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NEGATION IN SMALL CLAUSES

Introduction*

In the last years, the syntax of negation has received much attention in generative grammar. In several works, negation is taken to be a functional head, although some different opinions exist with respect to the exact location of the Neg projection (see a.o. Pollock, 1989; Belletti, 1990; Laka, 1990; Ouhalla, 1988; Zanuttini, 1991). All analyses have concentrated on negation in clausal contexts, whereas almost no attention has been paid to negation in other syntactic contexts. This paper intends to fill the gap, by analyzing negation in adjectival small clauses and in nominals. Similarly to full clauses, negation can

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be found in small clauses, as shown by the examples in (1) and (2): ¹

(1)  Il professore non è soddisfatto del suo lavoro  

*The professor not is satisfied with his work*

(2)  Ritengo il professore non soddisfatto del suo lavoro  

*(I) consider the professor not satisfied with his work*

The question arises as to whether negation in small clauses has the same status as negation in full clauses. The distribution of negative adverbs and the scope phenomena indicate that negation in small clauses has a different status and distribution than negation in full clauses; however, negative quantifier licensing and Neg-raising make negation in small clauses similar to negation in full clauses. These properties can all be made to follow by assuming the following: (1) that negation in small clauses is structurally different from negation in full clauses — whereas in the latter case it projects a NegP, in the former it is expressed in an Adverbial Phrase — (2) that in full clauses, NegP, on a par with AGRSP and TP, is a member of the set of functional projections typically associated to the verb, i.e., it is an extended projection of the verb in the sense of Grimshaw (1991) whereas in small clauses it is not part of the extended projection of the adjectival phrase, but it is a specifier-like element, similar to adverbs.

These assumptions are adequate for dealing with the properties of negation not only in small clauses, but also in nominals.

¹ Notice that the negation in (2) is not a constituent negation, since it does not necessarily imply a contrast, as it is usually the case for this kind of negation:

i)  Il professore è non soddisfatto *(ma scontento)*  

*The professor is not satisfied but unhappy*
1. The status of Negation in small clauses

In recent works, it has been proposed that negation heads its own functional projection, NegP. Elaborating on Pollock (1989), Belletti (1990) has suggested that the Italian negation *non*, analogous to French *ne*, is the head of NegP. French and Italian differ minimally with regard to the specifier of NegP. Whereas in French, SpecNegP must be filled with the negative adverb *pas*, in Italian it is only optionally filled with negative adverbs such as *mica* (most common in Northern Italian), *mai*, *più* and *ancora*. These assumptions are represented in the following structure where NegP is located in between AGRSP and TP (cf. Zanuttini, 1991 for an alternative proposal).
As it stands, this structure does not account for the linear order of elements inside a sentence, as the examples in (4) show.

(4)  
   a. Gianni non mangia mica/più/mai
   b. Jean ne mange pas

   *John not eat not/anymore/never*

Belletti (1990) and Pollock (1989) account for this order by proposing that the negative head is a syntactic clitic that must undergo head-movement to the highest functional head of the clause, AGRS°, in Belletti’s analysis. The hypothesis is supported by the observation that on a par with clitic pronouns (Kayne, 1977), negation non in full clauses cannot be stressed as displayed by (5) (Adriana Belletti, p.c.). (The example (5) is grammatical in an irrelevant
reading, i.e., as a correction of a previous utterance. The same is true for French *ne*, in (6).

(5) * Gianni NON mangia (più)
(6) * Jean NE mange pas

*Gianni not eat not/anymore

Now the question arises as to whether negation in the small clause in (2) should be analyzed in the same way. In various proposals, it has been argued that small clauses contain functional projections (Belletti, 1990; Cardinaletti & Guasti, 1991; Cinque, 1991; Hornstein & Lightfoot, 1987; Raposo & Uriagereka, 1991, among others). Under these views, the minimal hypothesis could be to extend to small clauses the analysis of negation proposed for full clauses. This makes the immediate prediction that negation in full and small clauses should manifest the same behavior. This expectation seems to be fulfilled by the distribution of negative quantifiers (§ 5) and by the so-called Neg-raising phenomenon (§ 6). However, there are other domains where it is not satisfied. These are represented by the distribution of negative adverbs (§ 2) and by the scope properties of negation (§ 3). In addition, Italian negation *non* in the two contexts manifests different phonological properties (§ 4).

