

Annotation guidelines for the Fact-Ita Bank Negation corpus

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1. Introduction

As reported by Saurí (2008), the main ways in which negation can be expressed are the following ones:

1. Negating the predicate that expresses the event: **Non** *ha seguito le regole*.
2. Negating the subject of an event: **Nessuno** *seguiva le regole*.
3. Negating the object of an event: *Non seguiva* **nessuna** *regola*.
4. The negation is expressed as part of the lexical semantics of the embedding predicate: *Ha rifiutato di seguire le regole*.

In this work we do not consider the 4th point, i.e. negation expressed by the lexical semantics of predicates.

Following Martí et al. (2016), we consider negation a syntactic operator and therefore, we analyze negation on a syntactic level.

Three distinct elements have to be annotated: the negation cues (e.g. *non*, *senza*, etc.), the scope of the negation (the part of the sentence affected by the negation) and the focus (i.e. the part that is most explicitly negated).

In the examples in these guidelines the **negation cues** will be highlighted in bold, the [focus] will be included in brackets and the scope will be underlined.

(1) [**Nessun** militare italiano] è rimasto ferito.

(2) Lo stato **non** tratta [con i rapitori].

Negation cues are associated both with a scope and a focus; the only exception is represented by the negation cue *no* as a full-meaning sentence (e.g. as an answer), which is not associated either a scope or a focus.

(3) Hai fame? **No**.

Reinforcement. Unlike standard English, Italian is a negative concord language, where two or more negative elements can occur in a sentence, and the sentence is interpreted as only

being negated once¹. In the case of negative concord (e.g. “Non ho visto nessuno”/“I didn’t see anyone”) we distinguish between negation cue[s] and reinforcement. We associate the negation cue[s] (*nessuno* (4) and *nessun* (5)) with the focus and scope, but also with the reinforcement (*non*) in our annotations.

(4) *Non* ho visto **nessuno**.

(5) *Non* vedo **nessun** problema.

In (6), where we have more than one negation cue, *non* is the reinforcement of both negation cues (e.g. **mai** and **nessuno**). Each of the negation cues is annotated independently and the reinforcement will be associated to both.

(6) *Non* è venuto **mai nessuno**.

2. Negation Cues

Negation cues are the elements in the sentence that express negation. Here we provide an exhaustive list of negation cues. The affixal negation (in-, a-) is not listed as it is not relevant for our annotation.

- Simple negation cues:
 - non
 - nemmeno
 - neanche
 - neppure
 - no, meno (“Hai capito o no?”, “Hai capito o meno?”)
 - no (“Mi hanno chiamato? No”)
 - nessuno
 - niente, nulla
 - mai
 - né... né...
 - senza
 - eccetto (= “ma non”)
 - tranne
- Multiword negation cues:
 - per niente [by no means]
 - un’acca (“Non ho capito un’acca”)

¹from <http://microsyntax.sites.yale.edu/negative-concord>

Reinforcement

In Italian “non” can be used as reinforcement of the negation with “nessuno” (7-8), “niente”, “nulla”, etc. In this case the two negation cues are annotated and the reinforcement is linked to the other negation cue.

“Nessuno” as pronoun:

(7) *Non* ho visto **nessuno**.

“Nessuno” as adjective:

(8) *Non* vedo **nessun** problema.

In the case of more than one negation cue, “non” is the reinforcement of all the negation cues. In (9), both “mai” and “nessuno”. Each of the negation cues in bold will be considered an independent negation and the reinforcement will be marked in both.

(9) *Non* è venuto **mai nessuno**...

The reinforcement stays always out of the scope, as it only expresses negation.

2.1. False negation cues

Some negation cues are used in expression that does not negate anything. For example *non appena* (10), *finché non* (11) or *non a caso* (12).

(10) È uno degli obiettivi che si è dato Dellasega **non** appena nominato ufficialmente direttore.

(11) Non posso partire finché **non** finisce lo sciopero.

(12) **Non** a caso, si sono messi in calendario quattro incontri.

As they do not negate anything, they are not marked as negation cues.

2.2. Annotating the negation cue

Negation cues are explicitly expressed by a lexical item (Morante et al., 2011). They can be a word or a multiword item, and they can be discontinuous.

1. Can the negation cue be discontinuous?
 1. *Né ... né* is a single discontinuous cue.
2. Is the potential cue part of a fixed expression that does not express negation?
 1. In some fixed expressions potential cues lose their negative meaning (see [2. False negation cues](#)) and they are not annotated.
3. Is the potential cue embedded in a modality cue?

