

SUPERFICIALLY ILLOGICAL "NON": NEGATIVES IN COMPARATIVES*

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1. Introduction

In Italian the word *non* is used as a negative element similar to *not* in English. Thus 1b and 2b are the negative counterparts of 1a and 2a, showing VP negation and NP negation respectively:

- (1) a. *Maria viene*
b. *Maria non viene.*
'Mary 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.'

There are other uses of *non* that do not correspond to English *not*: for example, the well-known cases of 'double negation', illustrated in 3 with *nessuno* 'no one'.

- (3) *Non viene nessuno.*
'No one is coming.'

In this paper we consider a use of *non* that is frequently found in comparatives and that has no English counterpart in these structures:¹

- (4) a. Maria è più intelligente di quanto è Carlo.
b. Maria è più intelligente di quanto non sia Carlo.
'Mary is more intelligent than Carlo is (not).'
- (5) a. Maria è più intelligente di quanto tu credi.
b. Maria è più intelligente di quanto tu non creda.
'Maria is more intelligent than you believe (not).'

This use of *non* is frequently cited as an example of a 'pleonastic element' and is said to be optional in comparatives. We will present an analysis of 4 and 5 accounting for many differences between a and b, both semantic and syntactic. We will show that this *non* is not limited to comparatives, but occurs in various structures, many of which have counterparts with not in English. While we have not done a detailed study of languages other than 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 and 5 lies in what is presupposed by the speaker, rather than in what is asserted. In the literature on presupposition there is reference to logical and pragmatic presuppositions. S' is a logical presupposition of a sentence S if from S we can conclude S' (see Horn 1969). It is also often mentioned that logical presuppositions remain unchanged under questioning (see Kiparsky and 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 Lakoff 1971). They involve the speaker and, often, the listener, while logical presuppositions follow from sentences themselves without regard to speaker, listener, or context (see Keenan 1971 and Karttunen 1973).

Our *non* is used when certain pragmatic presuppositions are present. In fact, questioning or negating a comparative drastically affects the possibility of having *non* (see 2.1 and 2.2 below). *Non* 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. In order to see this, consider the following contexts:

Context 1 (for 4a)

Dario: Dimmi cosa pensi di Maria e Carlo
'Tell me what you think of Mary and Carlo.'
Paolo: Maria è più intelligente di quanto e/??non sia Carlo, ma lui è molto più simpatico.

'Mary is more intelligent than Carlo 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 opposite beliefs from his own. Thus *non* does not appear in Paolo's response.

Context 2 (for 4b)

Dario: Carlo è così intelligente che dubito che Maria possa vincerlo a scacchi.
'Carlo is so intelligent that I doubt that Mary can beat him at chess.'
Paolo: Ma ti sbagli! Maria è più intelligente di quanto non sia/è Carlo e potrebbe vincerlo senza molti sforzi.
'But you're wrong! Mary is more intelligent than Carlo 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 she is less intelligent, and thus use *non*. 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 *non*. Thus there are two possible responses here, with differing amounts of intensity on the part of the speaker's attitude toward his contradiction of the listener's evaluation of Maria and Carlo.

Context 3 (for 5a)

Dario: Maria ha continuato a dire sciocchezze. È proprio cretina, sai?
'Mary 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/??non creda.
'But you're wrong! I know Mary very well and she's more intelligent than you think.'

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

Context 4 (for 5b)

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 at all this last lesson, but I don't believe it's worth the trouble to ask Mary 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. Mary 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 *non* accordingly. However, if Paolo takes Dario's remark as a strong indication of his evaluation of her intellect, then he need not use *non*.

In these four contexts we see that *non* 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 (context 1) or if the speaker need not assume anything since explicit statements of the listener's opinions have been made (context 3). The comparative without *non* can appear in all contexts, but it is a second choice in contexts 2 and 4, where a suitable assumption for having *non* on the part of the speaker seems appropriate to the context. Thus, *non* is not possible in all comparatives of inequality (contrary to the analyses of Seuren 1969 and Antinucci & Puglieselli 1971); rather, *non* is present in some comparatives and not in others.

Also, the *non* of comparatives is similar to only in English (see Horn 1969) in that, like *only*, it expresses an expectation. So in 6 (Horn's example),

- (6) Only Muriel voted for Hubert.

the speaker is revealing that he expected someone other than Muriel to vote for Hubert. Our *non* reveals that the speaker expects his statement to contradict someone's previously held belief. Various constraints on the distribution of *non* in comparatives can be explained by this presuppositional analysis.

2.1. Questions

Non does not appear in questioned comparatives of the type seen in 4:

- (7) a. *È più intelligente di quanto è Carlo?*
b. **È più intelligente di quanto non sia Carlo?*
'Is she more intelligent than Carlo is?'

Since in 7 the speaker is asking the listener whether a comparison of inequality is true or not, the speaker cannot simultaneously contradict the beliefs of the listener (nonrhetorical questions do not contradict, but only ask for information). Thus *non* does not appear in questioned comparatives like 7 because a proper context is not present. If 7a and 7b are negated, yielding a question conducive to an affirmative response from the listener, the comparative with *non* is still out:

- (7) c. *Non è più intelligente di quanto è Carlo?*
d. **Non è più intelligente di quanto non sia Carlo?*
'Isn't she more intelligent than Carlo is?'

Again 7d is rejected on semantic grounds: one does not simultaneously expect the listener to agree (the expectation

revealed by the matrix *non*) and to contradict him (the expectation revealed by the embedded *non*).
Non, likewise, cannot appear in many questioned comparatives of the type seen in 5:

- (8) a. **È più intelligente di quanto tu credi?*
b. **È più intelligente di quanto tu non creda?*
'Is she more intelligent than you think?'

8a is out because one does not normally ask someone for a confirmation of something they do not believe; 8b is out because the speaker will not ask the listener to confirm the opposite of what he expects him to believe. However, if the belief of the listener is a past belief which he may or may not still hold, the speaker can question the comparatives both with and without *non*:

- (8) c. *È più intelligente di quanto tu credevi?*
d. **È più intelligente di quanto tu non credessi?*
'Is she more intelligent than you thought?'

8c is good because it is perfectly natural to ask the listener to confirm whether or not a past belief was correct; 8d is good because it is also natural to ask him now to confirm the opposite of what we expect he used to believe. Likewise, 9 is natural:

- (9) a. *È più intelligente di quanto lui crede?*
b. **È più intelligente di quanto lui non creda?*
'Is she more intelligent than he believes?'

To ask information about whether someone is more intelligent than a third person believes or than you expect a third person to believe, is semantically fine. Thus a context for 9b with *non* can be found. If the distribution of *non* were determined by factors other than semantic ones, it would be very difficult to explain the acceptability of 8d and 9b in contrast with that of 7b and 8b. But with semantic criteria, one can explain the distribution above in a simple way.

2.2. Negation

It is common to find inequalities in which the matrix verb is negated, as in 10:

- (10) a. *Maria non è più intelligente di quanto è Carlo.*
b. *Maria non è più intelligente di quanto tu credi.*
c. *Maria non è più intelligente di quanto crede Dario.*
'Mary is not more intelligent than Carlo is/you think/Dario thinks.'

It is also possible to find inequalities in which the verb in the lower clause is negated with the normal sense of a negation. Thus in 11 we have an example of the lower verb being negated by the *non* seen in 1b, while in 12 we have an example of the

non of 4b:

- (11) Io sono stata all'estero più giorni di quanti Maria non è andata a lavorare.
'I've been abroad more days than Mary has not gone to work.'
(e.g. Mary hasn't gone to work for 10 days and I've been abroad for 11 days.)
- (12) Io sono stata all'estero più giorni di quanti Maria non sia andata a lavorare.
'I've been abroad more days than Mary's gone to work.'
(e.g. Mary has gone to work for 10 days and I've been abroad 11 days.)