2. Negative adverbs

In full clauses, negation *non* can co-occur with negative adverbs, as noticed previously. Interestingly enough, the same distribution is not attested in small clauses. In this context, negation *non* can never co-occur with negative adverbs — *mica* and *mal* (for *più* and *ancora*
see below). Notice that the relative order of the negative elements and the adjective does not affect the grammaticality of the sentences. ²

(7)  
   a. * Ritengo Gianni non mai contento
       (I) consider Gianni not never happy
   b. * Ritengo Gianni mai non contento
       (I) consider Gianni never not happy
   c. * Ritengo Gianni non contento mai
       (I) consider Gianni not happy never

Interestingly, all the sentences improve if non is dropped.

(8)  
   ? Ritengo Gianni mai contento
       (I) consider Gianni never happy

This suggests that non and negative adverbs are in complementary distribution. An immediate consequence of this observation is that non in small clauses is like negative adverbs.

The Italian paradigm can be essentially reproduced in French. Similarly to Italian, the negative head ne and pas never co-occur in small clauses. Differently from Italian, the

² The negative adverb mica is a contra-assertive adverb that is subject to pragmatic restrictions. In order to avoid this disturbing factor, we provide examples with mai.
negation is always expressed by *pas or by another negative adverb. 3

(9)  
  a. * Je considère Jean ne pas prêt pour son examen
      I consider Jean not not ready for the exam
  b. Je considère Jean pas prêt pour son examen
      I consider Jean not ready for the exam
  c. ? Je considère Jean jamais prêt à aider les gens
      I consider Jean never ready to help people

These facts lead to the conclusion that *non in small clauses does not have the same status as its homophone in full clauses, but rather it is similar to negative adverbs such as Italian *mai and French *pas and jamais. As for full clauses, we have assumed that negation is structurally expressed by a NegP and that this NegP, on a par with AGRSP and TP, is part of the functional projections associated with the verb. We suggest that in small clauses, negation is expressed in an Adverbial Phrase (affected with negative features) that functions as a specifier-like element as other Adverbial Phrases (Jackendoff, 1977; Lonzi, 1991). Structurally, this instance of negation is adjoined to the AP. 4 For the sake of concreteness,

3 Contrary to Italian *non, French *ne can never realize the negation in small clauses (see below, fn. 19).

4 An alternative would amount to saying that the negation is directly adjoined to the adjectival head. However, this hypothesis cannot account for the following facts. First, a FQ stranded by the small clause subject can intervene between negation and the adjective. Notice that this word order is only compatible with the idea that negation is adjoined to AP. For the hypothesis that small clauses are AGROPs, refer to Cardinaletti & Guasti (1991).

i) * Je considère Jean ne prêt pour son examen
    I consider Jean not ready for his exam

ii) Je considère [AGRop gli studenti [AP non ancora [AP tutti pronti per l’esame]]]

ii) Je considère [AGRop les étudiants [AP pas encore [AP tous prêts pour l’examen]]]
we will refer to this negation as Adverbial Negation. For the internal structure of AdvP, see (19).

(10)

Our hypothesis needs additional qualification with regard to other negative adverbs. We have seen that an intrinsic negative adverb, such as Italian *mai* and French *pas*, can negate the adjectival predicate of a small clause. We have also seen that *non* and *mai* are in complementary distribution. However, other adverbs can co-occur with *non*, such as *più* and *ancora*. This is illustrated below:

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*I consider the students not yet all ready for the exam*

Second, the small clause subject in a post-adjectival position can contain a negative quantifier.

(iii)  Ritengo non soddisfatto proprio nessuno studente  
*(I consider not satisfied really no student)*

Since in Italian, post-predicate negative quantifiers have to be c-commanded by negation at S-structure (in order to satisfy the Neg-criterion at LF, see section 5 below), the grammaticality of (iii) leads us to conclude that *non* c-commands *nessuno studente*. But, this is only possible if negation is not adjoined to the head, but to the maximal projection. For concreteness, we assume that the post-adjectival subject is in its base-generated position and that this position is to the right of the adjectival head (see Giorgi & Longobardi, 1991).
Ritengo Gianni non più contento del suo lavoro

(I) consider Gianni not anymore happy with his work
'I consider Gianni no longer happy'

Ritengo Gianni non ancora idoneo per quel compito

(I) consider Gianni not yet apt for this work

These facts are compatible with the above observations, since the sequences non più and non ancora are complex specifiers of the adjective where the negation non functions as a specifier of the adverb itself. Given that these adverbs are not intrinsically negative, as shown by the positive meaning of the sentences in (13) and (14), they have to co-occur with non in order to convey a negative meaning, as in (11) and (12).

