
   b. Maria non viene.
      'M comes / does not come.'

(2) a. Tutti gli uomini ti guardano.
   b. Non tutti gli uomini ti guardano.
      'All the men / Not all the men are looking at you.'

We will refer to this use as non1. Other instances of non1 do not correspond to Eng. not, e.g. the well-known examples of 'double negation':

(3) Non viene nessuno 'No one is coming.'
   not comes no one

In this paper we consider a use of non that is frequently found in comparatives and that has no English counterpart in such structures:

(4) Maria è più intelligente (a) di quanto è Carlo / (b) di quanto non sia Carlo
   'M is more intelligent than C is (not).'

(5) Maria è più intelligente (a) di quanto tu credi / (b) di quanto tu non creda
   'M is more intelligent than you believe (not).'

This use, hereafter referred to as non2, is frequently cited as an example of a 'pleonastic element' and is said to be optional in comparatives. However, we present below many semantic and syntactic distinctions between a and b of 4–5 and offer an analysis that accounts for these differences. One of the most obvious distinctions is mood, where non2 typically occurs with the subjunctive. A discussion of mood is found in §§3.21–3.23 below. In the examples that follow, we will use the subjunctive mood with non2, asking the reader to ignore the choice of mood for

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the time being unless otherwise indicated. After examining comparatives, we show that $non_2$ is not limited to comparatives, but occurs in various structures, many of which have counterparts with Eng. *not*. While we have made a detailed study only of Italian, we expect our analysis to be helpful in understanding similar uses of negative elements in other languages.

2. Pragmatics. The semantic difference between $a$ and $b$ in 4–5 lies in what is presupposed by the speaker, rather than in what is asserted. Before demonstrating this difference, let us explain our use of the word ‘presupposition’.

The literature on presupposition refers both to logical and pragmatic presupposition. $S'$ is a logical presupposition of a sentence $S$ if from $S$ we can conclude $S'$, and at the same time from $-S$ (read ‘not $S$’) we can conclude $S'$ (see Horn 1969). It is also often mentioned that logical presuppositions remain unchanged under questioning (see Kiparsky & Kiparsky 1970). One way to find a logical presupposition of an $S$ is to replace the intonation center in surface structure by a variable (see Chomsky 1971). Pragmatic presuppositions, on the other hand, are the conditions under which an $S$ is appropriate (see G. Lakoff 1971); these involve the speaker, and often the listener, whereas logical presuppositions follow from sentences themselves without regard to speaker, listener, or context (see Keenan 1971, Karttunen 1973).

$Non_2$ is used when certain pragmatic presuppositions are present. In fact, questioning or negating a comparative drastically affects the possibility of $non_2$ (see §2.1, 2.2 below). $Non_2$ appears when the speaker is assuming, but has not been told explicitly (and therefore is not entirely sure), that the assertion of the comparative is contradictory to some previously held belief (most often the belief of the listener, but not always).\(^1\) In order to see this, consider the following context for 4a:

(6) Dario: *Dimmi cosa pensi di Maria e Carlo.* ‘Tell me what you think of M and C.’

Paolo: *Maria è più intelligente di quanto \(\neg non\) sia Carlo, ma lui è molto più simpatico.* ‘M is more intelligent than C is, but he is much nicer.’

Since Dario has in no way revealed his opinion of Maria and Carlo, it would be very strange for Paolo to assume that Dario holds beliefs opposite from his; thus $non_2$ does not appear in Paolo’s response.

\(^1\) Van Valin 1975 has put forth a pragmatic analysis of the German word *doch* in which he points out two main kinds of *doch*, stressed and unstressed. Stressed *doch*, when it appears in sentence-initial position, is triggered by an overt negative immediately preceding in the discourse, and is used to contradict that negative. Intrasentential stressed *doch* is used when one is contradicting someone’s assertion or expectation (someone else’s, or the speaker’s own). Unstressed intrasentential *doch* is used when one contradicts an assumption which someone else has but really shouldn’t have (he should ‘know better’). The above is an oversimplification of Van Valin’s work, which is a careful study of many complexities. The important points for us are that the appearance of *doch*, in general, is pragmatically triggered; and that the pragmatics of intrasentential stressed *doch*, in particular, bear a striking resemblance to the pragmatics of $non_2$. 
Now consider a context for 4b:

(7) Dario: Carlo è così intelligente che dubito che Maria possa vincere a scacchi. ‘C is so intelligent that I doubt that M can beat him at chess.’

Paolo: Ma ti sbagli! Maria è più intelligente di quanto non sia Carlo e potrebbe vincere senza molti sforzi. ‘But you’re wrong! M is more intelligent than C is(n’t), and she could beat him with little effort.’

Here Dario has explicitly said that Maria probably cannot beat Carlo at chess. However, he has only implied that Carlo is more intelligent than Maria. Paolo may, accordingly, assume that Dario thinks Maria is less intelligent, and thus use non2. But if Paolo is more assertive, he may take Dario’s remark as equivalent to an explicit evaluation of Maria’s intelligence. In such a case, he would not use non2. Thus two responses are possible here, with differing amounts of intensity in the speaker’s contradiction of the listener’s evaluation of Maria and Carlo.

Next, consider a context for 5a:

(8) Dario: Maria ha continuato a dire sciocchezze. È proprio cretina, sai? ‘M continued to say stupid things. She’s really an idiot, you know?’

Paolo: Ma ti sbagli! Conosco Maria molto bene ed è più intelligente di quanto tu credi. ‘But you’re wrong! I know M very well and she’s more intelligent than you think.’

Here Dario explicitly states his evaluation of Maria. Therefore Paolo responds most naturally without non2.

(9) Dario: Non ho capito per niente quest’ultima lezione, comunque non credo che valga la pena di chiedere aiuto a Maria. ‘I didn’t understand this last lesson at all, but I don’t believe it’s worth the trouble to ask M for help.’

Paolo: Secondo me fai male, dovresti chiederglielo. Maria è più intelligente di quanto tu (non creda. ) credi. ‘As I see it, you’re making a mistake; you should ask her. M is more intelligent than you (wouldn’t) believe.’

Here Dario is not explicit as to his evaluation of Maria’s intellect. Thus Paolo assumes that she is more intelligent than Dario thinks, and uses non2 accordingly. However, if Paolo takes Dario’s remark as a strong indication of his evaluation of Maria’s intellect, then he need not use non2.

These four contexts show that non2 appears when there is a bit of uncertainty or indefiniteness about the speaker’s assumption. But it cannot appear if there is absolutely no justification for the speaker’s assumption (as in 6)—or if the speaker need not assume anything, since explicit statements of the listener’s opinions have been made (as in 8). The comparative without non2 can appear in all contexts, but is a second choice in 7 and 9, where a speaker’s assumption seems appropriate for the use of non2.
The evidence above shows that non$_2$ is not possible in all comparatives of inequality (contrary to the analyses by Seuren 1969 and by Antinucci & Puglielli 1971). Rather, non$_2$ is present in some comparatives and not in others.

Furthermore, non$_2$ is similar to Eng. only (see Horn) in that both express an expectation. So in Horn's example, Only Muriel voted for Hubert, the speaker reveals that he expected someone in addition to Muriel to vote for Hubert. Non$_2$ reveals that the speaker expects his statement to contradict someone's previously held belief.

Various constraints on the distribution of non$_2$ can be explained by this presuppositional analysis. The rest of §2 is devoted to those constraints.

2.1. Questions. When comparatives like 4 are questioned, non$_2$ does not appear:

(10) E più intelligente (a) di quanto è Carlo? / (b) *di quanto non sia Carlo? 'Is she more intelligent than C is?'

Here the speaker is asking the listener whether a comparison of inequality is true; hence the speaker cannot simultaneously be expecting to contradict the beliefs of the listener (since non-rhetorical questions do not contradict, but only ask for information). Non$_2$ does not appear in questioned comparatives like 10, then, because a proper context is not present. If these questions are negated, yielding a question conducive to an affirmative response from the listener, the comparative with non$_2$ is still impossible:

(11) Non è più intelligente (a) di quanto è Carlo? / (b) *di quanto non sia Carlo? 'Isn't she more intelligent than C is?'

Again 11b is rejected on semantic grounds; i.e., one does not expect the listener to agree (which expectation is revealed by the matrix non$_1$) and simultaneously expect to contradict him (which expectation is revealed by the embedded non$_2$).

Likewise, when comparatives like 5 are questioned, non$_2$ is often ungrammatical:

(12) E più intelligente (a) *di quanto tu credi? / (b) *di quanto tu non creda? 'Is he more intelligent than you think?'

Ex. 12a is bad because one does not normally ask someone for a confirmation of something he does not believe; and 12b is bad because the speaker will not ask the listener to confirm the opposite of what he expects him to believe. However, if the belief is one which the listener may or may not still hold, the speaker can question the comparatives both with and without non$_2$:

(13) E più intelligente (a) di quanto tu credevi? / (b) di quanto tu non credessi? 'Is she more intelligent than you thought?'

