

# Fragment answers and double negation in strict negative concord languages

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## 1 Preview

- The goal of this talk is to discuss the interpretation of n-words in fragment answers in strict negative concord languages and to show how this data can be incorporated into an overarching theory of n-words.
- Most theories of n-words address the issue of why n-words can survive as fragment answers to positive questions.
- This talk sheds light on a different set of data, namely the possibility of n-words to act as fragment answers to negative questions.
- We show that we find unexpected patterns in the possible interpretations of fragment n-words, in view of their behavior in non-elliptical constructions.
- We offer an alternative-based version of the hypothesis that n-words are strong negative polarity items (NPIs), arguing that the difference between n-words and other NPIs is the result of two parameters: (i) whether reconstruction of the polarity item is allowed, and (ii) whether the polarity item has the ability to invoke covert negation.
- The resulting theory captures the distribution and interpretation of n-words in both non-elliptical and elliptical constructions and allows for an easier integration of n-words in the broader typology of polarity sensitive items.

## 2 Data of interest

- In negative concord (NC) languages, the co-occurrence of elements that can independently convey negation (n-word in (1a) or sentential negation (SN) in (1b)) gives rise to a reading with only one semantic negation (2):
  - (1) a. Nessuno è venuto.  
          nobody has come  
          'Nobody came.'  
      b. Gianni non è venuto.  
          Gianni not has come  
          'Gianni didn't come.'
  - (2) Non è venuto nessuno.  
          not has come nobody  
          'Nobody came.'

- In strict negative concord languages (e.g. Romanian, Greek, Slavic languages, Hebrew, Hungarian, Japanese), n-words need to be accompanied by clause-mate sentential negation, regardless of their position in the sentence as shown in (3):

(3) a. Nimeni \*(nu) a venit.                      b. \*(Nu) am văzut nimic  
           nobody not has come                      not have seen nothing  
           ‘Nobody came.’                                      ‘I didn’t see anything.’

- N-words in these languages can occur without SN, but only in fragment answers such as (4a) and other elliptical structures (4b):

(4) a. Cine a venit?              Nimeni.  
           who has come?              nobody  
           ‘Who came?              Nobody.’  
       b. Maria cam exagerează, dar Ion niciodată.  
           Mary sort of exaggerates but John never  
           ‘Mary sort of exaggerates, but John never does.’

- N-words can also serve as fragment answers to negative questions:

(5)      Cine nu a venit?              Nimeni.  
           who not has come?              nobody  
           ‘Who didn’t come?              Nobody.’

- Using data from 8 strict NC languages (see Appendix), we show that n-words as fragments answers to negative questions are ambiguous between a negative concord reading, (6a), and a double negation (DN) reading, (6b), as confirmed by the distinct possible continuations:

(6) a. Nimeni. = nobody came ... *You’re the first one here.*  
       b. Nimeni. = nobody didn’t come ... *Everybody’s here.*

- **The puzzle:** The DN reading in (6b) is never available for the non-elliptical version, namely (3a), which can only receive an NC reading.
- **The goal:** Understand what is responsible for the availability of this additional reading.

### Previous analysis

- Espinal and Tubau (2016) discuss fragments answers to negative questions in Catalan and Spanish, which are non-strict NC languages.
- They show that for a subset of speakers, such answers are ambiguous between NC and DN readings:

(7)      Quién no llevaba gafas?              Nadie  
           who not wore glasses              nobody  
           ‘Who wasn’t wearing glasses?’              ‘Nobody’

- a. Nobody was wearing glasses.
  - b. Everybody was wearing glasses.
- To account for this data, they assume an ambiguity approach (Herburger, 2001), whereby n-words are ambiguous between a negative quantifier interpretation and an indefinite polarity item interpretation.
  - It is not clear how to extend the ambiguity approach to n-words in strict NC languages.
  - We choose instead to pursue an account of n-words as NPIs (e.g. Laka 1990, Ladusaw 1992, Giannakidou 2000) and show that it can capture their behavior in both non-elliptical and elliptical structures.

### 3 N-words as a type of NPIs

- We analyze n-words as strong NPIs, namely those NPIs that are only licensed when c-commanded by an anti-additive operator.
- We argue that unlike other NPIs, n-words can (i) reconstruct to their base position and (ii) trigger the insertion of a covert negation.

#### 3.1 N-words as strong NPIs

- We analyze n-words as strong NPIs (*yet, in weeks, at all, either, until*) - those NPIs that are licensed by anti-additive operators (e.g. sentential negation and *without*):

- (8) a. John hasn't visited us yet/in weeks.  
 b. \*Few colleagues have visited yet/in weeks.