Ritengo Gianni più contento (di ieri)

(I) consider Gianni more happy (than yesterday)
'I consider Gianni happier than yesterday'

---

The idea that più can be modified by a negative element is independently supported by the grammaticality of the following example, where the negative adverb mai modifies più.

i) Maria non è mai più tornata (Belletti, 1990:134 fn. 45)
   * Maria non è mai più tornata
   Maria not is never anymore come back
   'Maria has no longer come back'

The sequence mai più forms a constituent as attested by the ill-formedness of the following example (The reader can refer to Belletti, 1990, for relevant discussion).

ii) * Maria non è mai tornata più
   Maria not is never come back anymore
   'Maria has no longer come back'

Notice that the sequence mai ancora (never still) is never found. This is probably due to a semantic clash.
Ritengo Gianni ancora malato

*I consider Gianni still sick*

Notice incidentally that French displays the same possibilities with regard to *encore*. Differently from Italian *più*, the French counterpart *plus* can count as intrinsically negative, thus, conveying a negative meaning without *pas*.  

Je considère Jean (*pas*) plus capable de faire ce travail

*I consider Jean (*not*) anymore apt to do this job*

Je considère Jean pas encore prêt pour l'examen

*I consider Jean not yet ready for the exam*

Je considère Jean encore malade

*I consider Jean still sick*

For concreteness, we propose that the adverbs *più* and *ancora* are the head of the AdvP whose specifier is filled with another AdvP headed by *non* (or *mai*, see fn. 5), as in (18)a.  

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6 Analogous to the Italian example in (13), *plus* in French can also enter comparative clauses, as in (i).

i) Je considère Marie plus intelligente que Jean

*I consider Marie more intelligent than Jean*

7 The hypothesis that these complex negative adverbial phrases form a constituent is supported by the fact that they can be used in isolation, e.g., in answers.

i) Vai ancora in piscina? Non più

*Do you still go to the swimming-pool? Not anymore*

Notice that the order *non più* is base generated here, whereas it is obtained through cliticization of *non* in full clauses, as mentioned earlier.
When the Italian negative adverbs *non* and *mai* and the French *pas*, *jamais* and *plus* occur alone, the AdvP does not contain any specifier.

3. Scope phenomena

There is an interesting contrast between full and small clauses which indicates that in the former, but not in the latter case negation has a prominent position in the structure, thus supporting our previous proposal. The relevant phenomenon is represented by the interactions between negation and quantifiers.
Consider the full clause complement in (20) involving sentential negation and a quantifier. As apparent from the representations in (21), the complement is ambiguous: the quantifier can have wider scope than negation as in (21)a, meaning that for many/all students the professor is not satisfied with them, or viceversa, negation can have scope over the quantifier, as in (21)b, meaning that the professor is satisfied only with few students.

(20)    Ritengo che il professore non sia soddisfatto di molti/tutti gli studenti

(I believe that the professor is not satisfied with many/all students)

(21)   a. Ritengo che [[di molti/tutti studenti (x)] il professore NON sia soddisfatto x]

(I believe that [[ with many/all students] the professor is not satisfied x]

b. Ritengo che [il professore NON sia [[di molti studenti/tutti (x)] soddisfatto x]]

(I believe that [the professor is not [with many/all students] satisfied x]

The ambiguity disappears if the full clause (complement) is replaced by a small clause. Sentence (22) can only have the interpretation in (23)a according to which the professor is not content with many students. It cannot mean that he is content with few students, as exemplified in (23)b, parallel to (21)b. In other words, the quantifier must always have wider scope than negation.
(22) Ritengo il professore non soddisfatto di molti/tutti gli studenti

(1) consider the professor not satisfied with many/all students

(23) a. Ritengo [[molti studenti/tutti (x)] il professore NON soddisfatto di x]

(1) believe that [[ with many/all students] the professor not satisfied x]

b. * Ritengo [il professore NON [[molti studenti/tutti (x)] soddisfatto di x]]

(1) believe that [the professor not [with many/all students] satisfied x]

The contrast between (20) and (22) can be made explicit by the minimal pair below:

(24) * Ritengo il professore non soddisfatto di molti studenti, ma di pochi

(1) consider the professor not satisfied with many students, but with few

(25) Ritengo che il professore non sia soddisfatto di molti studenti, ma di pochi

(1) believe that the professor is not satisfied with many students, but with few

A parallel situation is found in French, as proven by the fact that a sentence such as (26) is not ambiguous. The only interpretation is the one in which the quantifier has wider scope than negation.