1. Some modality cues, such as *nessun dubbio*, *senza dubbio* contain false negation cues. These are expressions that act at the discourse level. They convey information about the attitude of the speaker towards his statement and, thus, should not be tagged as negation cues.

3. Scope

Following Morante et al. (2011), we consider the scope of a negation cue is the extent of the text it affects to, that is to say, the text section that is negated. Here we provide a simplified guide to be consulted when doubts arise about how to annotate the scope. The main factors to take into account are:

- When the scope is not explicit in the sentence, we mark only the negation cue.
- The scope can be discontinuous.
- The main test to check which part of the sentence is within the scope is *non si dà il caso che* test (subsection [3.2. Test](#)).
- Constructions with the same meaning will receive the same analysis.

In the following we provide a summary of the main rules for the annotation of the scope, based on Morante et al. (2011). Details are provided below in subsections.

1. In case of doubt, the *no si dà il caso che* test should be applied to determine which part of the sentence is affected by a negation cue (subsection [3.2. Test](#)).
2. What to do with discourse levels modifiers, e.g. *però*, *anche se*? Discourse level modifiers are not included in the scope (13).

(13) ... ha detto Putin, anche se lui non si è recato ai funerali.

3. How is the scope marked in coordinate clauses? Negation cues scope always only over their clause. What to do with coordinate conjunctions, e.g. *e*? The coordinate conjunction that introduces the clause that contains the negation is not included in the scope (14).

(14) Il contratto è scaduto alla fine dello scorso anno, e le trattative avviate dalle parti non hanno condotto a risultati apprezzabili.

4. How is the scope marked in subordinate clauses? The negation scopes over the subordinate clause. What to do with subordinate conjunctions, e.g. *che*? The subordinate conjunction that introduces the clause that contains the negation is not included in the scope (15).

(15) Hanno detto che un giornale non si fa così.

5. Is the subject negated? The negation scopes over all the clause (16).

(16) Nessun militare italiano è rimasto ferito.

6. Is the object negated? The negation scopes over all the clause (17).

(17) **Non** accetteremo nessun atto intimidatorio.

7. Is the attribute of a copulative construction negated? The negation scopes over all the clause (18).

(18) Mario non è nessun scemo.

8. Is the negation cue embedded in an elliptical construction? Sometimes the elliptical element is recoverable from the same sentence. We mark elliptical elements as the scope of the negation cue if they are recoverable from the same sentence (19-20). In (21) the elliptical elements are in the previous sentence, they are not marked as the scope of the negation cue.

(19) Ripeto che la signora è sua moglie e non sua sorella.

(20) Diciassette le band, trentine ma **non solo**, che si sono esibite on stage.

(21) Un esercizio che esiste ormai da anni ma che ha cambiato gestione. Ma **non il nome: Bar Salé**.

9. Is the negation cue embedded in an existential construction? The existential subject is also part of the scope if it is negated by the negation cue (22).

(22) **Non c'è luce nella casa**.

10. Relative pronouns that occur in negative subordinate clauses fall under the scope of the negation cue (23).

(23) Con supremo dispetto dei francesi che non hanno soldati in quel paese.

11. Interrogative pronouns such as *dove* and *perché* are included in the scope (24).

(24) Perché non dovremmo arrestarlo subito?

3.2. Test

Morante et al. (2011) propose to apply the *it is not the case that* test to determine the scope of the negation. In Italian we can use the same test: *non è che / non è vero che / non si dà il caso che*.

Examples:

(25) Ieri non ha piovuto a Amsterdam.

(26) Ma noi non avevamo pretese artistiche, quel numero partiva dall'idea che avevamo del significato di quel giorno per il paese.

In order to determine the scope of the negation in the example (25-26) we can use the test as in (27-28).

(27) *Non si dà il caso che* ieri ha piovuto a Amsterdam.

(28) *Non si dà il caso che* noi avevamo pretese artistiche.

3.3. Scope with respect to negation cues

Most of the negation cues are kept out of the scope. It is the case of *non*, *senza*, *né...né*, *eccetto*, *tranne*, *nemmeno*, *neanche* and *neppure*. Morante et al. (2011) wrote that “a cue does not change its own polarity, this is why we keep it out of the scope”.

However the negation cues as *nessun*, *niente*, *nulla*, *mai*, etc. are included in the scope and in some case could also be the focus (see section 3). If the negation cue is a determiner (29) or a pronoun (30), it should be included in the scope.