Ex. 13a is good because it is natural to ask the listener to confirm whether or not a past belief was correct; and 13b is good because it is natural to ask the listener now to confirm the opposite of what we expect he used to believe.

Likewise, the following is natural:

(14) E più intelligente (a) di quanto lui crede? / (b) di quanto lui non creda? 'Is she more intelligent than he believes?'

It is semantically acceptable to ask information about whether someone is more intelligent than a third person believes, or than you expect a third person believes. Thus a context for 14b (with non$_2$) can be found.
If the distribution of non₂ were determined uniquely by factors other than semantic ones, it would be difficult to explain the acceptability of 13b and 14b in contrast to the unacceptability of 10b and 12b. But with semantic criteria, one can explain the above distributional facts simply.

2.2. Negation. It is common to find inequalities in which the matrix verb is negated; e.g.,

(15) Maria non è più intelligente (a) di quanto è Carlo / (b) di quanto tu credi / (c) di quanto crede Dario 'M is not more intelligent than C is / than you think / than D thinks.'

It is also possible to find inequalities in which the verb in the lower clause is negated in the normal sense. Thus 16 is an example of the lower verb being negated by non₁, while 17 is an example of non₂:

(16) Io sono stata all’estero più giorni di quanti Maria non è andata a lavorare 'I’ve been abroad more days than M has not gone to work.' (E.g., M hasn’t gone to work for 10 days and I’ve been abroad 11 days.)

(17) Io sono stata all’estero più giorni di quanti Maria non sia andata a lavorare 'I’ve been abroad more days than M’s gone to work.' (E.g., M has gone to work for 10 days and I’ve been abroad 11 days.)

However, it is not possible to have non₂ when the matrix verb is negated—although it is possible, in such cases, to have non₁. Thus, corresponding to 15–17, we have 18–20. Non₂ appears in 18 and 20 (with the subjunctive), non₁ in 19 (with the indicative):

(18) Maria non è più intelligente (a) *di quanto non sia Carlo / (b) *di quanto tu non creda / (c) *di quanto non creda Dario 'M is not more intelligent than C is / than you think / than D thinks.'

(19) Io non sono stata all’estero più giorni di quanti Maria non è andata a lavorare 'I haven’t been abroad more days than M hasn’t gone to work.' (E.g., M hasn’t worked for 10 days, and I’ve been abroad fewer than 10 days.)

(20) *Io non sono stata all’estero più giorni di quanti Maria non sia andata a lavorare.

We must account for the unacceptable sentences here, where non₂ cannot appear. Consider first 18b: by saying Maria is not more intelligent than the listener believes, the speaker is agreeing with the listener. Thus there is no expectation of contradicting him. On semantic grounds, then, non₂ is excluded. Likewise in 18c, the speaker is saying Maria is not more intelligent than Dario believes. Thus he cannot simultaneously expect to contradict Dario, and non₂ is bad.

In order to understand why 18a is bad, consider 4b again: Maria è più intelligente di quanto non sia Carlo. The presupposition of the speaker in 4b is that someone does not expect Maria to be more intelligent than Carlo. Now look at 18a: if the presupposition were that someone expected Carlo to be more intelligent than Maria, and that the assertion of the inequality would contradict this expectation, then non₂ could be used. But here the assertion is that Maria, in fact, is not more intelligent than Carlo. Thus, rather than contradicting the belief (presupposed
to be held by someone) which non$_2$ would reveal, the assertion agrees with that belief. So in 18a the semantic environment for non$_2$ is not met, and it cannot appear. And 20 is bad for reasons entirely parallel to those presented for the exclusion of 18a.

If we tried to account for the above facts on the distribution of non$_2$ without reference to semantics, we might propose a constraint which says that non$_2$ cannot appear if the matrix verb is negated. But such a constraint cannot apply at the surface level for three reasons. First, at the surface level the difference between the non of 19 and that of 20 is not apparent. It is true that the verb in 19 is indicative, while that in 20 is subjunctive. Thus one might propose that the constraint can consider the surface mood of the verb, and thus determine which kind of non is involved. However, we claim in §3.22 below that some speakers may use the indicative mood with non$_2$. For such speakers, we do not see how non$_2$ could be distinguished at the surface level. We also argue below that subjunctive comparatives without non$_2$ are derived from ones with non$_2$, by a deletion rule. If there were a surface constraint against the appearance of non$_2$ after a matrix non$_1$, we would expect the comparatives from which non$_2$ has been deleted to be acceptable after non$_1$. This is not the case. Thus, if we delete the non$_2$ from 18, all the sentences are still unacceptable:

(21) Maria non è più intelligente (a) *di quanto sia Carlo / (b) *di quanto tu creda / (c) *di quanto creda Dario ‘M isn't more intelligent than C is / than you think / than D thinks.'

From 21 we see that the constraint in question cannot be operating at the surface level, since non$_2$ does not appear there. And, finally, non$_2$ is shown in §4 below to appear in constructions other than comparatives; and there we see that non$_2$ may follow a matrix non$_1$ in some examples. Therefore a surface constraint cannot account for the distribution of non$_2$.

Thus non$_2$ does not appear in most of the examples in this section because it is ruled out at some underlying level. If we are correct in claiming that the examples in §4 illustrate non$_2$, then the fact that it can appear there after negated matrix verbs means that there cannot be an underlying syntactic constraint which throws out non$_2$ after non$_1$.

For these reasons, such a constraint cannot easily describe the distributional facts about non$_2$ shown here. However, with semantic criteria, the exclusion of non$_2$ from these sentences is accounted for. ²

² Dwight Bolinger (personal communication) has brought to our attention some French examples with two negatives:

(a) Jean n'est pas plus beau qu'on ne pense ‘J is not handsomer than anybody thinks.’
(b) Jean ne peut pas etre plus beau que vous ne pensiez ‘J can't be handsomer than you thought.’

The corresponding Italian examples are bad:

(c) *Gianni non è più bello di quanto non si pensi.
(d) *Gianni non può essere più bello di quanto voi non pensiate.

We think (c) and (d) are bad for semantic reasons. Thus, either the semantics of the French sentences (a) and (b) are different from those of the corresponding Italian ones; or else we are
2.3. Equality. It has often been noted that non₂ cannot appear in comparisons of equality:\(^3\)

(22) *Maria è tanto intelligente (a) quanto è Carlo / (b) *quanto non sia Carlo

'M is as intelligent as C is.'

(23) Maria è tanto intelligente (a) quanto tu credi / (b) *quanto tu non creda

'M is as intelligent as you think.'

Both Seuren and Antinucci–Puglielli attribute the lack of non₂ here to the fact that comparisons of equalities link two similar things, while inequalities (in which non₂ can appear) link two dissimilar things.\(^4\) However, if this were the correct explanation, one would expect non₂ to appear in negated comparisons of equality like this:

(24) Maria non è tanto intelligente quanto tu credi 'M isn't as intelligent as you think.'

But in fact, it cannot appear here:

(25) *Maria non è tanto intelligente quanto tu non creda 'M isn't as intelligent as you don't think.'

Note that the semantics of 24 are very similar to 26a, and that non₂ can appear in an S such as 26b:

(26) Maria è meno intelligente (a) di quanto tu credi / (b) di quanto tu non creda

'M is less intelligent than you think.'

wrong, and there is indeed some kind of syntactic constraint against two negatives which we do not understand.

Note also that non₁ of ex. 3 (which occurs only in the presence of some other negative element) cannot appear in the lower clause if the matrix is negated in a comparative:

(e) Maria non è più intelligente di nessuno 'M isn't more intelligent than anyone.'

(f) *Maria non è più intelligente di quanto \{non è \{non sia\}\} nessuno 'M is not more intelligent than no one is.'

Why this should be so is not clear to us. We do not see any semantic reason for excluding the indicative comparative of (f), especially in light of the acceptability of ex. 19. We leave these facts, and the questions they pose, open for further research.

\(^3\) Apparently this is not so for French. Dwight Bolinger has brought to our attention the following example:

(a) Il est aussi bon qu'ils ne puissent l'ètre 'He's as good as they may be.'

The corresponding Italian sentence is bad:

(b) *E tanto buono quanto non lo possano essere loro.

\(^4\) Antinucci & Puglielli talk of 'coincidenza' as an element in comparisons of equality, but 'non coincidenza' in comparisons of inequality. They then derive non₂ of 4b and 5b from 'non coincidenza', and they derive 4a and 5a from the same source with an optional rule deleting non₂. It is very difficult to tell exactly how they intend these rules to operate, and exactly what status (semantic, syntactic, abstract, real lexical item) they assign to the elements 'coincidenza' and 'non coincidenza'. We have taken these elements to bear semantic information. However, if they are syntactic markers of some sort, the objection to this analysis which we raise immediately below may not be valid. Still, their analysis fails in that 4a–b, and likewise 5a–b, should not be derived from the same structure, given all the semantic and syntactic evidence presented in this paper.
Thus we conclude that *non_2* is excluded from comparisons of equality for reasons other than the fact that equalities link two similar things.