(26) Je considère le professeur pas fier de beaucoup de/tous les étudiants

I consider the professor not proud of many/all students
It is uncontroversial that to be properly interpreted, a quantifier must be assigned scope. For the sake of concreteness we assume that a quantifier receives its scope through the LF operation of Quantifier Raising (QR) (May, 1985). In a full clause, the minimal domain of an argument of the verb can be the VP. Since NegP dominates the VP, the negation c-commands the quantified expression and can have scope over it, thus allowing the reading in (21)b, whose LF representation is given in (27) (see below for an account of why the whole PP must be LF-raised): 

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8 The wide scope reading in (21)a is obtained by LF-movement of the quantified expression to a position higher than negation, presumably to a position adjoined to AGRSP:

i)
On the other hand, an argument of the adjective in a small clause has the AP as the minimal scope domain. This implies that the quantified expression, *molti studenti* or *tutti gli studenti*, in (22), must be adjoined to the AP, thus landing in a position which is outside the scope of the adverbial negation, as illustrated by the LF representation below:  

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9 For some speakers, adverbial negation can take wider scope than the quantifier if it is focalized. This can be explained by assuming that a focalized negation also has to move at LF, thus landing in a position from which it c-commands the quantified expression.
This way of interpreting the above contrast is confirmed by the fact that under certain circumstances, adverbial negation can have scope over a quantified expression in the complement of \( A^\circ \). This happens when the complement of \( A^\circ \) can count as a domain for the quantified expression as in (29):

\[\text{(29)}\]

\[
\begin{align*}
\{ & \text{di molti studenti}_k \\
\{ & \text{de beaucoup d'étudiants}_k \\
\text{AdvP} & \text{non/pas} \\
\text{AP} & \text{AP} \\
\text{AP} & \text{AP} \\
\text{A'} & \text{A'} \\
\text{A}^\circ & \text{A}^\circ \\
& t_k
\end{align*}
\]

\[\]

---

\(^{10}\) According to the scope principle (May, 1985), operators moved by QR and adjoined to one and the same maximal projection form a \( \Sigma \)-sequence and are free to take on any type of relative scope relation. Although the configuration in (28) resembles the one relevant for the scope principle, nevertheless, there is no freedom in the relative scope of negation and the quantifier. This may attributed to the fact that negation, unlike quantifiers, does not qualify as an operator for the scope principle.
Ritengo [Gianni non disposto \([cp \ ad \ affrontare \ molti/tutti \ i \ problemi]\)], ma solo pochi/alcuni

\( (I) \) consider Gianni not willing to face many/all problems, but only a few/some

In (29), \textit{molti problemi} is adjoined to some projection inside the CP complement, thus remaining in the c-command domain of the negation adjoined to the AP. The contrast between (22) and (29) complies with our conclusion that in the former example, the PP complement of the adjectival head cannot count as a scope domain for the quantified expression \textit{molti studenti} \(^{11}\).

In lines with our previous observations, the French counterpart of (29) can have the same interpretation.

\[ \text{(30) \qquad ? \ Je considère Jean pas prêt \([cp à affronter beaucoup de/tous les problèmes]\)} \]

\( I \) consider Jean not ready to face many/all the problems

\(^{11}\) The configuration of sentence (i) is similar to that of (29) in the text, in that the complement of the adjective contains a potential landing site for the quantified expression, namely a position inside the PP1.

\( i) \quad \text{Ritengo [le vostre proposte non concordi} \quad \text{[PP1 con le conclusioni} \quad \text{[PP2 di molti nostri collaboratori]}])] \]

\( I \) consider your proposals not consistent with the conclusions of many our collaborators

Thus, we expect that in (i), similarly to (29), wide scope for negation should be possible, contrary to fact. Since, under similar circumstances, the same interpretation is found when the PP is contained in a full clause (see (ii)), the lack of wide scope for negation in (i) is not counterevidence for our approach. Rather, it should be attributed to an additional factor operating both in the full clause in (ii) and in the small clause in (i).

\( ii) \quad \text{Le vostre proposte non sono concordi} \quad \text{[PP1 con le conclusioni} \quad \text{[PP2 di molti nostri collaboratori]}])] \]

\( Your \) proposals not are consistent with the conclusions of many our collaborators
Our interpretation of the scope properties of negation inside small clauses is further supported by an interesting contrast between Italian and French, on one side, and English, on the other. In English, examples similar to (22) can have the reading in (23)b, where negation has scope over the quantifier:

(31)  a. I consider John not content with many/all students, but only with few/some
     b. I consider this professor not proud of many/all students, but only of few/some

We can accommodate this fact as follows. Assume that in English, contrary to Italian and French, the quantified expression can be adjoined to the PP complement of the adjective. In this configuration, the negation c-commands the quantifier and takes scope over it. The relevant LF representation of (31)a is given in (32):
The contrast above can be traced back to an independent property distinguishing the two groups of languages, i.e. the ability of stranding prepositions. Whereas in English, prepositions can be stranded under S-structure movement, such as wh-movement, in Italian and French the same strategy is not available (Kayne, 1984).