However, when the matrix verb is negated, it is not possible to have our special *non* although it is possible to have a regular *non* (of the type seen in 1b). Thus corresponding to 10-12 we have 13-15:

- (13) a. *Maria non è più intelligente di quanto non sia Carlo.
b. *Maria non è più intelligente di quanto tu non creda.
c. *Maria non è più intelligente di quanto non creda Dario.
- (14) Io non sono stata all'estero più giorni di quanti Maria non è andata a lavorare.
'I haven't been abroad more days than Mary hasn't gone to work.'
(e.g. Mary hasn't worked for 10 days and I've been abroad for fewer than 10 days.)
- (15) *Io non sono stata all'estero più giorni di quanti Maria non sia andata a lavorare.

We must account for the unacceptability of 13a, 13b, 13c and 15. Consider first 13b. 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 the listener, and, on semantic grounds, *non* is excluded.

Likewise in 13c, the speaker is saying Maria is not more intelligent than Dario believes. Thus he cannot simultaneously expect to contradict Dario, and *non* is out. In order to understand why 13a is out, consider 4b again. The presupposition of the speaker in 4b is that someone does not expect Maria to be more intelligent than Carlo. In 13a, if the presupposition were that someone expected Carlo to be more intelligent than Maria and that the assertion of the inequality would contradict this belief or expectation, then *non* 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* would reveal, the assertion agrees with it. So in 13a the semantic environment for *non* is not met, and it cannot (and does not) appear. 15 is out for reasons entirely parallel to those presented for the exclusion of 13a.

If we tried to account for such facts on the distribution of our *non* without reference to semantics, we might propose

a constraint which says that our *non* cannot appear if the matrix verb is negated. Such a constraint cannot apply at the surface level for three reasons. First, at the surface level the difference between the *non* of 14 and that of 15 is not apparent. It is true that the verb in 14 is indicative while that in 15 is subjunctive. Thus one might propose that the constraint can look at the surface mood of the verb and determine which kind of *non* is involved. However, we claim in 3.2.2 below that there may be some speakers who use the indicative mood with our *non*. For such speakers we do not see how our *non* could be distinguished at the surface level. Second, we argue in 3.2.2 below that subjunctive comparatives without *non* are derived from subjunctive comparatives with *non*, by a rule deleting it. If there were a surface constraint against the appearance of our *non* after a matrix *non*, we would expect the comparatives from which our *non* has been deleted to be fine after a matrix *non*. This is not the case. Thus, if we delete the *non* out of 13, all the sentences are still unacceptable:

- (13') a. *Maria non è più intelligente di quanto sia Carlo.
b. *Maria non è più intelligente di quanto tu creda.
c. *Maria non è più intelligente di quanto creda Dario.
'Mary isn't more intelligent than Carlo is/you think/Dario thinks.'

From 13' we see that the constraint at hand cannot be operating at the surface level, since there is no appearance of our *non* at the surface level. And, finally, our *non* appears in constructions other than comparatives: in section 4, it may follow a matrix *non* in some cases. Therefore, a surface constraint cannot account for the distribution of *non*. Thus, our *non* does not appear in the examples in this section because it is out at some underlying level. If we are correct in claiming that the examples in section 4 contain our *non*, then the fact that it can appear there after negated matrix verbs means that there cannot be a syntactic constraint operating on an underlying level throwing it out after a matrix *non*.

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

2.3. Equality

It has often been noted that the *non* of 4b and 5b cannot appear in comparisons of equality:³

- (16) a. Maria è tanto intelligente quanto è Carlo.
b. *Maria è tanto intelligente quanto non sia Carlo.
'Mary is as intelligent as Carlo is.'
- (17) a. *Maria è tanto intelligente quanto tu credi.
b. *Maria è tanto intelligente quanto tu non creda.
'Mary is as intelligent as you think.'

Both Seuren 1969 and Antinucci & Puglieselli 1971 attribute the lack of *non* here to the fact that comparisons of equalities link two similar things while inequalities (in which *non* can appear) link two dissimilar things.⁴ However, if this were the correct explanation, one would expect our *non* to appear in negated comparisons of equality such as 18a. But in fact, *non* cannot appear (18b):

- (18) a. Maria non è tanto intelligente quanto tu credi.
'Mary isn't as intelligent as you think.'
b. *Maria non è tanto intelligente quanto tu non creda.
'Mary isn't as intelligent as you don't think.'

Since the semantics of 18a are very similar to 19a, and since our *non* can appear in an S such as 19b:

- (19) a. Maria è meno intelligente di quanto tu credi.
'Mary is less intelligent than you think.'
b. Maria è meno intelligente di quanto tu non creda.
'Mary is less intelligent than you think.'

We conclude that our *non* is excluded from comparisons of equality for reasons other than the fact that equalities link two similar things.

Saltarelli 1974a does not mention our *non*. But we assume from his analysis of the subjunctive mood that he would attribute the absence of our *non* in comparisons of equality to the lack of the subjunctive mood. *Non* appears only when the verb is subjunctive, as shown below (and as discussed in 3.2.2). Contrast 20ab (indicative) and 20cd (subjunctive):

- (20) a. ?*Maria è più intelligente di quanto non è Carlo.
b. ?*Maria è più intelligente di quanto tu non credi.
'Mary is more intelligent than Carlo is/you think.'
c. Maria è più intelligente di quanto non sia Carlo.
(=4b)
d. Maria è più intelligente di quanto tu non creda.
(=5b)

Since equalities cannot have the subjunctive, *non* cannot appear:

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

Saltarelli attributes the absence of the subjunctive in equalities and 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 mood. Exactly what constitutes identified reference is not clear, especially in the light of examples like 22 (which are not mentioned by Saltarelli):

- (22) Benchè 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 it appears in 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 have identified reference while others do not.⁵ Finally, if the comparative clause in 19b has unidentified reference, why doesn't the comparative clause in 18 have unidentified reference? The problems with this analysis seem insurmountable to us.

In order to see why our *non* cannot appear in comparatives of equality, whether negated or not, one must first understand that comparatives of equality using *tanto*...*quanto* 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 two contexts:

Context 5 (in which *tanto*...*quanto* can appear)

Dario: Maria è bravissima! E forse la più intelligente ragazza che conosco.

'Mary 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 noticed her answers in math class today--and she's just as intelligent as you think.'

Context 6 (in which *tanto*...*quanto* cannot appear)

Dario: Maria ha fatto bene oggi a scuola per la quarta volta.

'Mary did well at school today for the fourth time.'

Paolo: *Sì, è tanto intelligente quanto tu credi.

'Yes, she's as intelligent as you think.'

In context 5 Paolo knows precisely how intelligent Dario considers Maria to be. Thus *tanto*...*quanto* can be used. In context 6 Paolo infers from Dario's comment that he considers Maria intelligent, but there is no precision here as to how intelligent Dario considers her to be, making *tanto*...*quanto* inappropriate in Paolo's response.

We have stated that our *non* occurs when the speaker presupposes a certain evaluation of Maria's intelligence, but not when an explicit evaluation has been made (context 3 in section 2). Since *tanto*...*quanto* requires explicit and precise knowledge while *non* requires inferred and imprecise knowledge, *non* is excluded from comparisons of equality on semantic grounds (i.e. *non* and *tanto*...*quanto* are semantically mutually exclusive).

In support of this explanation, we note the following facts. In sentences in which a precise knowledge of the degree of inequality is known, *non* cannot appear (23a-d). Likewise, if there is an element requiring precise knowledge of another person's belief, *non* cannot appear (23e):⁶

- (23) a. *Maria è molto più intelligente di quanto non sia Carlo.
 b. *Maria è molto più intelligente di quanto tu non creda.
 c. *Maria è molto più intelligente di quanto tu non sia Carlo.
 d. *Maria è due metri più alta di quanto tu non creda.
 e. *Maria è più intelligente di quanto tu non creda con assoluta certezza.
 'Mary is more intelligent than you believe with certainty.'