- We adopt an alternative-based account of polarity sensitivity wherein NPIs denote regular existential quantifiers with no negative import of their own.
- On this approach, the restricted distribution of NPIs is due to the fact that they activate (subdomain) alternatives (Krifka, 1995, Lahiri, 1998, Chierchia, 2013):

- (9) a.  $\llbracket \text{any} \rrbracket = \lambda P \lambda Q \exists x \in D [P(x) \wedge Q(x)]$   
 b.  $\llbracket \text{any} \rrbracket^{\text{ALT}} = \{ \lambda P \lambda Q \exists x \in D' [P(x) \wedge Q(x)], D' \subseteq D \}$

- Active alternatives call for obligatory exhaustification. One way to implement this hypothesis is to assume that NPIs must enter into an agreement relation with a c-commanding exhaustification operator, akin to silent *only*:

- (10)  $\text{O}(p) = p \wedge \forall q \in \text{Alt}(p) [p \not\subseteq q \rightarrow \neg q]$   
*(the assertion p is true and any alternative q not entailed by p is false)*

- This kind of exhaustification will lead to unrescuable contradiction (in the sense of Gajewski 2002) in upward entailing (UE) but not in downward entailing (DE) environments. The NPI is licensed whenever the result of exhaustification is non-contradictory.

- Furthermore, Gajewski (2011) and Chierchia (2013) show that in the case of strong NPIs, the exhaustifier considers both truth-conditional and non-truth-conditional dimensions of meaning (i.e. presuppositions and implicatures). As a result, these NPIs can only be licensed by operators that do not bring in any presuppositions or implicatures (i.e. sentential negation and *without*).

### 3.2 Distinguishing between n-words and strong NPIs

- By adopting this alternative-based n-words-as-strong NPIs approach, the restricted set of licensors (e.g. sentential negation and *without*) is straightforwardly derived.
- However, n-words and strong NPIs do not fully align in their distribution and interpretation:
  - n-words but not NPIs can precede their licensor
  - n-words but not NPIs can act as fragment answers to positive questions
  - n-words but not NPIs can give rise to double negation readings

#### C-commanding differences

- N-words, unlike other NPIs, need not be c-commanded by their licensor :
  - (11) a. Nimeni nu a venit.  
nobody not has come  
'Nobody came.'
  - b. \*In weeks he hasn't visited me.
  - c. \*Anyone didn't come
- (11b-c) show that NPIs cannot reconstruct (cf. Bošković 2008, Bhatt and Homer 2015)<sup>1</sup>
  - If they could reconstruct to their base position, the NPI would end up in the syntactic scope of negation, and therefore it would be licensed.
- On the other hand, the distribution of n-words indicates that they can reconstruct, i.e. be interpreted in their pre-movement position (*SpecvP* when talking about subjects).
- Since this position is below sentential negation, the n-word can be said to be licensed:

- (12) a. [n-word [O [SN [<sub>vP</sub> n-word [<sub>V<sup>P</sup></sub> ... ]]]]]
- b. [NPI [O [SN [<sub>vP</sub> NPI [<sub>V<sup>P</sup></sub> ... ]]]]]

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<sup>1</sup>There are well-known exceptions to this generalization, involving NPIs embedded in preverbal subjects (cf. Linebarger 1980, Uribe-Etxebarria 1995, Sauerland and Elbourne 2002). Sauerland and Elbourne argue that in such examples the phrase containing the NPI moves only at PF; since no movement occurs at LF, the NPI ends up being interpreted in the scope of negation.

(i) [A doctor who knew anything about acupuncture] was not available.

## Fragment answers to positive questions

- Unlike other NPIs, n-words are felicitous in fragment answers to positive questions and in other elliptical structures, where there is no overt negation:<sup>2</sup>

- (13) a. Cine a venit? Nimeni.  
who has come nobody  
'Who came?' 'Nobody.'
- b. Maria cam exagerează, dar Ion niciodată.  
Mary sort of exaggerate but John never  
'Mary sort of exaggerates, but John never does.'

- (14) a. When did John come to visit? \*In weeks.  
b. \*Mary visited last month, but John in weeks.

- One possible proposal: in the case of a fragment answer, negation is part of the elided material (Giannakidou, 2000).
  - A problem: there is no proper antecedent for the negation, thus violating the identity condition on ellipsis (cf. Watanabe 2004).
  - The same can be argued for the construction in (13b).
- This problem can be avoided by invoking a covert negation (CN) as a last resort rescuing mechanism.
  - This strategy must not be available for regular NPIs since they cannot occur in structures like (14).
  - CN occurs in a high projection, and can only be licensed locally by an n-word that has undergone focus-movement (Zeijlstra, 2008).
- **Observation:** This mechanism is limited to elliptical constructions, even for n-words.
  - If this strategy were freely available, we should be able to see n-words surfacing in the absence of overt SN all over the place.
- We assume that this strategy is regulated by the following condition:

(15) An n-word can not invoke covert negation if the vP is spelled out.