Saltarelli 1974a does not mention *non_2*. But we assume, from his analysis of the subjunctive mood, that he would attribute its absence in comparisons of equality to the lack of the subjunctive mood. *Non_2* does not appear unless the verb is subjunctive:

(27) Maria è più intelligente (a) "di quanto non è Carlo / (b) "di quanto tu non credi (indicative) ‘M is more intelligent than C is / than you think.’

(This is discussed in §3.22 below). Contrast 27a–b with 4b (Maria è più intelligente di quanto non sia Carlo) and 5b (Maria è più intelligente di quanto tu non creda). Since equalities cannot have the subjunctive, *non_2* cannot appear:

(28) *Maria è tanto intelligente (a) *quanto (non) sia Carlo / (b) *quanto tu (non) creda.

Saltarelli attributes the absence of the subjunctive in equalities, but its presence in inequalities, to the notion of ‘identified reference’. If a proposition has identified reference, it is in the indicative mood; if it has unidentified reference, it is in the subjunctive. Exactly what constitutes identified reference is not clear, especially in the light of examples like this (not mentioned by Saltarelli):

(29) Benché tu l’abbia già fatto, voglio che tu lo faccia di nuovo ‘Although you have already done it, I want you to do it again.’

Here *abbia fatto* is subjunctive, yet the proposition in which it appears relates an event that has already taken place. If an event that has taken place does not have identified reference, what does? Furthermore, Saltarelli fails to note the presence of the indicative in inequalities such as 4a and 5a, and thus does not account for the fact that, in his analysis, some inequalities do have identified reference. And, finally, if the comparative clause in 26b has unidentified reference, why don’t the comparative clauses in 24–25 also? The problems with this analysis seem unsurmountable to us.

In order to see why *non_2* cannot appear in comparatives of equality, whether negated or not, one must first understand that comparatives of equality using *tanto ... quanto* ‘as ... as’ occur only when the speaker is comparing with precision. One cannot use *tanto ... quanto* if one has only a vague presumed knowledge of the comparison. Thus consider the following context, in which *tanto ... quanto* can appear:

(30) Dario: Maria è bravissima! È forse la più intelligente ragazza che conosco. ‘M is really smart! She’s possibly the smartest girl I know.’

Paolo: Hai ragione. Ho notato le sue risposte nella lezione di matematica oggi—ed è tanto intelligente quanto tu credi. ‘You’re right. I

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5 We do consider Saltarelli’s proposals important because they shed light on the use of the subjunctive in general. (See §3.2, below, for a brief discussion of the subjunctive.) His proposals are important also for the analysis of comparatives specifically, since they suggest that comparatives with the indicative (though he does not mention them) are semantically distinct from comparatives with the subjunctive—a suggestion we agree with fully.
noticed her answers in math class today—and she’s just as intelligent as you think.’

Now consider this context, in which tanto ... quanto cannot appear:

(31) Dario: Maria ha fatto bene oggi a scuola per la quarta volta. ‘M did well at school today for the fourth time.’

Paolo: *Si, è tanto intelligente quanto tu credi. ‘Yes, she’s as intelligent as you think.’

In 30, Paolo knows precisely how intelligent Dario considers Maria to be. Thus tanto ... quanto can be used. In 31 Paolo infers from Dario’s comment that he considers Maria intelligent, but there is no precision here as to how intelligent Dario considers Maria to be. Thus tanto ... quanto is inappropriate in Paolo’s response.

Returning now to non$_2$, recall that it occurs when the speaker presupposes a certain evaluation of Maria’s intelligence, but not when an explicit evaluation has been made (see 8, above). Tanto ... quanto requires explicit and precise knowledge, while non$_2$ requires inferred and imprecise knowledge; thus non$_2$ is excluded from comparisons of equality on semantic grounds (i.e., non$_2$ and tanto ... quanto are semantically mutually exclusive).

In support of this explanation, we note the following facts. In sentences where a precise knowledge of the degree of inequality is known, non$_2$ cannot appear:

(32) Maria è molto più intelligente (a) *di quanto non sia Carlo / (b) *di quanto tu non creda ‘M is much more intelligent than C is / than you think.’

(33) Maria è due metri più alta (a) *di quanto non sia Carlo / (b) *di quanto tu non creda ‘M is two meters taller than C is / than you think.’

Likewise, if there is an element requiring precise knowledge of another person’s belief, non$_2$ cannot appear:

(34) *Maria è più intelligente di quanto tu non creda con assoluta certezza. ‘M is more intelligent than you believe with certainty.’

All these examples are good without non$_2$ and with the indicative mood, as we would expect.

3. UNDERLYING STRUCTURE. Sentences 4a and 5a differ from 4b and 5b by the contexts in which they may appear, and by the presence or absence of non$_2$. Since non$_2$ reveals a certain presupposition of the speaker, there is a question whether a syntactic difference is required between the a and b examples of 4–5. Kiparsky & Kiparsky, in their very important paper, offer a syntactic difference to parallel the presuppositional difference between factive and non-factive complements. On the other hand, G. Lakoff claims that presupposition-free syntax is not possible, and points to several syntactic processes that seem to be conditioned by presuppositions.7

6 Our notion of precision is distinct from Saltarelli’s notion of identified reference, as shown by contrasting 34 with the following: Voglio che lui creda [subjunc.] con assoluta certezza ‘I want him to believe with certainty.’

7 The most convincing of these examples is the deletion of the future auxiliary will, an example he credits to Kim Burt. Note that his example involving comparatives (p. 337, bottom) does not call for an explanation involving presuppositions if Bresnan 1973 is correct.
Since a presupposition-free syntax is much less powerful than one that can refer to presuppositions, we would hope to be able to offer a syntactic difference to parallel the presuppositional one in these sentences. And in fact, proposing a syntactic difference sheds light on the facts given in §3.2 below.

The underlying structures we propose for 4a-b are given here as Figures 1–2 respectively. Those for 5a–b appear as Figures 3–4. Details not directly relevant to this study are omitted.8

In the comparatives where non₂ appears, the underlying structure contains one more clause than that of the corresponding comparatives without non₂. In Figs. 2 and 4 this extra clause is labeled S₂. We have not attached any lexical item to S₂, nor have we indicated what kind of complement (subject, object) S₃ is in S₂. This

8 There is evidence that più derives from underlying più tanto. For a detailed analysis of the head of comparative clauses in Italian, see Nespor (MS). For an analysis of comparatives in English, see Bresnan.

At a deeper level, the comparative S forms a constituent with the comparative quantifier più (tanto); again, see Bresnan. For our purposes, however, the exposition of our arguments is clarified by beginning at the underlying level seen in Figs. 1–4.
is because $S_2$ represents an abstract sentence, which is never lexically realized and has varying meanings. In Fig. 2, $S_2$ means roughly 'Someone is surprised that ...'; in Fig 4, it means 'I expect that ...'
3.1. Defense of the Abstract S. The proposal of an abstract S such as $S_2$ in Figs. 2 and 4 is not new. R. Lakoff 1968 argues for abstract higher S's to dominate subjunctive clauses that appear unembedded in surface structure in Latin and modern Spanish. Morgan 1969 proposes that, in underlying structure, presuppositions are conjoined to the left of performatives. These presuppositions have abstract verbs of supposition, with many characteristics of performatives.

While we propose an abstract S for semantic reasons, there is syntactic evidence that this S exists in underlying structure. In fact, a lexically realized S may occur in the same position as our abstract $S_2$:

(35) Maria è più intelligente di quanto la gente presume che non sia Carlo 'M is more intelligent than people assume C is(n't).'

(36) Ho apprezzato quel gesto più di quanto tu ti aspettavi che non avrei fatto 'I appreciated that gesture more than you expected that I would.'

Thus a sentence node clearly can intervene between the main clause and the comparative clause.

An argument in support of our abstract S is supplied by the behavior of gerunds (-ndo forms). Consider the following sentences:

(37) a. Ho visto Maria guidando per la strada 'I saw M while I was driving down the street.'

b. Ho incontrato quella ragazza lavorando nella fabbrica 'I met that girl while I was working in the factory.'

c. Ho scoperto Carlo giocando nella soffitta 'I discovered C while I was playing in the attic.'

d. Parlavo alla ragazza facendo smorfie 'I was talking to the girl while I was making faces.'

Gerunds can have their subject deleted under identity only with the higher subject,10 not with an object, as seen here.