(33) a. Who<sub>k</sub> did you speak with t<sub>k</sub>?
    b. * Chi<sub>k</sub> hai parlato con t<sub>k</sub>?
    c. [Con chi]<sub>k</sub> hai parlato t<sub>k</sub>?
    d. * Qui<sub>k</sub> as-tu parlé avec t<sub>k</sub>?
    e. [Avec qui]<sub>k</sub> as-tu parlé t<sub>k</sub>?
Our proposal amounts to saying that the same phenomenon is found in instances of LF-movement. In English, the sole NP containing the quantified expression is moved and adjoined to the PP, thus stranding the preposition as in (32). On the contrary, in Italian and French, the whole PP must be moved, preposition stranding being forbidden. Thus, the minimal domain for the quantified expression is the next maximal projection, the AP, as in (28).

4. Phonological properties of non

As pointed out by Adriana Belletti (p.c.), non in full clauses cannot bear any stress (see § 1), as a reflex of its clitic nature. On the contrary, negation in small clauses can be stressed. The minimal pair is given below:

(34) a. * Gianni NON è soddisfatto del suo lavoro

    Gianni not is satisfied with his work

b. Ritengo Gianni NON soddisfatto del suo lavoro

   (I) consider Gianni not satisfied with his work

This contrast indicates that non in small clauses cannot be analyzed as a clitic, thus confirming our previous proposal. The different syntactic status of the two negations has a further phonological reflex. Adriana Belletti (p. c.) notes that in some varieties of Italian non is pronounced differently according to the syntactic context. For example, non in full clauses has a closed vowel n[o]n. Interestingly enough, in small clauses the negation non has an open
vowel /o/. This is not an idiosyncratic property, but reflects a general phonological rule of Italian. An /o/ can be open in a stressed syllable, whereas it must be closed in an unstressed one, as shown by the contrast between 'p[ɔ]co (little) and p[ɔ]'chissimo (very little). Under the hypothesis that sentential non is a clitic and consequently is not assigned any stress, we expect it to display a closed [o], whereas non in small clauses is an independent word, thus bearing stress and displaying an open [ɔ]. The phonological contrast illustrated so far is naturally captured by our hypothesis according to which, in small clauses, negation is an Adverbial element.

5. Negative quantifiers

So far we have outlined the differences between negation in full and small clauses. In full clauses, NegP is one of the functional projections associated with the verb. In small clauses, negation is in an adverbial position adjoined to the AP. In spite of this structural difference, the negation found in small clauses can license a negative quantifier, as shown in (35) and (36), on a par with the negation found in full clauses, as displayed in (37) and (38).

(35) Ritengo Gianni non fedele a nessuno

(I) consider Gianni not faithful to nobody

'I consider Gianni not faithful to anybody'
(36)  Ritengo Gianni non interessato a niente

(I) consider Gianni not interested in nothing

(37)  Ritengo che Gianni non sia fedele a nessuno

(I) believe that Gianni is not faithful to nobody

(38)  Ritengo che Gianni non sia interessato a niente

(I) believe that Gianni is not interested in nothing

These facts show that negative quantifiers can be licensed both by the negation found in full clauses and by the adverbial negation found in small clauses. This raises the question of how the licensing of negative quantifiers takes place. Haegeman & Zanuttini (1991) and Rizzi (1991) suggest that the syntax of negative quantifiers is governed by the Negative criterion which states that

(39) a. A Neg-operator must be in a spec-head configuration with an X° [+neg]

b. An X° [+neg] must be in a spec-head configuration with a Neg-operator

According to this criterion, a negative quantifier must enter into a spec-head configuration with a head affected with negative features. In Italian, the relevant relation is obtained by LF movement of the negative quantifier. Since the sentential negation is cliticized on AGRS° (§1), the negative feature [+neg] percolates up to this head. This implies that the Negative criterion must be satisfied at the level of AGRSP. At LF, a negative quantifier is adjoined to AGRSP. This configuration meets the specifier-head configuration required by the negative
criterion (see Haegeman, 1991). Elaborating on this approach, we propose that the negative adverb in the AP-initial position enriches the Adjectival head with negative features. At LF, the negative quantifier is adjoined to the AP thus entering into a Spec-head configuration with a [+neg] head in compliance with (39).  