(29) Nessun contenzioso tra adulti dovrebbe coinvolgere innocenti, mai, in nessun luogo e in nessuna circostanza.

(30) Non auguro a nessuno questa esperienza.

In case of reinforcement of the negation, the scope is attached to the negation cue (and not to the reinforcement) even if in this case the negation cue is often part of the scope. For example (31):

(31) Non è venuto nessuno.

Cue: nessuno

Scope: è venuto nessuno

Reinforcement: Non

3.4. Principal Clause and Subordinate Clause

If the main verb is negated, the scope includes the whole sentence (32).

(32) Non è facile uscire di questa zona dopo aver prelevato degli ostaggi.

If the negation is in a subordinate clause, the scope includes only the subordinate clause. The subordinate conjunction is excluded from the scope but the relative pronoun is included (no distinctions are considered between implicit and explicit subordinate clauses).

The preposition introducing an implicit subordinate clause is not included in the scope. For example in (33) “a” is non included in the scope.

(33) Impara dunque a **non temere i frutti del passato**

Relative pronouns are included in the scope (34) whereas the conjunctions which introduce a subordinated clauses are excluded (35).

(34) Però c'è qualcosa nell'ispettore Baynes che non riesco a capire bene.

(35) Devi ammettere che **non potevo lasciarlo dov'era.**

3.5. Set apart text

If the negation is inside brackets (marked by square brackets, round brackets, etc.) or enclosed by dashes, the scope is limited to the parenthesis (36).

(36) dopo aver intimato ai due guardiani- **non armati** - di entrare davanti a loro.

If the negation is in the sentence (outside the brackets) and the parentheses contain a clause that seem disconnected from the rest of the sentence, it is not included in the scope (37).

(37) A Parigi non credono nell'autenticità del comunicato (secondo il primo ministro Jean - Pierre Raffarin « c'è molto scetticismo tra gli esperti » e « nulla rimette in causa la fiducia che abbiamo in un esito favorevole della vicenda »).

On the contrary, if the information inside the parentheses is related to the information in the sentence, it should be included in the scope (38).

(38) I vincitori (squadra rossa e squadra verde) non potranno partecipare alla finale.

3.6. Coordination

In coordinate clauses, negation cues scope always only over their clause (Morante 2012). When the negation is in the first coordinated clause, the scope includes only the first clause (39).

(39) L'operazione non è stata rapidissima e è durata più di 5 minuti.

When the negation is in the second coordinated clause, the elliptical subject is recovered from the sentence and included in the scope (40). It is relevant to note that the information can only be recovered from the same sentence.

(40) L'operazione è stata rapidissima e **non è durata più di 5 minuti.**

If the negated verb is the main verb of the sentence and there are some coordinated elements in the sentence (in particular the subject or the object are composed of coordinated elements), the scope includes the whole sentence (41-42).

(41) Certo non è facile penetrare in questa zona e poi uscirne , dopo aver prelevato degli ostaggi.

(42) Mario e Maria non hanno mangiato oggi il pane dopo scuola.

3.7. Noun phrases

When noun-accompanying adjective is negated, the scope will be the noun phrase (43-45).

(43) Organizzazione non governativa

(44) Per l'Organizzazione non governativa Intersos

(45) Per l'Organizzazione non governativa (ong) Intersos

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When the noun accompanying adjectives are coordinated, the negation scope only over the negated adjective (46).

(46) Una sola l'arma utilizzata per i due omicidi e **mai** ritrovata.

When an adverbial phrase related to a noun is negated, the rule is the same as for the adjective (47).

(47) È uno degli obiettivi **non** a lunghissima scadenza.

3.8. Cleft sentences

In the cleft sentences, the "stressed" element (the element we want to focus on) is detached from the remaining part of the sentence (for example "dal 30 agosto" (48)). In this case the scope will include the cleft element as well as the principal clause.

(48) È dal 30 agosto che **non** si sparava più a Nassiriya.

4. Focus

From Blanco and Moldovan (2011): "Focus is that part of the scope that is most prominently or explicitly negated" or "the element of the scope that is intended to be interpreted as false to make the overall negative true." They also provide a table (Table 1) with focalised elements as well as their interpretation.