9 R. Lakoff (1972:923) notes that some embedded clauses in Latin appear with the subjunctive or the indicative, and that the choice of mood depends upon the context. Thus, if the speaker 'assumes responsibility' for the assertion of the clause, the indicative is used; if no responsibility is assumed, the subjunctive is used. Lakoff claims that this shows that linguistic facts cannot be described solely by grammatical means, but that the context in which language is spoken must be considered. We are not familiar with the Latin situation; but perhaps it would be justified to posit an embedded abstract S dominating the clause which appears in the subjunctive when the speaker assumes no responsibility. In such a case, that S might have the meaning 'I am not sure if ...' or 'I do not take credit for ...'

10 Only surface subjects that are not derived subjects may control a gerund. Thus (a) is unacceptable:

(a) *Maria è stata vista da te guidando per la strada 'M was seen by you driving (you/her) down the street.'

In fact, NP's that are not subjects may control the subject deletion of gerunds, such as the dative mi 'me' with the psychological verb sorprendere 'surprise':

(b) Mi sorprende che sia così basso, considerando l'altezza del papà 'It surprises me that he is so short, considering the height of his father.'

Exactly how these facts on deletion of the subjects of gerunds may be handled is touched on briefly in Napoli (MS). Note that these gerunds are not to be confused with the progressive form of the verb. They do not derive from underlying stare V-ndo 'be V-ing', as shown by the meanings of (b) and (c):

(c) Studiando si può imparare tutto 'By studying, one can learn everything.'
Now consider the following, with comparatives of the type seen in 5:

(38) Tua moglie è meno fedele di quanto, rendendomi conto dell'importanza della fedeltà nel matrimonio per te, (a) tu non sia pronto a immaginare / (b) *tu sei pronto a immaginare 'Your wife is less faithful than, realizing the importance of fidelity in marriage for you, you are ready to imagine.'

(39) Tua moglie è meno fedele (a) di quanto tu non sia pronto a immaginare, (b) *di quanto tu sei pronto a immaginare, rendendomi conto dell'importanza della fedeltà nel matrimonio per te 'Your wife is less faithful than you are ready to imagine, realizing the importance of fidelity in marriage for you.'

In these examples only the comparative with non₂ is acceptable. The subjectless gerundial phrase, rendendomi conto dell'importanza della fedeltà nel matrimonio per te, must have had io 'I' as subject at some point, since rendendomi is a reflexive form with the 1sg. clitic mi 'me'. Nowhere in the surface of the sentences of 38–39 do we have a 1st-person subject which could have controlled the deletion of the subject of the gerund. Yet this gerund is acceptable in 38a and 39a, the examples with non₂, and not in 38b and 39b, the examples without non₂. Thus some S with 1sg. subject must appear in the underlying structure of the a examples, but not of the b examples. This S is our abstract S, which here might have had the meaning 'I presume/expect/think.'

Note that this gerundial phrase cannot have had its subject deleted under identity with the subject of a deleted performative verb, since the performative verbs would be the same for comparatives with and without non₂.

As further evidence that this gerundial phrase is not dependent upon the performative verb, consider the following sentences:

(40) Rendendomi conto dell'importanza della fedeltà nel matrimonio per te, (io dico che) tua moglie è meno fedele (a) *di quanto tu non sia pronto a immaginare / (b) *di quanto tu sei pronto a immaginare 'Realizing the importance of fidelity in marriage for you, (I say that) your wife is less faithful than you are ready to imagine.'

Here we see that the gerundial phrase cannot appear in sentence-initial position. However, gerunds which have had their subject deleted under identity with some NP in an initial performative S CAN appear in sentence-initial position:

(41) Considerando il modo in cui agisce, (io dico che) tua moglie è meno fedele (a) di quanto tu credi / (b) di quanto tu non creda 'Considering the way in which she acts, (I say that) your wife is less faithful than you believe.'

(42) Rendendomi conto del modo in cui agisce, (io dico che) tua moglie è meno fedele (a) di quanto tu credi / (b) di quanto tu non creda 'Realizing the way she acts, (I say that) your wife is less faithful than you think.'

Gerunds dependent upon the performative verb cannot in fact appear after di

11 Ex. 38a sounds a bit awkward, although it is perfectly acceptable when read slowly, with heavy pauses around the gerundial phrase. Probably the awkwardness is caused by the length of the gerundial, which makes one prefer to postpone it, as in 39a.
quanto, in contrast to the gerund seen in 38a (though they can appear in sentence-final position):

(43) a. *Tua moglie è meno fedele di quanto, considerando il modo in cui agisce, 
tu credi | tu non creda.
b. *Tua moglie è meno fedele di quanto, rendendomi conto del modo in cui 
agisce, tu credi | tu non creda.

Note that in 41–42 the gerundial phrases, which are dependent upon the performative verb, are acceptable in comparatives with and without non\textsubscript{2}. This is precisely because the performative verb is the same for all the comparatives. Likewise, in 38–40 the performative verb is the same for all the examples; yet the gerundial phrase can appear in certain positions with non\textsubscript{2}, but never without it. What is decisive for this gerundial, then, is the presence or absence of our verb of presupposition. It is the presence of this verb on which the gerundial phrase in 38–40 depends for both its appearance and its position.

Assuming now that the abstract S’s shown in Figs. 2 and 4 appear in underlying structure, the facts presented in §3.2 below can be accounted for.

3.11. Defense of non\textsubscript{2} in underlying structure. The differing pragmatics of comparatives with and without non\textsubscript{2} (studied in §2 above) have led us to propose that non\textsubscript{2} is present in the underlying structure of the subjunctive comparatives that appear with it in the surface, but absent in the underlying structure of the indicative comparatives that appear without it in the surface. Several syntactic arguments support this proposal.

In this section, we argue not only that non\textsubscript{2} is present in underlying structure, but also that its position is in S\textsubscript{3}. In Figs. 2 and 4, we have placed non\textsubscript{2} in the sentential complement of the abstract S\textsubscript{2}. There are at least two other possible positions for it. One is in S\textsubscript{2} itself, the other is in S\textsubscript{4}, in comparatives that have an S\textsubscript{4}, such as Fig. 4.

Let us first consider Fig. 4 once more, and turn our attention to the features of NP’s. As is well known, indefinite NP’s in examples like 44 can be [+specific] in affirmative sentences, but only [−specific] in negative sentences:

(44) a. Laura ha un cane ‘L has a dog ([+specific]).’
b. Laura non ha un cane ‘L does not have a dog ([−specific]).’

In comparatives, such indefinite NP’s can be [+specific] in indicative sentences without non\textsubscript{2}, but only [−specific] in subjunctive sentences with non\textsubscript{2}:

(45) a. Laura ama un problema di logica più di quanto io amo un problema di 
matematica ‘L loves a logic problem ([+specific]?) more than I
love a math problem ([±specific]).’
b. Laura ama un problema di logica più di quanto io non ami un problema 
di matematica ‘L loves a logic problem ([±specific]?) more than I
love a math problem ([−specific]).’

The following argument is used by Huckin 1974 to support the proposal that than is negative in English. Note that the Italian facts differ from the English; thus our conclusion is the opposite from Huckin’s. That is, we conclude that some Italian comparatives are underlyingly negated, and others are not.
Thus the specificity of such an indefinite NP, in a comparative with or without
\textit{non}_2, is the same as in a non-comparative negative or affirmative sentence, respectively. If the interpretation of indefinite NP’s depends on the surface presence of a negative element, then 44–45 supply no argument for the underlying presence of \textit{non}_2 in some comparatives. But if this interpretation depends on the underlying presence of a negative element, then 44–45 give an argument for the underlying presence of \textit{non}_2 in the comparative in 45b. Since we do not at present have a way to choose between these possibilities, we leave the question open.

Second, \textit{non}_2 with subjunctive in comparatives may appear with negative-polarity items, while indicative comparatives without \textit{non}_2 cannot. In 46–47 we see that \textit{pur} ‘even’ is a negative-polarity item which cannot appear in a non-negated S, regardless of mood. In 48 we see that \textit{non}_2 in comparatives allows this negative-polarity item, while non-negated comparatives do not:

(46) (a) *\textit{Dico che tu puoi [indic.]} immaginarlo, / (b) *\textit{Penso che tu possa [subj.]} immaginarlo, \textit{pur con tutta la fantasia del mondo} ‘I say/think that you can imagine it, even with all the fantasy in the world.’

(47) (a) *\textit{Puoi immaginarlo}, / (b) Non puoi immaginarlo, \textit{pur con tutta la fantasia del mondo} ‘You can/can’t imagine it, even with all the fantasy in the world.’

(48) \textit{La situazione in Africa è peggiore} (a) *di quanto si arriva a immaginare, / (b) di quanto non si arrivi a immaginare, \textit{pur con tutta la fantasia del mondo} ‘The situation in Africa is worse than one can imagine, even with all the fantasy in the world.’