6. Neg-raising phenomena

With bridge verbs, a matrix negation can license a negative quantifier in the embedded complement, (40) - (41), giving rise to the well-known phenomenon of Neg-raising.

(40) Non ritengo che Gianni sia fedele a nessuno

(I) not believe that Gianni is faithful to nobody

(41) Non ritengo che Gianni sia interessato a niente

(I) not believe that Gianni is interested in nothing

Small clauses manifest essentially the same paradigm, as illustrated below.

(42) Non ritengo Gianni fedele a nessuno

(I) not consider Gianni faithful to nobody

\[12\] One may wonder how clause (b) of the negative criterion is satisfied in small clauses. Two solutions can be envisaged. Either we assume that it does not apply at all or we can imagine that there is an empty operator in the position where negative quantifiers land at LF.
These facts can be accounted for by assuming that at LF, negative quantifiers are moved and adjoined to the head containing the [+neg] features, i.e., to the matrix AGRS°, thus entering into the spec-head configuration in compliance with the Neg-criterion. ¹³ This predicts that no difference is found between full and small clauses in this respect.

Similarly to the examples in (40) through (43) involving negative quantifiers, a matrix negation can license a negative adverb, such as ancora, both in full and in small clauses, as in (44) and (45), respectively.

¹³ French differs from Italian in that a negative quantifier does not seem to be licensed by a negation in the matrix clause, as shown in (i). We attribute this to the fact that Neg-raising seems to be more restricted in French than in Italian. In fact, the counterpart of (40) is also very marginal, if accepted at all:

\begin{enumerate}
  \item i) **? Je ne considère Jean fidèle à personne
        \hspace{1cm} I not consider Jean faithful to nobody
  \item ii) **? Je ne crois que Jean est/soit fidèle à personne
           \hspace{1cm} I not believe that Jean is faithful to nobody
\end{enumerate}

Notice that if pas is introduced in the matrix clause, the result is the mutual erasure of the two negations; hence, the sentences acquire a positive meaning.

\begin{enumerate}
  \item iii) ? Je ne considère pas Jean fidèle à personne
            \hspace{1cm} I not consider not Jean faithful to nobody
  \item iv)  ? Je ne crois pas que Jean soit fidèle à personne
            \hspace{1cm} I not believe not that Jean is faithful to nobody
\end{enumerate}

This implies that the embedded clauses in (iii) and (iv) have by themselves a negative meaning, in spite of the absence of a negation. In this respect, French differs from Italian where a negative quantifier must be licensed by a preverbal negation. Compare examples (v) - (vi) with (35) through (38) in the text.

\begin{enumerate}
  \item v)  \hspace{1cm} Je considère Jean (pas) fidèle à personne
            \hspace{1cm} I consider Jean not faithful to nobody
  \item vi) \hspace{1cm} Je crois que Jean (ne) est (pas) fidèle à personne
            \hspace{1cm} I believe that Jean not is not faithful to nobody
\end{enumerate}
Non ritenevo che quei ragazzi fossero ancora pronti per l'esame

(I) not believed that those boys were yet ready for the exam

Non ritenevo quei ragazzi ancora pronti per l'esame

(I) not considered those boys yet ready for the exam

However, this strategy is not available for intrinsically negative adverbs, such as *maì* and *mica*, neither in full nor in small clauses, as illustrated below.  

* Non ritengo che questi ragazzi siano mai disposti ad aiutarcì

(I) not believe that these boys are never ready to help us

* Non ritengo che questi ragazzi siano mica disposti ad aiutarcì

(I) not believe that these boys are not ready to help us

* Non ritengo questi ragazzi mai disposti ad aiutarcì

(I) not consider these boys never ready to help us

* Non ritengo questi ragazzi mica disposti ad aiutarcì

(I) not consider these boys not ready to help us

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14 Sentences (46) and (47) allow us to rule out a possible alternative to the approach proposed in the text. One might argue that a NegP can be present in small clauses as an additional strategy, but that there is not a suitable host on which the negative head *non* can cliticize. Hence, it must raise to the matrix AGR$^\circ$. If this approach were correct, the sentences (46) and (47) should be grammatical, given that *maì* and *mica* could be analyzed as negative adverbs occupying SpecNegP, as in the representation in (i).

i)  * Non$_k$ ritengo [$_k$ questi ragazzi [Neg$_p$ mai $t_k$ disposti ad aiutarcì]]

   (I) not believe these boys never ready to help us

   The impossibility of having a sentential NegP in small clauses is also the source of the ungrammaticality of the French sentence in (ii) with the same derivation.

ii)  * Je ne$_k$ considère [Jean [Neg$_p$ pas $t_k$ intelligent]]

   I not consider Jean not intelligent
These facts suggest that *ancora* in (44) and (45) has to be assimilated to negative quantifiers, such as *nessuno* and *niente*, and that negative adverbs such as *mai* and *mica* have to be treated separately. This difference may be viewed as a consequence of the fact the elements belonging to the former class must be licensed by a preceding negation, as in (14), (40) and (42), whereas elements of the latter class can and must survive alone, as in (8).