Table 1: Focalised elements and their interpretation (Blanco and Moldovan, 2011)

	Statement	Interpretation
1	John didn't build a house to <u>impress Mary</u> .	John built a house for other purpose.
2	I don't have a watch <u>with me</u> .	I have a watch, but it is not with me.
3	We don't have an evacuation plan <u>for flooding</u> .	We have an evacuation plan for something else (e.g., fire).
4	They didn't release the UFO files <u>until 2008</u> .	They released the UFO files in 2008.
5	John doesn't know <u>exactly</u> how they met.	John knows how they met, but not exactly.
6	His new job doesn't require <u>driving</u> .	His new job has requirements, but it does not require driving.
7	His new job doesn't require <u>driving yet</u> .	His new job requires driving in the future.
8	His new job doesn't <u>require anything</u> .	His new job has no requirements.
9	A panic on Wall Street doesn't exactly <u>inspire</u> confidence.	A panic on Wall Street discourages confidence.

One can make some generalisations on the focus:

- The focus corresponds to a single argument (or role in Propbank) or the verb, not more.
- The focus can be in certain case smaller than an argument.
- The focus is always included in the scope.

In the following examples (49-54) we provide some focus annotations (between square brackets):

(49) Una sola l'arma utilizzata per i due omicidi e [**mai**] ritrovata.

(50) Dice di **non sapere** [che fine] abbia fatto.

(51) I bilanci ufficiali non si [discostano] dalla cifra di 394 morti, in maggioranza bambini.

(52) Un dolore che la notizia della cattura di uno dei presunti terroristi, un ceceno, non [attenua].

(53) Ha ribadito di **non voler** [trattare con gli assassini di bambini]

(54) Francamente non ci aspettavamo una risposta [di questo tipo].

In order to determine the focus of a negation, we propose to add a contrast construction (for example with the connective *ma*); the focus will be the element on which the contrast construction is built. For example, from the sentence (55) we can build the sentence (56). In (56) the two arguments in contrast are “pretese artistiche” and “interesi economici”. So we consider that the focus is “pretese artistiche”.

(55) **Non** avevamo [pretese artistiche].

(56) Non avevamo pretese artistiche ma avevamo interesi economici.

The focus is sometimes identified through some particular linguistic constructions. For example, the explicit expression of a pronoun, which is optional in Italian, puts the focus on the subject. In the sentence (57), the pronoun (“lui”) which is expressed is the focus of the negation.

(57) « Con l'anima e col cuore siamo tutti a Beslan », ha detto Putin, anche se [lui] **non** si è recato ai funerali.

The choice of the order of the phrases/complements in a sentence is also used to put the focus on a particular phrase (right and left dislocation) (58).

(58) **Non** sono stati *i carabinieri* a chiudere le strade.

Focus and scope can be the same, in particular with the negation cue *senza* (59).

(59) si addensava la folla di politici di ogni schieramento **senza** [distinzione di sorta].

If the focus includes both the predicate and one or more of its arguments, we annotate as focus only the predicate (syntactic head) (60).

The determiner is included in the focus extent (60):

(60) Quest'ultimo **non** esclude [un impegno futuro] sulla piazza bolzanina.

The preposition is included in the focus extent (61):

(61) Comunque non ha problemi [a rientrare nel gruppo].

4.1. Cleft sentences

In the cleft sentences, the "stressed" element (the element we want to focus on) is detached from the remaining part of the sentence (for example "dal 30 agosto" in the sentence (62)). This stressed element can be also the focus of the negation and will be marked as focus.

(62) È [dal 30 agosto] che non si sparava più a Nassiriya.

4.2. Non ... più ...

In the examples (63) and (64), "non" is the negation cue and "più" the focus.

(63) Per una serie complessa di ragioni, tra cui la consapevolezza di **non** ottenere [più] dalle sedi competenti l'appoggio pieno che mi sembrava indispensabile, ho deciso di lasciare il mio incarico di direttore responsabile della Misna.

(64) **non** sembrano [più] sussistere particolari problemi tecnici per il transito dell'autobus.

4.3. Double negation

In case of double negation (65) (i.e. the combination of two simple negations), two scopes should be annotated as well as two focus.

(65) **Non** posso [**non** pensare [che all'Iraq abbiamo dato una speranza]_{focus non 2}]_{focus non 1}

1

Non 1

Scope: "posso non pensare che all'Iraq abbiamo dato una speranza"

Focus: "non pensare che all'Iraq abbiamo dato una speranza"

Non 2

Scope: "pensare che all'Iraq abbiamo dato una speranza"

Focus: "che all'Iraq abbiamo dato una speranza"

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