The constraint on \textit{pur} in this usage is that the VP of its clause be negated. This constraint is on underlying, not on surface, structure:

(49) (a) *\textit{Non dico che tu puoi immaginarlo}, / (b) \textit{Non penso che tu possa immaginarlo, pur con tutta la fantasia del mondo} ‘I don’t say/think that you can imagine it, even with all the fantasy in the world.’

In 49a \textit{potere} ‘be able’ is never negated at any level; thus \textit{pur} cannot appear with it. But in 49b, with the reading in which negative transportation has applied, \textit{pur} can appear. However, \textit{potere} is not negated in surface structure in 49b; thus the constraint is on underlying structure. Looking at 48 now, we can see that in 48a, the indicative comparative without \textit{non}, there is no negation of \textit{arrivare} in underlying structure; but in 48b, the subjunctive with \textit{non}_2, there is.

A third argument in favor of placing \textit{non}_2 in S_3 depends upon the conjunction of negated sentences with \textit{neanche} ‘neither’, and runs parallel to the one above about negative-polarity \textit{pur}. Consider the following:

(50) (a) *\textit{Tu sei convinto} / (b) \textit{Tu non sei convinto che Maria è intelligente, e neanche Giorgio ne è convinto} ‘You are/aren’t convinced that M is intelligent, and G isn’t convinced of it either.’

\textit{Neanche} can occur here only if the first occurrence of the repeated verb is negated. This constraint holds at an underlying level, not at the surface. Thus if the negative in 50b is removed by negative transportation, \textit{neanche} may still appear. Contrast these sentences:
(51) (a) *Non dico / (b) Non penso che tu sia convinto che Maria è intelligente, e neanche Giorgio ne è convinto ‘I don’t say/think that you are convinced that M is intelligent, and G isn’t convinced of it either.’

Here 51a is bad because non₂ has never negated tu sei convinto che S at any underlying level (since dire ‘say’ does not allow negative transportation). But 51b is good with the reading in which non₂ has been moved by negative transportation from the predicate essere convinto ‘be convinced’ to the predicate pensare ‘think’.

Now consider these comparatives:

(52) Maria è più intelligente (a) *di quanto tu sei convinto / (b) di quanto tu non sia convinto, e neanche Giorgio ne è convinto ‘M is more intelligent than you are convinced, and G isn’t convinced of it either.’

The fact that neanche can occur in 52b (with non₂), but not in 52a (without non₂), means that the first essere convinto in 52b is negated in underlying structure, while that in 52a is not. Thus non₂ must negate S₃ in Fig. 4.

The above argument against placing non₂ in S₂ in underlying structure also holds for not placing it in S₄. Another argument is as follows. If non₂ were in S₄ in Fig. 4, then the fact that it appears in S₃ (with credere ‘believe’) in the surface might be explained by negative transportation. However, essere convinto is a predicate that does not allow negative transportation. That is, 53a does not have any reading identical to that of 53b:

(53) (a) Tu non sei convinto che Maria è interessante ‘You are not convinced that M is interesting.’
   (b) Tu sei convinto che Maria non è interessante ‘You are convinced that M isn’t interesting.’

Yet essere convinto can appear with non₂ in comparatives:

(54) Maria è più intelligente di quanto tu non sia convinto ‘M is more intelligent than you are convinced.’

If non₂ in 54 is to be accounted for in the same way as non₂ in the surface sentence of Fig. 4 (i.e., 5b), negative transportation cannot be the correct explanation for its placement with credere in Fig. 4. For these reasons, we conclude that non₂ negates S₃ in underlying structure.¹³

¹³ For speakers of English, many questions may arise at this point. First, Ross 1969 notes that ever and any appear in English comparatives, while negative elements like nobody do not. For this reason he proposed an underlying not which gets deleted. There are no parallel facts in Italian, and negative elements MAY appear in Italian comparatives:

(a) Non è più alto di nessuno ‘He isn’t taller than anyone (no one).’

Furthermore, we would like to point out that never and not at all do appear with comparatives in English, as do other examples of constituent negation:

(b) Better late than never. (*ever)
(c) It’s better that he did it late than not at all. (*It’s better that he did it late than at all.)

And, for some speakers, comparatives like (d) are acceptable:

(d) She’s taller than you wouldn’t believe.

Second, Grosu 1972 has pointed out that coördination reduction in English behaves differently depending on negativity. Inequalities, he points out, act like negated S’s with respect to
3.2. EXPLANATORY POWER OF THIS ANALYSIS. In this section we present several facts which follow from our analysis, and which would be difficult to explain otherwise.

3.21. SUBJUNCTIVE. Looking at examples 4–5, one notes that when non appears, the verb following it is subjunctive; but without non, we have the indicative. These facts follow automatically if the subjunctive is required by the abstract V in the abstract S which dominates the S with non.

this rule. In Italian, however, coordination reduction is the same regardless of negativity. Thus it provides no argument for or against our analysis.

Third, Huckin, in a study that covers the Ross and Grosu arguments plus many others, proposes that, in English comparatives of inequality, than is a negative element. He points out that normally negated elements like can’t stand or can’t help appear without the not in comparatives, and that affirmative-polarity items like already and still are excluded from comparatives in English. In both cases, the facts in Italian are different. Note that già ‘already’ is not an affirmative-polarity item in Italian. It may appear in the indicative only with affirmative verbs. But it may appear in the subjunctive with negated verbs:

(e) L’ha già fatto ‘He’s already done it.’
(f) *Non l’ha già fatto ‘He hasn’t already done it.’
(g) Penso che (non) l’abbia già fatto ‘I think that he has/hasn’t already done it.’

Likewise, già may appear with non in subjunctive comparatives, as well as without non in indicative ones:

(h) Ha avuto un successo maggiore (1) di quanto ha già avuto nel passato [indic.] / (2) *di quanto non ha già avuto nel passato [indic.] / (3) di quanto non abbia già avuto nel passato (subj.) ‘He had a greater success than he already had in the past.’

Note also that certain negative-polarity items, like affatto ‘at all’, cannot appear with non in comparatives:

(i) *Maria è più alta di quanto tu non creda affatto ‘M is taller than you don’t believe at all.’

This is because affatto requires a precise knowledge of the listener’s belief in (i), but non shows that the speaker does not have such precise knowledge. (See 32–34 above, and the comments preceding.) Thus (i) is self-contradictory and unacceptable.

Given the above contrasts between English and Italian, it may well be that one analysis cannot suffice for the comparatives in both languages. Still, some slight difference between the two languages may be causing all these apparent gross differences. Huckin notes that many distinctions often alleged to depend upon the affirmative/negative contrast in English may well depend instead upon a modality contrast. If this is so, the data on English presented in this footnote may suggest only that the modality of English comparatives is like that of negated S’s, rather than that English comparatives of inequality are indeed negated. And we would like to point out that, while it is possible to propose a semantic reading for (j) of (k), as Huckin does, we cannot imagine what the parallel semantic reading of (l) would be:

(j) John is taller than Bill.
(k) John is -er much tall than Bill is not -er much tall.
(l) John is less tall than Bill.

Thus the analysis of English inequalities which claims they are negative meets many problems.

Dwight Bolinger has suggested to us that the subjunctive may appear after di quanto because quanto is an indefinite antecedent. The subjunctive mood may be used after indefinite non-specific NP’s in certain cases; e.g., Cerco una ragazza (a) che sappia [subj.] il giapponese / (b) che sa [indic.] il giapponese ‘I’m looking for a girl who knows Japanese.’ For all speakers, una ragazza is [−specific] in (a). For some speakers, una ragazza is [±specific] in (b); for others, it must be only [+specific].

If it is quanto that triggers the subjunctive, then we would expect, for those speakers who
In many varieties of Italian, the subjunctive seems to be lexically controlled; i.e., certain verbs, complementizers, NP's, and adjectives call for the subjunctive in their complements, regardless of anyone's presuppositions about that complement. Thus, in 55, everyone may know that the world is round, yet some speakers still use the subjunctive, because for them the lexical item *credere* controls the mood of the complement:

(55) *Maria deve credere che il mondo sia* [subj.] *rotondo, perché lo è* 'M must believe that the world is round, because it is.'

In many other varieties of Italian, the subjunctive seems to be lexically controlled by some verbs, but presuppositionaly controlled in the complement of others. Kiparsky & Kiparsky note briefly that German factive complements are in the indicative, while non-factives may often be in the subjunctive. Rivero 1971 makes similar claims for Spanish. Saltarelli 1974a,b claims for Italian that the indicative mood occurs when a proposition has identified reference, otherwise the subjunctive occurs.