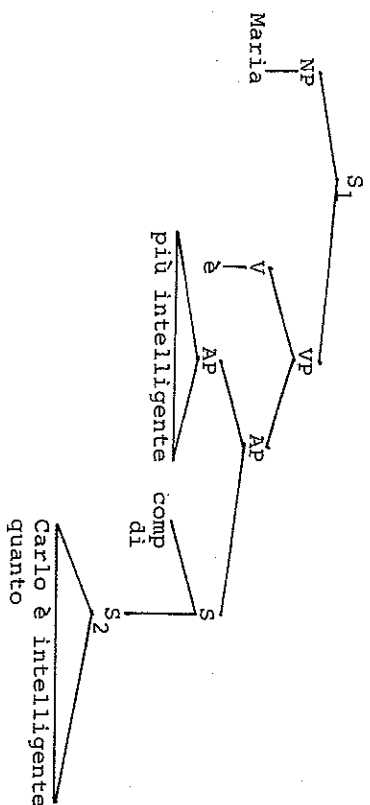
All the examples of 23 are fine without *non* and with the indicative mood, as we would expect.

3. Underlying structure

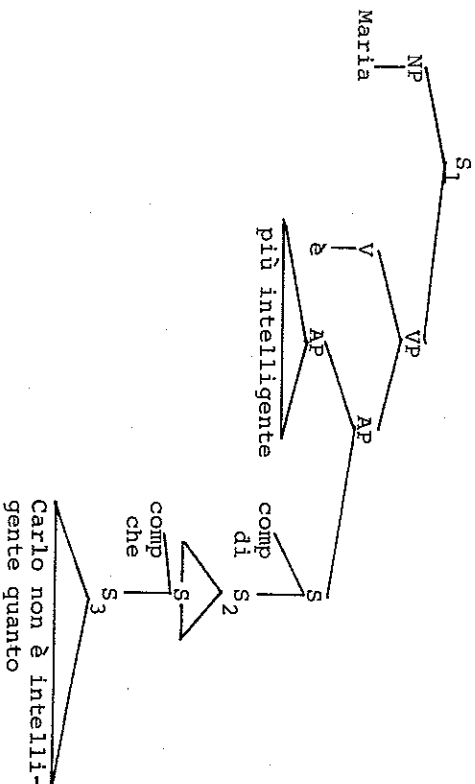
4a and 5a differ from 4b and 5b by the contexts in which they may appear and by the presence or lack of *non*. Since *non* reveals a certain presupposition of the speaker, there is a question as to whether or not there need be a syntactic difference between a and b of 4 and 5. Kiparsky and Kiparsky 1970 offer a syntactic difference to parallel the presuppositional difference between factive and nonfactive complements. On the other hand, Lakoff 1971 claims that presupposition-free syntax is not possible, pointing to several syntactic processes that seem to be conditioned by presuppositions.⁷ Since a syntax that is presupposition-free is much less powerful than one that can make reference to it, we would hope to be able to offer a syntactic difference to parallel the presuppositional difference in these sentences. And, indeed, proposing a syntactic difference sheds light on the facts given in 3.2.

The underlying structures we propose for 4 and 5 are given in 24 and 25. All details not directly relevant to this study have been omitted:⁸

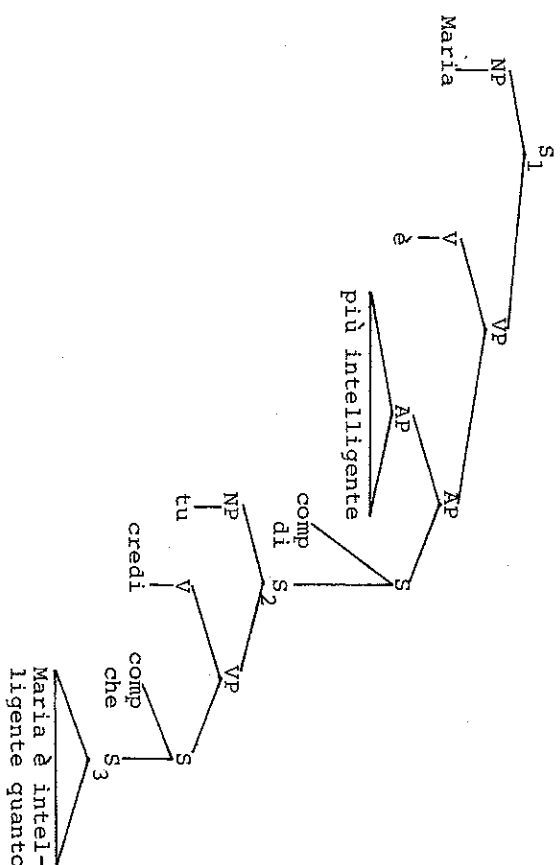
(24) a. (underlying 4a)



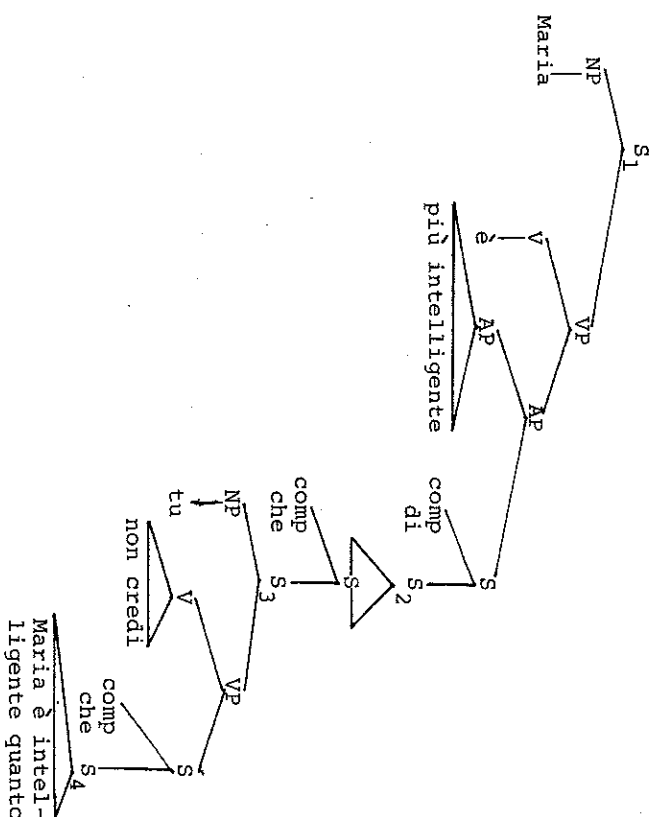
b. (underlying 4b)



(25) a. (underlying 5a)



b. (underlying 5b)



In the comparatives with *non* there is one more clause in the underlying structure than in the structure of the corresponding comparatives without *non*. In 24b and 25b 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 is because S2 represents an abstract sentence in that it is never lexically realized and has varying meanings. In 24b, S2 means roughly 'someone is surprised that' and in 25b, it means 'I expect that'.

3.1. Defense of the abstract S.

The proposal of an abstract S such as S2 in 24b and 25b is not new. Lakoff 1968 argues for abstract higher Ss to dominate subjunctive clauses that appear unembedded in surface structure in Latin and modern Spanish.⁹ 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 have proposed an abstract S for semantic reasons, there is syntactic evidence that this S does appear in underlying structure. In fact, a lexically-realized S may occur in the same position as our abstract S2:

(24') Maria è più intelligente di quanto ci si aspetta
che non sia Carlo.

'Mary is more intelligent than one expects that
Carlo is(n't).'

(25') Maria è più intelligente di quanto io mi aspetto
che tu non creda.

'Mary is more intelligent than I expect that you
(don't) believe.'

Thus an S-node clearly can intervene between the main and the comparative clauses. Furthermore, an argument in support of our abstract S is supplied by the behavior of gerunds. Consider the following sentences:

(26) a. Ho visto Maria guidando per la strada.
'I saw Mary 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 Gianni giocando nella soffitta.
'I discovered Johnny while I was playing in the
attic.'