There is an other way of analyzing these facts which amounts to interpreting *mai* and *mica* in (48) and (49) as an instance of adverbial negation, i.e. they are negative elements by their own. To the extent that these sentences could be acceptable, the only interpretation is the one where the two negations cancel each other producing a positive meaning. This is mostly clear when the adverbial negation in the small clause is realized as *non* in Italian or *pas* in French.

(50) Non ritengo questi ragazzi non disposti ad aiutarci

(1) *not consider these boys not ready to help us*

(51) ? Je ne considère pas ces garçons pas disponible à nous aider

*I not consider not these boys not ready to help us*

Notice that there is no way of rescuing the sentences (46) and (47), in other words, *mai* and *mica* can never survive alone in a full clause, here the embedded clause. The sentence negation strategy requires that the head *non* of NegP be always lexically realized. The lack of *non* in (46) and (47) is evidence that a sentential NegP is not present here. Thus, a simple adverbial negation is not sufficient to express negation in full clauses.
7. Two strategies for negation

So far we have pointed out that there exist two ways of expressing negation syntactically. Although the two instances of negation are semantically quite similar, nevertheless they are realized in different syntactic ways, according to the syntactic context. In full clauses, negation is realized as a functional projection belonging to the clausal system whereas in small clauses, it is realized as a adverbial element functioning as a specifier. Notice that these two strategies are in complementary distribution. Negation in full clauses must be expressed as a functional projection associated with the verb and not as an adverbial-like element. In other words, NegP, analogous to AGRSP and TP, forms an extended projection of the VP (Grimshaw, 1991). This view finds support in languages, such as Turkish, in which sentential negation is a bound morpheme which is part of the verb morphology (see Payne, 1990). Although in Italian and French, the negative head, non and ne, is not a bound morpheme, it combines with the inflected verb via cliticization.

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15 Another instance of negation is the prefixal negation that is attached to a lexical head, e.g. the adjective as in in-fedele. This differs from both sentential and adverbial negation in being a lexical negation. Contrary to the two syntactic negations, it cannot license a negative quantifier (see § 5):

i) * Ritengo Gianni infedele a nessuno.
   (I) consider Gianni unfaithful to nobody

Then, we have three different types of negation, leaving aside constituent negation (see fn. 1): sentence negation, adverbial negation and morphological negation. This threefold distinction has been independently proposed by Manzotti & Rigamonti (1991).

16 Belletti (1990) notes that in full clauses, adverbs such as mai can occupy a VP-initial position, beyond SpecNegP, but only if negation non, hence a sentential NegP, is also present. Under our approach, this entails that the adverbial strategy is available in full clauses provided that it is licensed by a sentential NegP.

17 Unlike finite verbs, French infinitives do not move to AGRS°. Assuming that the clitic negation ne moves to AGRS°, as in finite clauses, the order ne pas manger (not not eat) is obtained. Thus, negation combines with a functional projection associated with the infinitive verb.
In small clauses negation is expressed as an adverb and is not part of the extended projection of the adjectival phrase. This tantamounts to saying that negation has a verbal nature, thus it cannot combine with a nominal element such as an adjective. In such a case, it can only occur in a specifier-like position, thus not entering into the extended projection of the adjective. This approach has the additional consequence that small clauses must be assigned a reduced structure with respect to full clauses, in particular they should not contain all the projections with a verbal status, such as TP and AGRSP. This conjecture is confirmed by the fact that small clauses lack tense morphemes and person morphemes, typically found in full clauses. This fact, combined with Giorgi & Pianesi’s (1991) hypothesis that there is a biunique correspondence between temporal morpheme and temporal projections, leads us to conclude that TP is absent in small clauses. The same conclusion could be extended to AGRSP. 18 19

The analysis presented here raises the question as to the status of negation in Germanic languages. It is generally assumed that in Scandinavian languages (Holmberg & Platzack, 1988) and in German (Grewendorf, 1990) sentential negation is adjoined to VP, on a par with other adverbs. If our view is correct, this analysis of negation in Germanic languages cannot be maintained. Modulo independent differences, NegP should be included in the extended head of the verb, as it is assumed for example for West Flemish (see Haegeman & Zanuttini, 1991). Further investigation is needed in order to validate this expectation.