The situation seems to us to call for a slightly different analysis of the Italian subjunctive from any of those above. Certainly for many speakers, if one considers a complement to be true (i.e. factive), the indicative is used. Such speakers prefer 56 to 55:

(56) *Maria deve credere che il mondo è* [indic.] *rotondo, perché lo è.*

However, for other speakers, the 'intensity' of the complement on the part of the higher subject is relevant to mood. Suppose that one says:

(57) *Maria crede che New York sia* [subj.] *bella* 'M believes that New York is pretty.'

Here the speaker may well believe that New York is pretty; but the subjunctive indicates that Maria has only a vague notion of its beauty, and most probably has never been to New York. But one may say:

(58) *Maria crede che New York è* [indic.] *bella.*

Here the speaker may or may not agree with Maria; but Maria has the notion firmly in her mind, and probably has visited New York. However, even if Maria has not visited New York, but firmly believes it is a pretty city, the indicative is used:

(59) *Maria crede che New York è bella—non so perché se l'è messo nella testa, perché non c'è mai stata* 'M thinks that New York is pretty—I don't know how she got that idea in her head, because she's never been there.'

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read *una ragazza* in (b) as being only [+specific], that only the subjunctive could be used after *quanto*. However, this is not true. All speakers we have found accept both the indicative (without *non_2*) and the subjunctive (with it) in these inequalities. So unless one argues that the *quanto* of subjunctive inequalities is [−specific] and that of indicative inequalities is [+specific], one cannot explain the possibility of the indicative mood after *quanto*. The same objection holds for comparatives of equality, where *quanto* is used, but the indicative is the only acceptable mood. Furthermore, there is no indefinite NP like *quanto* in some of the examples of §4, where both *non_2* and the subjunctive appear. For these reasons, we are suspicious of Bolinger's suggested solution. And once we consider all the syntactic facts presented in §3, we reject this solution in favor of the abstract S solution.
Certainly, we cannot get into a detailed analysis here of how the subjunctive mood is used. All we wish to demonstrate is that contexts are relevant to the choice of mood for many Italians. Thus the claim that our abstract verb controls the subjunctive in its complement in our comparatives with non\textsubscript{2} is reasonable, since it is precisely the notion of supposing, but not knowing for sure, that is conveyed by this abstract verb.\textsuperscript{15}

3.22. Subjunctive without non\textsubscript{2}. Thus far we have given examples with subjunctive plus non\textsubscript{2}, and with indicative without non\textsubscript{2}. But the facts are not as cut and dried as our examples might lead one to believe. Actually, the preferences are as follows:

\begin{align*}
(60) \text{Maria è più intelligente (a) di quanto tu credi [indic.] / (b) } & \text*{di quanto tu non credi [indic.] / (c) di quanto tu non creda [subj.] / (d) } \text{(7)} \text{di quanto tu creda [subj.] 'M is more intelligent than you believe.'}
\end{align*}

\begin{align*}
(61) \text{Maria è più intelligente (a) di quanto è Carlo [indic.] / (b) } & \text*{di quanto non è Carlo [indic.] / (c) di quanto non sia Carlo [subj.] / (d) } \text{(7)} \text{di quanto sia Carlo [subj.] 'M is more intelligent than C is.'}
\end{align*}

Everyone agrees that 60a,c and 61a,c are perfectly grammatical. For some speakers, 60d and 61d are good, while for others they are less preferable than 60c and 61c (hence we have placed the ‘?’ in parentheses). No one has told us they would say 60b or 61b, yet everyone thinks they might have heard someone else say it. Our analysis of the appearance of non\textsubscript{2} in comparatives predicts that, among speakers who use the subjunctive only with lexical conditioning, some speakers may consider the abstract verb of our abstract S not to be in the class of verbs calling for the subjunctive.\textsuperscript{16} Thus these speakers should use non\textsubscript{2} plus the indicative. There should be no possibility for the indicative with non\textsubscript{2}, however, among those speakers who control mood semantically. We do not know if this prediction holds true, since we have found no speakers who use the indicative with non\textsubscript{2}. But the fact that people think they have heard 60b and 61b is perfectly consistent with our analysis.

The d examples, then, are the only ones not yet accounted for. We claim that d comes from c by way of an optional rule deleting non\textsubscript{2}. Semantically, this seems correct, since the d examples can be used in the same contexts as the c examples, but not everywhere that the a examples can be used.\textsuperscript{17} This distribution would be natural if the c and d examples were transformationally related.

\textsuperscript{15} Sometimes a modal verb following non\textsubscript{2} may be indicative or subjunctive, with no clear difference of acceptability: É più alto di quanto tu non possa [subj.] / non puoi [indic.] immaginare ‘He's taller than you can imagine.’ Since modality may be expressed either by a modal verb or by mood, this fact is not surprising for those speakers whose use of mood is presuppositionally controlled. However, one problem with our analysis is that many speakers who lexically control the subjunctive after verbs like credere do not allow the indicative, even with modal verbs, in the complement of credere-type verbs. Yet these speakers do accept the above example, with or without the subjunctive. We have no explanation for these facts.

\textsuperscript{16} We are grateful to Emily Norwood Rando for pointing out this prediction to us.

\textsuperscript{17} Some speakers have a slight preference for deleting non\textsubscript{2} when the situation calls for extreme politeness. The kind of subtle difference implied by such a choice, between the subjunctive comparative with and without non\textsubscript{2}, is not atypical of many choices between applying
At least four syntactic arguments favor deriving subjunctive inequalities without \( \text{non}_2 \) from those with it. First, as noted in §3.11, certain indefinite NP's may have \([\pm\text{specific}]\) readings in affirmative sentences, but only \([-\text{specific}]\) readings in negative sentences. In subjunctive comparatives without \( \text{non}_2 \), such indefinite NP's have only \([-\text{specific}]\) readings:

(62) \textit{Laura ama un problema di logica più di quanto io ami [subj.] un problema di matematica} ‘L loves a logic problem \([\pm\text{specific}]\) more than I love a math problem \([-\text{specific}]\).’

The \([-\text{specific}]\) reading of the second \textit{un problema} here would be explained if its comparative clause were underlingly negative. If there is no underlying \( \text{non}_2 \) in (62), one must say that these indefinite NP's are \([-\text{specific}]\) in negative sentences and in subjunctive inequalities: an unlikely set of environments.

Second, we saw that negative-polarity items may appear with the subjunctive and \( \text{non}_2 \), but not with the indicative without \( \text{non}_2 \). These same negative-polarity items are marginally acceptable without \( \text{non}_2 \) when the subjunctive mood is used:

(63) \( (*) \textit{La situazione in Africa è peggiore di quanto si arrivi a immaginare, pur con tutta la fantasia del mondo} \) ‘The situation in Africa is worse than one may possibly imagine, even with all the fantasy in the world.’

The facts that 63 is much better than 48a (which lacks \( \text{non}_2 \) in the indicative), and that it is almost as good as 60d and 61d,\(^{18}\) are explained if 63 is derived from 48b by a rule deleting \( \text{non}_2 \). If no such rule exists, one must say that the negative-polarity item in 46–48 and 63 can occur only with negated VP's or with a non-negated subjunctive inequality—again, an unlikely set of environments.

Third, we saw that \textit{neanche}, in an example like 52, is acceptable only if the first occurrence of the repeated verb is negated. We find that \textit{neanche} can marginally appear with subjunctive inequalities without \( \text{non}_2 \):\(^{19}\)

(64) \( (*) \textit{Maria è più intelligente di quanto tu sia convinto, e neanche Giorgio ne è convinto} \) ‘M is more intelligent than you may be convinced, and G isn't convinced of it either.’

Again, if \( \text{non}_2 \) is present underlingly in 64, the facts about \textit{neanche}-conjunction follow. If it is not, we need a strange set of environments for \textit{neanche}-conjunction.

Fourth, we show in §3.24 below that subjunctive comparative clauses with \( \text{non}_2 \) can be introduced by the complementizer \textit{che}, as well as by \textit{di quanto}, while indicative comparatives without \( \text{non}_2 \) can be introduced only by \textit{di quanto}. Subjunctive comparatives without \( \text{non}_2 \), as we expect by this point, can be introduced by \textit{che}, as well as by \textit{di quanto}, with the same degree of acceptability:

\(^{18}\) Ex. 63 may be slightly worse than 60d and 61d because of the presence of the negative-polarity item in the surface, which makes one expect a \( \text{non}_2 \) there.

\(^{19}\) Again, if 64 has lower acceptability than 60d and 61d, this may be because of the presence of \textit{neanche} in the surface, which makes one expect a \( \text{non}_2 \).
NEGATIVES IN COMPARATIVES

(65) Maria è più intelligente (a) (65)che sia Carlo / (b) (65)che tu creda ‘M is more intelligent than C is/ than you think.’

If non2 has been deleted from the comparative clauses in 65, then the choice of complementizers here, and the choice of complementizers in comparative clauses with non2 in the surface, constitute a single fact. But if there is no non2 in 65 at any level, then we might try to suggest that che can appear with subjunctive comparatives, regardless of the presence or absence of non2. However, note that 60b and 61b, in which non2 appears with the indicative, have the same degree of (un)-acceptability with che as with di quanto:

(66) Maria è più intelligente (a) *che non è Carlo / (b) *che tu non credi.