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

Gerunds (the *-ndo* forms) can have their subject deleted only under identity with the higher subject,¹⁰ and not with an object, as seen in 26.

Now consider 27, which gives comparatives of the type seen in 5:

- (27) a. *Tua moglie è meno fedele di quanto, rendendomi conto dell'importanza della fedeltà nel matrimonio per te, tu non sia pronto a immaginare.*
 b. **Tua moglie è meno fedele di quanto, rendendomi conto dell'importanza della fedeltà nel matrimonio per te, 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.'
 c. *Tua moglie è meno fedele di quanto tu non sia pronto a immaginare, rendendomi conto dell'importanza della fedeltà nel matrimonio per te.*
 d. **Tua moglie è meno fedele 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 *non* is acceptable. The subjectless gerundial phrase, *rendendomi conto...* must have had *io* 'I' as subject at some point, since *rendendomi* is a reflexive form with the first person singular clitic *mi*. Nowhere in the surface of the sentences of 27 do we have a first person subject which could have controlled the deletion of the subject of the gerund. Yet this gerund is fine in 27ac1, both with *non*, but not in 27bd, without *non*. Thus an S whose subject is first person singular must appear in the underlying structure for a and c, but not for b and d. This is our abstract S, which might have had the meaning here '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 *non*.

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

- (27) e. **Rendendomi conto dell'importanza della fedeltà nel matrimonio per te, (io dico che) tua moglie è meno fedele di quanto tu non sia pronto a immaginare.*
 f. **Rendendomi conto dell'importanza della fedeltà nel matrimonio per te, (io dico che) tua moglie è meno fedele 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 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 (28ab). But gerunds dependent upon the performative verb cannot in fact appear after *di quanto*, in contrast to the gerund seen

in 27a (although they can appear in S-final position), as 28cd show:

- (28) a. *Considerando il modo in cui agisce, (io dico che) tua moglie è meno fedele di quanto tu credi/tu non creda.*
 'Considering the way in which she acts, (I say that) your wife is less faithful than you believe.'
 b. *Rendendomi conto del modo in cui agisce, (io dico che) tua moglie è meno fedele di quanto tu credi/tu non creda.*
 'Realizing the way she acts, (I say that) your wife is less faithful than you think.'
 c. **Tua moglie è meno fedele di quanto, considerando il modo in cui agisce, tu credi/tu non creda.*
 d. **Tua moglie è meno fedele di quanto, rendendomi conto del modo in cui agisce, tu credi/tu non creda.*

Note that in 28ab the gerundial phrases, which are dependent upon the performative verb, are acceptable in comparatives with and without *non*. This is because the performative verb, being the same for all the comparatives, can take the same kinds of gerundial phrases. Likewise, in 27 the performative verb is the same for all the examples, yet the gerundial phrase can never appear in certain positions without *non*. 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 27 depends for both its appearance and its position. Assuming now that the abstract Ss shown in 24b and 25b do appear in underlying structure, the facts seen in section 3.2 below can be accounted for.

3.1.1. Defense of *non* in underlying structure.

The differing pragmatics of comparatives with and without *non* have led us to propose that *non* is present in the underlying structure of the subjunctive comparatives that appear with *non* in the surface, but not present in the underlying structure of the indicative comparatives that appear without *non* in the surface. There are several syntactic arguments to support this proposal, and in this section, we offer support not only for the presence of *non* in underlying structure, but also for its position being in S3.

The first argument involves the features of NPs. As is well known, indefinite NPs in examples such as 29 can be [t-specific] in affirmative sentences but only [-specific] in negative sentences:12

- (29) a. *Laura ha un cane.*
 'Laura has a dog ([t-specific]).'
 b. *Laura non ha un cane.*
 'Laura does not have a dog ([-specific]).'

In comparatives such indefinite NPs can be [+specific] in indicative sentences without *non* but only [-specific] in subjunctive sentences with *non*:

- (29) c. Laura ama un problema di logica più di quanto io amo un problema di matematica.
'Laura loves a logic problem ([+specific]?) more than I love a math problem ([+specific]).'
d. Laura ama un problema di logica più di quanto io non ami un problema di matematica.
'Laura loves a logic problem ([+specific]?) more than I love a math problem ([-specific]).'

Thus the specificity of such an indefinite NP in a comparative with or without *non* is the same as in a noncomparative negative or affirmative sentence, respectively. If the interpretation of indefinite NPs depends on the surface presence of a negative element, then 29 supplies no argument for the underlying presence of *non* in some comparatives. But if it depends on the underlying presence of a negative element, then 29 gives an argument for the underlying presence of *non* in the comparative in 29d. Since we do not presently have a way to determine which of these situations hold, we leave the question open.

Second, *non* with subjunctive in comparatives may appear with negative polarity items, while indicative comparatives without *non* cannot. In 30a-c we see that *pur* in this particular usage is a negative polarity item which cannot appear in a nonnegated S regardless of mood. In 30d we also see that *our non* in comparatives allows this negative polarity item, while nonnegated comparatives do not.

- (30) a. *Dico che tu puoi immaginarlo, pur con tutta la fantasia del mondo.
b. *Penso che tu possa immaginarlo, pur con tutta la fantasia del mondo.
'I say/think that you can imagine it, even with all the fantasy in the world.'
c. Non puoi/*puoi immaginarlo, pur con tutta la fantasia del mondo.
'You can't/can imagine it, even with all the fantasy in the world.'
d. *La situazione in Africa è peggiore di quanto si arriva a immaginare pur con tutta la fantasia del mondo.
e. La situazione in Africa è peggiore di quanto non si arrivi a immaginare 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 *pur* in this usage is that the VP of its clause be negated. This constraint is on underlying structure, not on surface structure, as we see in 30a' and 30b'.

- (30) a'. *Non dico che tu puoi immaginarlo pur con tutta la fantasia del mondo.
b'. Non penso che tu possa immaginarlo pur con tutta la fantasia del mondo.

In 30a' *potere* 'be able' is never negated at any level, thus *pur* cannot appear with it. But in 30b' with the reading in which negative transportation has applied, *pur* can appear, even though *potere* is not negated in surface structure. Thus the constraint is on underlying structure. Looking at 30de, we can see now that in 30d (the indicative comparative without *non*) *arrivare* is not negated in underlying structure, while in 30e (the subjunctive comparative with *non*) it is.

A third argument in favor of placing *non* in S₃ depends upon the conjunction of negated sentences with *neanche*, and runs parallel to the argument above about the negative polarity item *pur*. Consider 31a:

- (31) a. Tu non sei/*Tu sei convinto che Maria è intelligente e neanche Giorgio ne è convinto.
'You are not/are convinced that Mary is intelligent and George isn't convinced of it either.'

Neanche in 31a can occur only if the VP of the S₃ containing the same verb is negated. This constraint holds at an underlying level, not at the surface. Thus if the negative is removed by negative transportation, *neanche* may still appear. Contrast 31b and 31c:

- (31) b. *Non dico che tu sei convinto che Maria è intelligente e neanche Giorgio ne è convinto.
c. 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 Mary is intelligent and George isn't convinced of it either.'

31b is out because *non* never negated *tu sei convinto* *che* S at any underlying level (since *dire* 'say' does not allow negative transportation). But 31c is fine with the reading in which *non* has been moved by negative transportation from the predicate *essere convinto* 'be convinced' to the predicate *pensare* 'think'. Now consider the comparatives in 32:

- (32) a. *Maria è più intelligente di quanto tu sei convinto, e neanche Giorgio ne è convinto.
b. Maria è più intelligente di quanto tu non sia convinto, e neanche Giorgio ne è convinto.
'Mary is more intelligent than you are convinced and George isn't convinced of it either.'

The fact that *neanche* can occur in 32b (with *non*) but not in 32a (without *non*) means that the first *essere convinto* in 32b is negated in underlying structure while that in 32a is not. Thus *our non* must negate S₃ in 25b.