18 Our conclusion derives Zanuttini’s (1991) correlation, according to which the presence of tense is a prerequisite for the occurrence of sentential negation.

19 According to the proposal advanced here, negative elements may vary cross-linguistically as follows:
   i)   French *ne* is always the head of a sentential negation;
   ii)  Italian *non* can be the head of both a sentential and of an adverbial negation;
   iii) French *pas* and Italian *mai* can only realize the adverbial negation.
Conclusions

Negation in small clauses manifests different properties from negation in full clauses, among these the scope phenomena. These observations have led us to propose that negation in the two cases does not enter the same structural configuration. In a full clause, negation is the head of NegP, an extended projection of the VP with Neg⁰ functioning as an extended head of the verb. Because of its verbal nature, NegP cannot be an extended projection of an adjectival phrase or equivalently Neg⁰ cannot be the extended head of the adjective. In this case, negation is expressed by an AdvP adjoined to the AP.

This distinction finds additional support by the investigation of negation in the domain of noun phrases, as illustrated in the appendix.

Appendix: Negation in Noun Phrases

Another environment where negation is not realized as sentential negation is noun phrases. Although negation in this context is not fully identical to negation in small clauses, it displays many similarities. Noun phrases have by definition nominal properties, analogous to small clauses. Thus, we predict that they do not contain sentential negation, which is found only in the extended projection of a verbal phrase.

As a matter of fact, all the properties displayed by negation in small clauses are also found in noun phrases. This resemblance supports the view that negation in noun phrases should be treated as the one found in small clauses.

a. Negative adverbs. As in small clauses, the sequence non mai is prohibited in noun
phrases.

(52) La non ammissione di quei candidati provocò uno scandalo

_The not admission of those candidates caused a scandal_

(53) * La non mai ammissione di quei candidati provocò uno scandalo

_The not never admission of those candidates caused a scandal_

b. **Scope phenomena.** Negation in noun phrases cannot have scope on a quantified expression functioning as a complement of the noun. Hence, (54) can only mean that the strike was caused by the fact that 'all the demands' were not accepted.

(54) La non accettazione di tutte le domande causò lo sciopero degli studenti

_The not acceptance of all demands caused the strike of the students_

c. **Phonological properties.** Similarly to small clauses, and contrary to full clauses, in some varieties of Italian, _non_ in nominals is pronounced with an open vowel, i.e., it is a stressed element.

d. **Negative quantifiers.** Negation in noun phrases can license a negative quantifier in the complement of the noun, as in (55).

(55) ? La non accettazione di nessuna domanda...

_The not acceptance of no demand_
In fn. 4, we provided arguments in favor of the view that negation in small clauses is not adjoined to the adjectival head, but to the AP. Similarly, in noun phrases the negation *non* is not adjoined to the nominal head but to the NP. This is proven by the fact that a negative quantifier is also licensed in the external argument position of the noun.

(56) La non adesione di nessuno studente fece fallire l'iniziativa  

_The non-adhesion of no student made fail the initiative_

In summary, negation in noun phrases behaves as negation in small clauses, as far as scope phenomena, phonological properties and distribution of negative quantifiers are concerned. These facts lead us to propose that negation in noun phrases is an adverbial element, adjoined to the NP. This conclusion, based essentially on Italian data, seems to be only partially correct, if we extend the investigation to other languages, e.g., French. In French noun phrases, *pas* cannot be used and negation is expressed by *non*.

(57) La *pas/non-admission de ces candidats a causé un scandale  

_The not admission of those candidates has caused a scandal_

Leaving aside this lexical difference, negation in French nominals behaves as negation in Italian nominals with respect to the properties (a), (b). As in Italian, negation and negative adverbs cannot co-occur, as in (58), parallel to (53), and a quantified expression always has wider scope than negation, as in (59), parallel to (54).
(58)  * La non jamais admission de ces candidats a causé un scandale

_The not never admission of those candidates has caused a scandal_

(59)  La non-admission de tous les candidats a causé un scandale

_The not admission of all candidates has caused a scandal_

This quick comparison confirms the view that in nominals, we are not faced with an instance of sentential negation. However, the exact status of negation in nominals remains a matter for further investigation, particularly in view of the fact that in French, the lexical item expressing negation in nominals is different from the one found in small clauses. It is unlikely that this is just an idiosyncrasy of French, given that the same situation is found in English, where _not_ is used in small clauses and _non_ in nominals.
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