Since che is not impossible with non2 in the indicative, but is totally impossible without it in the indicative (see §3.24 below), we must say that che can appear in comparative clauses with non2 or with the subjunctive—an unenlightening set of environments. But if non2 is underlyingly present in 65, then we can say that che is acceptable with non2 in comparative clauses.

3.23. SUBJUNCTIVE WITHOUT non2, PAST TENSE. The deletion of non2 with present-tense verbs is marginal for some speakers, but good for others, as we saw in 60d and 61d above. In the past tense, however, the deletion of non2 is perfectly acceptable for many speakers we have questioned:20

(67) Maria è più intelligente (a) di quanto (non) fosse suo fratello a quell’età / (b) di quanto tu (non) credessi’ M is more intelligent than her brother was at that age / than you believed.’

Dwight Bolinger has suggested to us that the subjunctive comparative without non2 is used when the speaker allows for the possibility that he might be mistaken about his presumption of other people’s opinions.21 He suggests that, if this is true, then comparatives in the subjunctive without non2 are perfectly acceptable in past tenses, because the possibility of having mistaken a past opinion is stronger than the possibility of having mistaken a present one. We noted above (see fn. 17) that the subjunctive without non2 seems more polite. Since allowing for the possibility of having mistaken another’s opinions is more polite than stating that we think we know another’s opinions, Bolinger’s explanation seems correct to us. Thus the rule deleting non2 operates in polite contexts of a type found more commonly in the past tense than the present.

20 Note that there is good syntactic evidence that non2 has been deleted from the subjunctive comparatives in the past tense:

(a) La situazione in Africa è peggiore (67)di quanto si arrivasse [subj.] a immaginare / *di quanto si arrivava [indic.] a immaginare, pur con tutta la fantasia del mondo ‘The situation in Africa is worse than one could imagine, even with all the fantasy in the world.’

(b) Maria è più intelligente (?) di quanto tu fossi [subj.] convinto / *di quanto tu eri [indic.] convinto, e neanche Giorgio ne era convinto ‘M is more intelligent than you were convinced, and G wasn’t convinced of it either.’

(c) Maria è più intelligente (?) che tu credessi [subj.] / *che tu credevi [indic.] ‘M is more intelligent than you thought.’

21 We do not mean to suggest that Bolinger agrees with our rule deleting non2 from these comparatives. We are merely relating his suggestions about the differences between the subjunctive with and without non2.
A second interesting fact involving tense distinctions is that non₂ with the indicative sounds better in the past tense than in the present:

(68) Maria è più intelligente (a) *di quanto non è suo fratello / (b) ↑(7) di quanto non era suo fratello a quell'età ‘M is more intelligent than her brother / than her brother was at that age.’

(69) Maria è più intelligente (a) *di quanto tu non credi / (b) ↑(7) di quanto tu non credevi ‘M is more intelligent than you believe / believed.’

As we stated in §3.22, we predict that certain speakers, who control mood entirely on the lexical level, may classify the verb of our abstract S as taking the indicative mood in its complement. Such speakers would produce the sentences of 68–69. Although we have not found such speakers, we have noted that for many speakers who control mood lexically (either entirely or partially), lexical items requiring the subjunctive in a present-tense complement may accept (fully or marginally) the indicative in a past-tense complement. Consider an example with the clause introducer prima che ‘before’, which controls mood:

(70) Prima che Maria (a) faccia [subj.] quello / (b) *fa [indic.] quello, io faccio così ‘Before M does that, I'll do thus.’

(71) Prima che Maria (a) facesse [subj.] quello / (b) ↑↑ (subj.) faceva [indic.] quello, io facevo così ‘Before M did that, I was doing thus.’

In 70, we see that the present indicative is bad after prima che. But in 71, we see that some speakers fully accept the past indicative, while others do not reject it completely after prima che. Thus the fact that the indicative with non₂ in inequalities is much better in the past tense than in the present is parallel to the fact that the indicative after elements that lexically control the subjunctive is better in the past tense than in the present. These two facts are, indeed, a single fact if 68b and 69b are alternatives to 67a and 67b respectively, which is our claim.

3.24. CHOICE OF COMPLEMENTIZERS. The comparative complementizer, di (quanto), can appear in comparatives with and without non₂, as we saw in 4–5. For many Italians, however, the complementizer che ‘that’ can appear with the non₂-comparatives, but not with the comparatives lacking non₂ in the indicative:

(72) *Maria è più intelligente (a) *che è Carlo / (b) che non sia Carlo.

(73) *Maria è più intelligente (a) *che tu credi / (b) che tu non creda.

Looking back at the structures proposed in Figs. 1–4, we see that the abstract S₂ present in comparatives with non₂ is introduced by the same complementizer that introduces S₂ in the comparatives without non₂. We see also that S₃ embedded in S₂ is introduced by the unmarked complementizer che. Thus the two complementizers, di and che, are separated only by the abstract elements of S₂. The abstract elements of S₂ are subsequently deleted, leaving behind S₃. The question, then, is what happens to the complementizers on either side of the deletion site.

Note that, when subjunctive clauses stand alone, they may or may not be introduced by a complementizer:

(74) (Che) le avessi comprate! ‘Oh, if only I had bought them!’

The subjunctive in S's like 74 is exactly the kind for which R. Lakoff 1968 proposes higher abstract verbs. If a higher abstract verb underlies 74, then when it is deleted, the che introducing its complement may optionally also be deleted.
Perhaps the abstract elements of $S_2$ in Figs. 2 and 4 are deleted, optionally taking with them the *che* complementizer that introduces $S_3$. If *che* is deleted, *di* (*quanto*) surfaces as the complementizer. If *che* is not deleted, then we have two complementizers back-to-back; and since they introduce only one $S$, one of them is deleted. Thus *di* (*quanto*) might be deleted, yielding *che* in the surface in 72b and 73b. Nick Clements has pointed out to us that, since the complementizer *di* is homophonous with a preposition, a rule deleting *di* before *che* is similar to preposition deletion before complementizers in various languages. Certainly such a rule is independently motivated in Italian—*Ho paura di lui* 'I am afraid of him' vs. *Ho paura (*di*) che venga* 'I am afraid (*of*) that he may come'.

*Che* can never arise in the comparatives without an abstract $S_2$ (i.e. the indicative comparatives without *non*$_2$), because the situation of two complementizers 'fighting' for one position will never arise.

Without an underlying extra abstract $S$ in the comparatives with *non*$_2$, it is difficult to imagine how the choice of complementizers might be accounted for. But with the abstract $S$, the data are more understandable.

### 3.25. Repetition and Clitics

In comparatives of the type seen in 4, the element which is compared need not be deleted:

(75) Maria è più intelligente (a) di quanto è intelligente Carlo / (b) di quanto non sia intelligente Carlo 'M’s more intelligent than C is intelligent.'

There is a distinct difference, however, in the tone and possible uses for 75a and 75b. The second *intelligente* of 75a is said more slowly than that of 75b. In 75a there is a strong sense of repetition, which is much less noticeable in 75b. Furthermore, 75a might be found in a context like the following:

(76) Paolo: *Maria e Carlo sono una coppia speciale: lei è intelligentissima e lui è bellissimo.* 'M and C are a special couple: she is very intelligent and he is very handsome.'

Dario: *Ma lei è più intelligente di quanto è bello lui, no?* 'But she is more intelligent than he is handsome, isn’t that so?'

Paolo: *No! Lui è il più bello del mondo! Però, lei è più intelligente di quanto è intelligente lui.* 'No! He is the most handsome man in the world! But she is more intelligent than he is intelligent.'

But 75b sounds fine in the same contexts as 4b. Note that if Fig. 1 is the structure underlying 75a, then the first instance of *intelligente* is in $S_1$, while the second is in $S_2$. The structural proximity may make the deletion of the second *intelligente* automatic in most contexts. But if Fig. 2 underlies 75b, the two instances of *intelligente* are in $S_1$ and $S_3$. The greater structural distance between them may allow for an optional deletion of the second one.

This explanation is supported by the facts on clitics. Predicate adjectives may be replaced by the clitic *lo*:

(77) Dario: *È intelligente Maria?* 'Is M intelligent?’
Paolo: *Sì, lo è* 'Yes, she is (that).'

When *lo* replaces a predicate adjective, a quantifier may remain behind:

(78) *Sì, lo è molto* 'Yes, she is (that) a lot.'
Clitics never receive stress in Italian. If the second occurrence of intelligente in 75a requires a context in which it is lengthened or otherwise emphasized, while that in 75b does not, we would expect that the second intelligente of 75a could not be replaced by the unstressed clitic lo, while that of 75b could. This is, in fact, the case:

(79) Maria è più intelligente (a) *di quanto lo è Carlo / (b) di quanto non lo sia Carlo 'M’s more intelligent than C is (that).'