The above argument against placing *non* in S₂ in underlying structure also applies to the placement of *non* in S₄. Another argument against placing *non* in S₄ is as follows. If *non* were in S₄ in 25b, 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, so that 33a does not have any reading identical to that of 33b. Yet *essere convinto* can appear with *non* in comparatives, as in 33c:

- (33) a. *Tu non sei convinto che Maria è interessante.*
 'You are not convinced that Mary is interesting.'
 b. *Tu sei convinto che Maria non è interessante.*
 'You are convinced that Mary is not interesting.'
 c. *Maria è più intelligente di quanto tu non sia convinto.*
 'Mary is more intelligent than you are convinced.'

If the *non* in 33c is to be accounted for in the same way the *non* in the surface sentence of 25b (=5b) is to be accounted for, negative transportation cannot be the correct explanation for the placement of *non* with *credere* in 25b. For these reasons, we conclude that *non* negates S₃ in underlying structure.¹³

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 without such an analysis.

3.2.1. Subjunctive

Looking at 4 and 5 one notes that when *non* appears the verb following it is subjunctive, while without *non* we have the indicative. These facts follow automatically if the abstract S dominating the S with our *non* calls for the subjunctive.¹⁴

In many varieties of Italian the subjunctive seems to be lexically controlled. That is, certain verbs, complementizers, NPs, and adjectives call for the subjunctive in their complements, regardless of anyone's presuppositions about that complement. Thus in 34a everyone knows that the world is round, yet some speakers still use the subjunctive because for them the lexical item *credere* 'believe' controls the mood of the complement:

- (34) a. *Maria deve credere che il mondo sia rotondo,*
perché lo è.
 'Mary 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 presuppositionally controlled in the complement of other verbs. Kiparsky and Kiparsky 1970 note briefly that in German factive complements

are in the indicative while nonfactive may often be in the subjunctive. Rivero 1971 makes similar claims for Spanish. Saltarelli 1974b claims for Italian that the indicative mood occurs when a proposition has identified reference, otherwise the subjunctive occurs.

The situation in Italian seems to us to call for an analysis of the subjunctive slightly different from any of the above. Certainly, many speakers use the indicative if they consider a complement to be true (i.e. factive), thus preferring 34b to 34a.

- (34) b. *Maria deve credere che il mondo è rotondo,*
perché lo è.
 'Mary must believe that the world is round,
 because it is.'

However, there are other speakers for whom the 'intensity' of the complement on the part of the higher subject is relevant to mood. Thus, if one says:

- (34) c. *Maria crede che New York sia bella.*
 'Mary believes that New York is pretty.'

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. If, on the other hand, one says:

- (34) d. *Maria crede che New York è bella.*

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

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

Certainly we cannot get into a detailed analysis of the uses of the subjunctive mood here. All we wish to have demonstrated 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* is reasonable, since it is precisely the notion of supposing but not knowing for sure that this abstract verb conveys.¹⁵

3.2.2. Subjunctive without *non*.

Thus far we have given examples with *non* + subjunctive and without *non* + indicative. The facts are not as cut and dry

as our examples might lead one to believe. Actually, the preferences are as follows:

- (35) a. Maria è più intelligente di quanto tu credi.
 b. *?Maria è più intelligente di quanto tu non credi.
 c. Maria è più intelligente di quanto tu non creda.
 d. (?Maria è più intelligente di quanto tu creda.)
- (36) a. Maria è più intelligente di quanto è Carlo.
 b. *?Maria è più intelligente di quanto non è Carlo.
 c. Maria è più intelligente di quanto non sia Carlo.
 d. (?Maria è più intelligente di quanto sia Carlo.)

Everyone agrees that 35ac and 36ac are perfectly grammatical. For some speakers 35d and 36d are fine, while for others they are less preferable than 35c and 36c (hence the ? in parentheses). Non one has told us they would say 35b or 36b, yet everyone thinks they might have heard someone else say it. Our analysis of the appearance of *non* in comparatives predicts that among speakers who use the subjunctive only with lexical conditioning, there may be some who consider the abstract verb of our abstract S not to be in the class of verbs that calls for the subjunctive. Thus these speakers should use *non* + indicative. There should be no possibility for the indicative with *non*, 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 our *non*. But the fact that people think they have heard 35b and 36b is perfectly consistent with our analysis. The examples marked d, then, are the only ones we have not yet accounted for. We claim that d comes from c by way of an optional rule deleting *non*. Semantically this seems correct since the d examples can be used in the same contexts as c, but not everywhere the a examples can be used.¹⁷ This distribution would be natural if c and d were transformationally related.

There are also at least four syntactic arguments in favor of deriving subjunctive inequalities without *non* from those with *non*. First, as was noted in 3.1.1, certain indefinite NPs may have [specific] readings in affirmative sentences, but only [specific] readings in negative sentences (see 29). In subjunctive comparatives without *non*, such indefinite NPs have only [specific] readings:

- (37) Laura ama un problema di logica più di quanto io ami un problema di matematica.
 'Laura loves a logic problem ([specific]?) more than I love a math problem ([specific]).'

The [specific] reading of the second *un problema* in 37 would be explained if the comparative clause were underlyingly negative. If there is no underlying *non* in 37, one must say that these indefinite NPs are [specific] in negative sentences and in subjunctive inequalities--an unlikely set of environments.

Second, we saw in 30 (section 3.1.1) that negative polarity

items may appear with *non* and the subjunctive, but not without *non* and the indicative. These same items are marginally acceptable without *non* when the subjunctive mood is used:

- (38) (?) ?La situazione in Africa è peggiore di quanto si arrivi a immaginare pur con tutta la fantasia del mondo.

The fact that 38 is much better than 30d (indicative without *non*) and that it is almost as good as 35d and 36d¹⁸ is explained if 38 is derived from 30d by a rule deleting the *non*. If no such rule exists, one must say that the negative polarity item *non* in 30 and 38 can occur only with negated VPs or with a nonnegated subjunctive inequality--again an unlikely set of environments.

Third, we saw in 3.1.1 that *neanche* in an example such as that in 32 is acceptable only if the S containing the same verb is negated. We find that *neanche* can marginally appear with subjunctive inequalities without *non*:¹⁹

- (39) (?) ?Maria è più intelligente di quanto tu sia convinto e neanche Giorgio ne è convinto.
 'Maria is more intelligent than you may be convinced and George isn't convinced of it either.'

Again if *non* is present underlyingly in 39 the facts about *neanche* conjunction follow. And if it is not, we need a strange set of environments for *neanche*.

And fourth, we show in section 3.2.4 below that subjunctive comparative clauses with *non* can be introduced by the complementizer *che* as well as by *di quanto*, while indicative comparative clauses without *non* can be introduced only by *di quanto*. Subjunctive comparatives without *non*, as we expect by this point, can be introduced by both, with the same degree of acceptability:

- (40) a. (?) ?Maria è più intelligente che sia Carlo.
 b. (?) ?Maria è più intelligente che tu creda.
 'Mary is more intelligent than Carlo is/you think.'

If *non* has been deleted from the comparative clauses in 40, the choice of complementizers here and in comparative clauses with *non* in the surface is one fact. But if there is no *non* in 40 at any level, then we might try to suggest that *che* can appear with subjunctive comparatives regardless of the presence or absence of *non*. However, note that 35b and 36b (*non* with the indicative) have the same degree of (un)acceptability with *che* as with *di quanto*:

- (40) c. *?Maria è più intelligente che non è Carlo.
 d. *?Maria è più intelligente che tu non credi.

Since *che* is not totally out with *non* in the indicative but totally out without *non* in the indicative (see 3.2.4 below), we must say that *che* can appear in comparative clauses with *non* or with the subjunctive--an enlightening set of

environments. But if *non* is present in 40 underlying, then we can say *che* is acceptable with our *non* in comparative clauses.