Without a structural difference between 75a and 75b, we cannot see how these cliticization facts can be accounted for. But with our abstract S, they follow.

Another fact about clitics is that the lo which replaces predicate adjectives can appear only with the surface complementizer di quanto, never with che (see §3.24 above):

(80) Maria è più intelligente (a) di quanto non (lo) sia Carlo / (b) *che non lo sia Carlo.

This follows from the fact that repetition of the predicate adjective can occur after di quanto (as we see in 75), but not after che:

(81) *Maria è più intelligente che non sia intelligente Carlo.

From 81 we see that a predicate adjective cannot appear in the comparative clause after che. This is true even when we compare clauses with different predicate adjectives:

(82) Maria è più intelligente (a) di quanto è furbo Carlo / (b) di quanto non sia furbo Carlo / (c) *che non sia furbo Carlo 'M is more intelligent than C is sly.'

We think that 80b, 81, and 82c are bad because a predicate adjective in a comparative clause is not admissible except in the presence of the comparative quantifier quanto. Since quanto must either move into complementizer position or be deleted, and since the presence of che blocks quanto from moving into complementizer position, quanto can never co-occur with che. Therefore no predicate adjective can appear in a comparative clause after che.

3.26. REDUCTION. Comparatives like 4a are fully acceptable, but they are unusual. One prefers to use a briefer comparative like:

(83) Maria è più intelligente di Carlo ‘M is more intelligent than C.’

This can be used in all the same contexts as 4a, and it does not convey presuppositions of the type conveyed by comparatives with non. Thus, if 83 is a reduced form of a longer comparative, it seems that it must be reduced from 4a and not from 4b.

Some speakers have another alternative for forming comparatives:

(84) Maria è più intelligente che Carlo.

We did not find many speakers who use this. Still, it seems that for those who do, it is appropriate in the same contexts as 4b and 5b; i.e., it is reduced from a comparative with non. In fact, non may appear with marginal acceptability:22

22 Note that the corresponding sentence with di is totally unacceptable:

(a) *Maria è più intelligente di non Carlo.

This does not mean that 85 is derived from a comparative having non with che, while a com-
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(85) Maria è più intelligente che non Carlo.

Thus it appears that, for many speakers, only indicative comparatives can reduce to NP's; for others, both indicative and subjunctive (i.e. those with non2) can reduce. We do not know why subjunctive comparatives can reduce to NP's only in certain varieties of Italian.

3.3. OBLIGATORY NEGATION IN S3. We have claimed that S3 in Figs. 2 and 4 (i.e. the comparative clauses with non2) are negated in underlying structure. This amounts to claiming that our abstract verb takes only negative complements. Such a claim is totally consistent with the grammar of Italian, since many verbs require that their complements be negative—just as many require that their complements be affirmative. Thus, stare all'erta 'watch out' in 86 can take only negative complements, while proibire 'prohibit' in 87 can take only affirmative complements:

(86) a. Sta all'erta che non ti sorprenda 'Watch out that he doesn't surprise you.'
    b. *Sta all'erta che ti incontrino in quel posto 'Watch out that they meet you in that place.'

(87) a. Proibisco che Giorgio parli 'I forbid that G speaks.'
    b. *Proibisco che Giorgio non vada a scuola 'I forbid that G not go to school.'

Our abstract verb, then, is in a class of predicates with stare all'erta which takes only negative complements.

4. Non2 IN OTHER CONSTRUCTIONS. If our analysis of non2 is correct, its appearance depends on the presuppositions of the speaker, and not completely on the syntax of parative having non2 with di (quanto) cannot reduce. Rather, (a) is bad because di can be followed only by NP's, pronouns, and numerals in the surface of reduced comparatives. Any other element (ADV, VP, PP etc.) must be preceded by che:

(b) Maria è più intelligente che / *di furba 'M is more intelligent than sly.'
(c) Mi piace di più nuotare che / *di fare i tuffi 'I like swimming better than diving.'
(d) Va più spesso al cinema che / *di in biblioteca 'He goes to the movies more often than to the library.'

Thus (a) is bad because non2 cannot follow di. Differences between di and che in reduced comparatives are discussed by Nespor (ms).

While many speakers do not accept (85), most accept the following:

(e) È più studioso che (non) intelligente 'He's more scholarly than intelligent.'

Battaglia & Pernicone (1951:497) note that non2 is kept here when one wants to 'sottolineare maggiormente il difetto dell'intelligenza' ('underline more strongly the defect of intelligence'). We believe, rather that this non is non2.

23 Another example might be:

(a) Dubito che Carla (1) abbia capito / (2) non abbia capito 'I doubt that C has (not) understood.'

Certainly (a2) is ambiguous (as are 88–90, in the b examples). It does have one reading similar to that of (a1); however, (a) may exemplify a separate phenomenon that Jespersen calls 'paratactic negation'. He points to cases in which 'a negative is placed in a clause dependent on a verb of negative import like "deny, forbid, hinder, doubt"' ([1917] 1960:75), and he gives as an example:
comparatives. Therefore we would expect to find other syntactic environments in which it can appear. And in fact, we do. Consider the a and b examples of the following sentences, all of which involve indirect questions:

(88) Chissà (a) che ti sposi / (b) che non ti sposi ‘Who knows if he’ll marry you / if he might not marry you.’

(89) Non sono sicura (a) se io debba / (b) se io non debba vederlo lunedì ‘I’m not sure if I should / shouldn’t see him Monday.’

(90) Ci domandiamo (a) se dobbiamo / (b) se non dobbiamo riconsiderare la nostra analisi di ‘non2’ ‘We wonder if we should / shouldn’t reconsider our analysis of non2.’

(91) Chissà (a) se vale / (b) se non valga la pena (di) comprarlo ‘Who knows if it’s worth / if it’s not worth the trouble to buy it.’

The b examples are used when the speaker expects the negated proposition to surprise someone, or to be contrary to previous expectations. Note that the subjunctive is used with or without non2 in 88–90; thus it sounds the same in these sentences as would non1. In fact, the b sentences of 88–90 are ambiguous as to whether one is unsure about the affirmative or negative possibility of the embedded clause. However, 91 takes the indicative without non2, but the subjunctive with it. If this is truly an example of non2, then there should be a corresponding sentence with non1 plus the indicative, contrasting with 91b in the same way that 16 contrasts with 17—and there is:

(92) Chissà se non vale [indic.] la pena (di) comprarlo ‘Who knows if it isn’t worth the trouble to buy it.’

We believe that these examples can be translated into English, maintaining the presuppositions present in Italian. Thus the negative element discussed in this paper is not found solely in Italian (or solely in Romance), but in English as well. We expect that it can be found—we wonder if it can’t be found—in many languages.

5. CONCLUSIONS. We have argued that non2 is present only when the speaker holds certain presuppositions. It is not pleonastic, but rather is a bona-fide negative. In order to explain many syntactic and semantic facts, we have proposed an abstract verb in an abstract sentence dominating the complement in which non2 appears. Finally, we have shown that non2 appears in constructions other than comparatives in both Italian and English. We have given no account of why our abstract S of

(b) It never occurred to me to doubt that your work ... would not advance our common object in the highest degree.

Dwight Bolinger, on the other hand, has suggested that doubt today might be analysed as raise the doubt, as in:

(c) I raise the doubt that he is (not) here.

(d) I raised the doubt about his (not) being here.

Certainly (c) and (d) seem to give examples of our negative of presupposition. And the Italian example (a2), with the reading given there, is used in contexts similar to that for non2. Thus (a2) might be used when the speaker knows Carla is very intelligent and usually understands: therefore, the idea that she might not have understood in this instance is unlikely. Still, there is enough evidence to make the speaker think Carla has indeed not understood. So the speaker raises his doubt, while still letting you know he expects people to be surprised at it.
presupposition can appear in certain syntactic environments, but not in others. Specifically, we do not know why comparatives and indirect questions (like those in §4) provide environments for this presuppositional sentence, while other types of structures do not. Perhaps the presence of the wh-word in both these structures (comparatives and indirect questions) is crucial. Also, we realize that generating an S in embedded position that is never lexically realized is a new proposal, with serious theoretical implications. However, the proposal of this S has allowed us to account for at least five sets of facts (in §3.1 the gerund facts, and in §3.2 those on mood, choice of complementizers, clitics, and repetition); all these would go unrelated in either a presupposition-dependent syntax model or an interpretive approach. Thus this analysis has strong explanatory power in its favor.

If our analysis is anywhere near correct, non$_2$ is one more example of a presuppositional fact that is accounted for by a certain syntactic analysis. Thus we may hope that presupposition-free syntax can still be defended.

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