3.2.3. Subjunctive without *non*, past tense.

The deletion of our *non* with present tense verbs is marginal for some speakers but fine for others, as we saw in 35d and 36d. In the past tense, however, the deletion of *non* is perfectly acceptable for many speakers we have questioned: 20

- (41) a. Maria è più intelligente di quanto (non) fosse
suo fratello a quell'età.
b. Maria è più intelligente di quanto tu (non) credessi.
'Mary is more intelligent than her brother was at that age/than you thought.'

Dwight Bolinger (personal communication) has suggested to us that the subjunctive comparative without *non* 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 *non* 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 note 17) that the subjunctive without *non* 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 *non* operates in polite contexts of a type found more commonly in the past tense than in the present.

A second interesting fact involving tense distinctions is that *non* with the indicative sounds better in the past tense than in the present:

- (42) a. ?*Maria è più intelligente di quanto non è suo fratello.
b. ?(?) Maria è più intelligente di quanto non era suo fratello a quell'età.
'Mary is more intelligent than her brother is/than her brother was at that age.'
c. ?*Maria è più intelligente di quanto tu non credi.
d. ?(?) Maria è più intelligente di quanto tu non credevi.
'Mary is more intelligent than you believe/believed.'

We stated our prediction in 3.2.2 that certain speakers who control mood entirely lexically may classify the verb of our abstract S as taking the indicative mood in its complement; they would produce the sentences of 42. Although we have not found such speakers, we have noted that for many who control mood lexically (either entirely or partially), lexical items that require the subjunctive in a present tense complement may

accept fully or marginally the indicative in a past tense complement. For example, consider 43, with the clause introducer *prima che* 'before', an element that controls mood:

- (43) a. Prima che Maria facesse quello, io faccio così.
b. *Prima che Maria fa quello, io faccio così.
'Before Mary does that, I'll do thus.'
c. Prima che Maria facesse quello, io facevo così.
d. ?(?) Prima che Maria faceva quello, io facevo così.
'Before Mary did that, I was doing thus.'

In 43ab we see that the present indicative is out after *prima che*. But in 43cd, 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 our *non* 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, one if 42bd are alternatives to 41ab, which is our claim.

3.2.4. Choice of complementizers.

The comparative complementizer, *di* (quanto), can appear in comparatives with or without *non*, as we saw in 4 and 5. For many Italians the complementizer *che*, however, can appear with the *non* comparatives but not with the comparatives without *non* in the indicative:

- (44) a. *Maria è più intelligente che è Carlo.
b. Maria è più intelligente che non sia Carlo.
(45) a. *Maria è più intelligente che tu credi.
b. Maria è più intelligente che tu non creda.
'Mary's more intelligent than Carlo is/you think.'

Looking back at the structures proposed in 24 and 25 we see that the abstract S2 present in comparatives with *non* is introduced by the same complementizer that introduces S2 in the comparatives without *non*. We also see 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, which 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 in Italian, they may or may not be introduced by a complementizer:

- (46) (Che) le avessi comprate!
'Oh, if only I had bought them!'

The subjunctive in Ss like 46 is exactly the kind that Lakoff 1968 proposes higher abstract verbs to account for. If there is a higher abstract verb underlying 46, then when it is deleted, the *che* introducing its complement may optionally be

deleted as well.

Perhaps the abstract elements of S₂ in 24b and 25b delete, optionally taking with them the *che* complementizer that introduces S₃. If *che* is deleted, *di* (*quanto*) surfaces as the complementizer. If it is not, 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 44b and 45b. 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 S₂ (i.e. the indicative comparatives without *non*) because we will never get the situation of two complementizers 'fighting' for one position. Without an underlying extra abstract S in the comparatives with *non*, it is difficult to imagine how the choice of complementizers might be accounted for. But with the abstract S, the data is more understandable.

3.2.5. Repetition and clitics.

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

- (47) a. Maria è più intelligente di quanto è intelligente Carlo.
 b. Maria è più intelligente di quanto non sia intelligente Carlo.
 'Mary's more intelligent than Carlo is intelligent.'

There is a distinct difference in the tone and possible uses for 47a and 47b, however. The second *intelligente* in 47a is said more slowly than its counterpart in 47b. In 47a there is a strong sense of repetition, while in 47b it is much less noticeable. 47a might be found in a context like the following:

Context 7 (for 49a)

- Paolo: Maria e Carlo sono una coppia speciale: lei è intelligentissima e lui è bellissimo.
 'Mary and Carlo 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.'

47b, on the other hand, sounds fine in the same contexts as 4b (see context 2 above). Note that if 24a is the structure underlying 47a, then the first instance of *intelligente* is in S₁, while the second is in S₂. The structural proximity may make the deletion of the second *intelligente* automatic in most contexts. If 24b is underlying 47b, however, the two instances of *intelligente* are in S₁ and S₃. The greater structural distance between them may allow for an optional deletion of the second *intelligente*.

This explanation is supported by the facts on clitics. Predicate adjectives may be replaced by the clitic *lo*, as in 48a. When *lo* replaces a predicate adjective a quantifier may remain behind, as in 48b:

- (48) a. Dario: È intelligente Maria?
 'Is Mary intelligent?'
 Paolo: Sì, lo è.
 b. Sì, lo è molto.
 'Yes, she is (that).'
 'Yes, she is (that) a lot.'

Clitics never receive stress in Italian. If the second occurrence of *intelligente* in 47a requires a context in which it is lengthened or otherwise emphasized while that in 47b does not, we would expect that the second *intelligente* of 47a could not be replaced by the unstressed clitic *lo*, while that of 47b could. This is, in fact, the case:

- (49) a. *Maria è più intelligente di quanto lo è Carlo.
 b. Maria è più intelligente di quanto non lo sia Carlo.
 'Mary's more intelligent than Carlo is (that).'

Without a structural difference between 47a and 47b we cannot see how the cliticization facts in 49 can be accounted for. But with our abstract S, they follow.

Another fact about clitics is that the *lo* replacing predicate adjectives can appear only with the surface complementizer *di* *quanto*, never with *che* (3.2.4 above), as shown in 50ab. This is because the repetition of the predicate adjective can occur after *di* *quanto* as in 47 but not after *che* (50c).

- (50) a. Maria è più intelligente di quanto non (lo) sia Carlo.
 b. *Maria è più intelligente che non lo sia Carlo.
 c. *Maria è più intelligente che non sia intelligente Carlo.

From 50c we see that a predicate adjective cannot appear in the comparative clause after *che*. This is the case even when we compare clauses with different predicate adjectives:

(51) a. Maria è più intelligente di quanto è furbo Carlo.

b. Maria è più intelligente di quanto non sia furbo Carlo.

c. *Maria è più intelligente che non sia furbo Carlo.
'Mary is more intelligent than Carlo is sly.'

We think that 51c, 50c, and 50b are out 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 delete, and since the presence of *che* blocks *quanto* from moving into complementizer position, *quanto* can never co-occur with *che*, nor can a predicate adjective appear in a comparative clause after *che*. The restriction on the occurrence of predicate adjectives only with *quanto* is perhaps some sort of 'comprehensibility' (surface?) constraint, since we see no syntactic reason for it.

3.2.6. Reduction

Comparatives like 4a are fully acceptable, but they are unusual. One prefers to use a briefer comparative like 52:

(52) Maria è più intelligente di Carlo.

'Mary is more intelligent than Carlo.'

52 can be used in any context in which 4a can. It does not have presuppositions of the type conveyed by comparatives with *non*. Thus, if 52 is a reduced form of a longer comparative, it seems that it is reduced from 4a rather than 4b.

Some speakers have another alternative way to form comparatives, seen in 53:

(53) Maria è più intelligente che Carlo.

'Mary is more intelligent than Carlo.'

We did not find many speakers who use 53. Still, it seems that for those who use it, it is appropriate in the contexts in which 4b and 5b are, i.e. it is reduced from a comparative with *non*. In fact *non* may appear with marginal acceptability: 22

(54) ?Maria è più intelligente che non Carlo.

Thus it seems that for many speakers only indicative comparatives can be reduced to NPs, while for others both indicative and subjunctive (i.e. those with *non*) can. We do not know why subjunctive comparatives can be reduced to NPs only in certain varieties of Italian.

3.3. Obligatory negation in S₃

We have proposed that S₃ in 24b and 25b (comparative clauses with *non*) 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, for there are many verbs that require their complement to be negative, just as there are many others that require their complement to be affirmative. For example, in 55 *stare all'erta* in the sense of 'watch out' can take only negative complements, while in 56 *proibire* 'prohibit' can take only affirmative complements:

(55) a. Sta all'erta che non ti sorprenda.

b. *Sta all'erta che ti sorprenda.

(56) a. Proibisco che Giorgio parli.

b. *Proibisco che Giorgio parli.

'I forbid that George speak.'

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

4. Non in other constructions.

If our analysis of *non* is correct, its appearance depends on the presuppositions of the speaker and not completely on the syntax of comparatives. Therefore, we would expect to find other syntactic environments in which our *non* can appear. Consider a and b of the following sentences, all of which involve indirect questions: 23

(57) a. Chissà che ti sposi.

b. Chissà che non ti sposi.

'Who knows if he'll marry you/if he might not marry you.'

(58) a. Non sono sicura se io debba vederlo lunedì.

b. Non sono sicura se io non debba vederlo lunedì.

'I'm not sure if I should/shouldn't see him Monday.'

(59) a. Ci domandiamo se dobbiamo riconsiderare la nostra analisi di noi.

b. Ci domandiamo se non dobbiamo riconsiderare la nostra analisi di noi.

'We wonder if we should/shouldn't reconsider our analysis of non.'

(60) a. Chissà se vale la pena (di) comprarlo.

b. Chissà 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 be contrary to previous expectations. Note that the subjunctive is used with or without our *non* in 57-59, thus our *non* sounds the same in these sentences as the regular *non* (of 1b, 11, and 14); in fact b of 57-59 are ambiguous as to whether one is unsure about the affirmative or negative possibility of the embedded clause. However, 60 takes the indicative without our *non*, but the subjunctive with it. If this is truly an example

of our *non*, then there should be a corresponding sentence with *non* + indicative which contrasts with 60b in the same way 11 contrasts with 12 (section 2.2). Indeed, there is such a sentence, contrasting in the expected way:

- (61) Chissà se non vale 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 without losing the presuppositions in the 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 it can be found in many languages.

5. Conclusions.

In this paper we have argued that the *non* of comparatives in Italian is present only when the speaker holds certain presuppositions. This *non* is not pleonastic, but rather 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 the *non* appears. Finally, we have shown that this *non* appears in other constructions besides comparatives in both Italian and English. We have given no account of why our abstract S of presupposition can appear in certain syntactic environments but not in others. In specific, we do not know why comparatives and indirect questions (like those seen in section 4) provide environments for this presuppositional sentence, but other types of structures do not. Perhaps the presence of the *wh*-word in both the comparatives and indirect questions is crucial. Also, we note that generating an S that is never lexically realized in embedded position is a new proposal and has 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, the facts on mood, choice of complementizers, clitics, and repetition) which would go unrelated in either a presuppositional-dependent syntax model or an interpretive approach. Thus this analysis has strong explanatory power in its favor. Furthermore, we hope to have presented enough syntactic and semantic evidence to support our proposal and raise the question of the possibility of such underlying structures.

If our analysis is anywhere near correct, this *non* 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.

NOTES

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¹Huckin 1974 argues that in comparatives of inequality in English *than* is a negative element. We discuss Huckin's proposal with respect to Italian in note 13 below.

²Dwight Bolinger (personal communication) has brought to our attention some examples in French with two negatives: *Jean n'est pas plus beau qu'on ne pense*. 'John is not handsomer than anybody thinks.' *Jean ne peut pas être plus beau que vous ne pensiez*. 'John can't be handsomer than you thought.' The corresponding Italian examples are out: **Gianni non è più bello di quanto non si pensi*. **Gianni non può essere più bello di quanto voi non pensiate*. We think the Italian Ss are out for semantic reasons. Thus, either the semantics of the French Ss are different from those of the corresponding ones in Italian, or we are wrong and there is indeed some kind of syntactic constraint against two negatives which we do not understand. Note also that the negative *non* of 3 (occurring only in the presence of some other negative element) cannot appear in the lower clause if the matrix is negated in a comparative: *Maria non è più intelligente di nessuno*. 'Mary isn't more intelligent than anyone.' **Maria non è più intelligente di quanto non è/non sia nessuno*. Mary is not more intelligent than no one is. Why this should be so is not clear to us. We see no semantic reason for excluding the indicative comparative of the last sentence, especially in light of the acceptability of 14. We leave these facts and the questions they pose open for further research.

³Apparently this is not so for French. Dwight Bolinger (personal communication) has brought to our attention the following example: *Il est aussi bon qu'il n'eût pas l'être*. 'He's as good as they may be.' The corresponding Italian sentence is out: **E tanto buono quanto non lo possono essere loro*.

⁴Antinucci & Puglielli 1971 talk of COINCIDENZA as an element in comparisons of equality, but NON COINCIDENZA in comparisons of inequality. They then derive the *non* of 4b and 5b from NON COINCIDENZA and 4a and 5a from the same source with an optional rule deleting *non*. It is very difficult to tell exactly how they intend these rules to operate and exactly what status (semantic, syntactic, abstract, real lexical item) is assigned 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 raised immediately below

in the text may not be valid. Still, their analysis fails in that 4ab and likewise 5ab should not be derived from the same structure, given all the semantic and syntactic evidence presented in this paper.

⁵We do consider Saltarelli's proposals important because they shed light on the use of the subjunctive in general. (See 3.2 for a brief discussion of the subjunctive.)

His proposals are important also for the analysis of comparatives in specific, since they suggest that comparatives with the indicative (which he does not mention) are semantically distinct from comparatives with the subjunctive, a suggestion we fully agree with.

⁶Our notion of precision is distinct from Saltarelli's notion of identified reference, as 23e shows in contrast to: *Voglio che lui creda con assoluta certezza.* 'I want him to believe with certainty.'

⁷The most convincing of these examples is the deletion of the future auxiliary *will*, an example he credits Kim Burt with. Note that his example involving comparatives (337) does not call for an explanation involving presuppositions if the analysis of comparatives by Bresnan 1973 is correct.

⁸There is evidence that *più* derives from underlying *più tanto*. For a detailed analysis of the head of comparative clauses in Italian, see Nespor (forthcoming). For an analysis of comparatives in English, see Bresnan 1973. Also, at a deeper level, the comparative *S* forms a constituent with the comparative quantifier *più* (*tanto*) (see Bresnan 1973). For our purposes, the exposition of our arguments is clarified by beginning at the underlying level seen in 24 and 25.

⁹Lakoff (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, and otherwise the subjunctive is used. Lakoff claims that these facts are evidence 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 situation in Latin, but perhaps positing an embedded abstract *S* that dominates the clause which appears in the subjunctive when the speaker assumes no responsibility could be justified. In such a case the *S* might have the meaning 'I am not sure if...' or 'I do not take credit for...'

¹⁰Only surface subjects that are not derived subjects may control a gerund: **Maria è stata vista da te guidando per la strada.* 'Mary was seen by you driving (you/her) down the street.' And in fact, NPs that are not subjects may control the subject deletion of gerunds, such as the dative *mi* 'me' with the psychological verb *sorprendere* 'surprise': *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 (forthcoming). Note that these gerunds are not to be confused with the progressive form of the verb. They do not derive from underlying *stare vndo* 'be Ving', as the meanings *tutto*. 'By studying, one can learn everything.'

¹¹27a sounds a bit awkward, although it is perfectly acceptable when read slowly with heavy pauses around the gerundial phrase. Probably this is because of the length of the gerundial, which makes one prefer to postpone it as in 27c.

¹²The following argument is used by Huckin 1974 to support the proposal that *than* is negative in English. Note that the facts in Italian differ from those of English, so that our conclusion is the opposite from Huckin's, namely, some comparatives are underlyingly negated and others are not in Italian.

¹³For speakers of English there may be many questions floating around at this point. First, Ross 1966 noted 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 facts in Italian parallel to these. Furthermore, negative elements may appear in comparatives in Italian: *Non è più alto di nessuno.* 'He isn't taller than anyone (no one).' And we point out that *never* and *not* at all appear in English: *Better late than never.* ('It's better that he did it late than at all'). And for some speakers a comparative like the following is acceptable: *She's taller than you wouldn't believe.*

Second, Grosu 1972 has pointed out that Coordination Reduction in English behaves differently depending on negativity. Inequalities, he points out, act like negated *SS* with respect to Coordination Reduction. In Italian, however, Coordination Reduction is the same regardless of negativity. Thus there is no argument for or against our analysis based on Coordination Reduction.

Third, Huckin 1974, in a study that covers the Ross and Grosu arguments as well as many others, has pointed 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 in the subjunctive with negated verbs: *L'ha già fatto.* 'He's already done it.' **Non l'ha già fatto.* 'He hasn't already done it.' *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: *Ha avuto un successo maggiore di quanto ha già avuto nel passato (ind.).* **Ha avuto un successo maggiore di quanto non ha già avuto nel passato (ind.).* *Ha avuto un successo maggiore 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: **Maria è più alta di quanto tu non creda affatto*. 'Mary is taller than you don't believe at all.' This is because *affatto* requires a precise knowledge of the listener's belief, but the *non* shows that the speaker does not have such precise knowledge (see 23 and the comments preceding). Thus the sentence is self-contradictory and, therefore, 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, there may be some slight difference between the two languages causing all these apparent gross differences. Huckin 1974 notes that many distinctions often alleged to depend on the affirmative/negative contrast in English may well depend instead on a modality contrast. If this is so, the data on English presented in this note may suggest only that the modality of English comparatives is like that of negated Ss, rather than that English comparatives of inequality are indeed negated. We would like to point out that, while proposing a semantic reading of *John is taller than Bill*, *John is -er much taller than Bill* is not -er much taller, as Huckin 1974 does, seems plausible, we cannot imagine what the parallel semantic reading of *John is less tall than Bill* would be. Thus the analysis of English inequalities which claims they are negative meets many problems.

¹⁴ Dwight Bolinger (personal communication) has suggested to us that the subjunctive may appear after *di quanto* because *quanto* is an indefinite antecedent. In Italian the subjunctive mood may be used after indefinite nonspecific NPs in certain cases, such as: (i) *Cerco una ragazza che sappia il giapponese (subj.)*. (ii) *Cerco una ragazza che sa il giapponese (ind.)*. 'I'm looking for a girl who knows Japanese.' For all speakers *una ragazza* is [-specific] in (i), while for some speakers *una ragazza* is [+specific] in (i). For others it must be only [+specific]. If it is *quanto* that triggers the subjunctive, then we would expect that for those speakers who read *una ragazza* in (i) as being only [+specific], only the subjunctive could be used after *quanto*. However, this is not true. All speakers we have found accept both the indicative (without *non*) and the subjunctive (with *non*) in these inequalities. Thus, unless one argues that the *quanto* of subjunctive inequalities is [-specific] and that the *quanto* of indicative inequalities is [+specific], one cannot explain the possibility for 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. For these reasons, we are suspicious of Bolinger's suggested solution. And, once we consider the syntactic facts presented in section 3, we reject this solution in favor of the abstract S solution.

¹⁵ Sometimes a modal verb following our *non* may be indicative or subjunctive, with no clear difference of acceptability:

È più alto di quanto tu non possa/non puoi 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 such as *credere* do not allow the indicative even with modal verbs in the complement of such verbs as *credere*. Yet these speakers do accept the S above with and without the subjunctive. We have no explanation for these facts.

¹⁶ We are grateful to Emily Norwood for pointing out this prediction to us.

¹⁷ For some speakers there is a slight preference to delete the *non* when the situation calls for extreme politeness. The kind of subtle difference such a choice implies between the subjunctive comparative with and that without *non* is not atypical of many choices between applying transformations or not. For example, Bolinger 1968 has pointed out the preferred use of the passive when one wishes to avoid responsibility. Many other similar cases are well known.

¹⁸ 38 may be slightly worse than 35d and 36d because of the presence of the negative polarity item in the surface, which makes one expect a *non* in the surface.

¹⁹ Again the lower acceptability of 39 than 35d and 36d may be because of the presence of *neanche* in the surface, which makes one expect a *non* in the surface.

²⁰ Note that there is good syntactic evidence that *non* has been deleted from the subjunctive comparatives in the past tense: (i.a) *(?)La situazione in Africa è peggiore di quanto si arrivasse a immaginare pur con tutta la fantasia del mondo (subj.)*. (i.b) **La situazione in Africa è peggiore di quanto si arrivava a immaginare pur con tutta la fantasia del mondo (ind.)*. (ii.a) *(?)Maria è più intelligente di quanto tu fossi convinto e neanche Giorgio ne era convinto (subj.)*, (ii.b) **Maria è più intelligente di quanto tu eri convinto e neanche Giorgio ne era convinto (ind.)*. (iii.a) *(?)Maria è più intelligente che tu credessi (subj.)*. (iii.b) **Maria è più intelligente che tu credevi (ind.)*.

²¹ We do not mean to suggest that Bolinger agrees with our rule deleting *non* from these comparatives. We are merely relating his suggestions about the differences between the subjunctive with and without *non*.

²² Note that the corresponding sentence with *di* is totally out: (i) **Maria è più intelligente di non Carlo*. This does not mean that 54 is derived from a comparative having *non* with *che* while a comparative having *non* with *di* (*quanto*) cannot reduce. Rather, (i) is out because *di* can be followed only by NPs, pronouns, and numerals in the surface of reduced comparatives. Any other element (ADV, VP, PP, etc.) must be preceded by *che*: (ii.a) *Maria è più intelligente che/*di furba*. 'Mary is more intelligent than sly.' (ii.b) *Mi piace*

*di più nuotare che/*di fare i tuffi.* 'I like swimming better than diving.' (ii.c) *Va più spesso al cinema che/*di in biblioteca.* 'He goes to the movies more often than to the library.' Thus (i) is out because non cannot follow *di*.

Differences between *di* and *che* in reduced comparatives are discussed in Nespor (forthcoming).

While many speakers do not accept 54, most accept: (iii) *È più studioso che (non) intelligente.* 'He's more scholarly than intelligent.' Battaglia and Pernicone (1951:497) note that the non is kept in (iii) when one wants to 'underline more strongly the defect of intelligence'. We believe, rather, that this non is our non of presupposition.

23 Another example might be: (i.a) *Dubito che Carla abbia capito.* (i.b) *Dubito che Carla non abbia capito.* 'I doubt that Carla has (not) understood.' Certainly (i.b) is ambiguous (as are 57-59 in the b examples in the text below), but it does have one reading similar to that of (i.a). We have not included (i) in the text, however, because it may exemplify a separate phenomenon that Jespersen (n.d.) calls 'paratactic negation'. Jespersen points to cases in which 'a negative is placed in a clause dependent on a verb of negative import like *deny*, *forbid*, *hinder*, *doubt*' (75), and he gives as an example: (ii) *It never occurred to me to doubt that your work... would not advance our common object in the highest degree.* Dwight Bolinger (personal communication), on the other hand, has suggested that doubt today might be analyzed as raise the doubt, as in: (iii) *I raise the doubt that he is (not) here,* (iv) *I raised the doubt about his (not) being here.* Certainly (iii) and (iv) seem to give examples of our negative of presupposition. And the Italian example (i.b) with the reading given there is used in contexts similar to that for our non of comparatives. Thus (i.b) 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.

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