- Essentially, if you spell out the material within the VP, then a spelled-out negative marker trumps the insertion of covert negation.
- We thus propose the following underlying representation for the interpretation of the fragment answer:

(16) [CN [Nimeni <a venit>]]

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<sup>2</sup>Although NPIs can act as fragment answers to negative questions; see section 4.

## Double negation readings

- Further support in favor of invoking covert negation comes from double negation (DN) readings.
- In some strict NC languages (e.g. Romanian, Greek, Czech, Polish), a DN reading can only arise in the presence of two n-words and SN (cf., Merchant 2004, Fălăuș 2009, Iordăchioaia 2009, de Swart 2010)
- A DN reading is available in (18) but not in (17), where there is only one n-word:

(17) Maria nu a citit nimic.  
 Maria not has read nothing.  
 'Mary didn't read anything.' (NC)  
*but not* 'Mary didn't read nothing' = 'Mary read something.' (DN)

(18) Nimeni nu a citit nimic.  
 nobody not has read nothing  
 'Nobody has read anything.' (NC)  
*or* 'Nobody hasn't read anything.' = 'Everybody read something.' (DN)

- Since a DN reading amounts to two negations, for (18) to receive a DN reading a covert negation must be invoked (given that n-words are existential quantifiers with no negative import and the only negative element is SN).

(19) [CN [nimeni [nu [nimic ]]]]  $\neg\exists\neg\exists = \forall\exists$

- The fact that CN can be invoked even in non-elliptical constructions seems to go against the condition in (15).
- We claim that this violation falls under the umbrella of phenomena regulated by the principle of minimal compliance (Richards, 1997):

(20) **Principle of Minimal Compliance:** For any dependency D that obeys constraint C, any elements that are relevant for determining whether D obeys C can be ignored for the rest of the derivation for purposes of determining whether any other dependency D' obeys C.

- In our case, this means that it's enough if one n-word is licensed by the overt negation.
- In other words, the ill-formed CN–n-word dependency is saved as long as a well-formed dependency (SN–n-word) is already present.
- Once that happens, the second n-word can be licensed by either the overt negation expressed by SN, giving rise to the NC reading, or by a covert negation, giving rise to the DN reading.
- This explains the fact that if DN readings arise for non-elliptical sentences, it is only in the presence of two n-words.

#### 4 Back to the puzzle: fragment answers to negative questions

- It has been noted that n-words can also serve as fragment answers to negative questions (de Swart, 2010).
- The condition in (15) restricts the insertion of CN to elliptical constructions.
- **Prediction:** In elliptical structures we should find more readings than in non-elliptical structures.
  - This prediction is borne out across all the strict NC languages that we investigated, where n-word answers can be ambiguous between an NC reading and a DN reading (see Appendix).
- For illustration, consider the following examples from Romanian and Greek:

(21) Cine nu a venit? Nimeni.  
who not has come nobody  
'Who didn't come?' 'Nobody.'

- a. *You're the first one here.*
- b. *Everybody's here.*

(22) Ce nu ai cumpărat? Nimic.  
what not have bought nothing  
'What didn't you buy?' 'Nothing.'

- a. *The shop was closed.*
- b. *So now we have everything we need.*

(23) Pjos den plirose to prostimo? Kanis.  
who not paid the fee nobody  
'Who didn't pay the fee?' 'Nobody.'

- a. *We all support the "don't pay" movement.*
- b. *Everybody paid.*

- This ambiguity also occurs in answers to negative questions that already contain an n-word:

(24) Cine nu a primit nimic de Crăciun? Nimeni.  
who not has received nothing for Christmas? nobody  
'Who didn't get anything for Christmas?' 'Nobody.'

- a. *This year was hard on everyone, so we decided to do no presents.*
- b. *Santa was very generous this year.*

- The two possible continuations in each of these examples confirm the prediction.
- Recall that the non-elided versions of the answer cannot receive a DN reading.

(25) a. Nimeni nu a venit.  
nobody not has come

'Nobody came.' (NC)  
*but not* 'Nobody didn't come.' = 'Everybody came.' (DN)

- b. Kanis den plirose to prostimo.  
 nobody not paid the fee  
 'Nobody paid the fee.'  
*but not* 'Nobody didn't pay the fee.' = 'Everybody paid.' (DN)

- That n-words can survive as fragment answers to negative questions is not surprising given that the identity condition on ellipsis guarantees the presence of negation at the level of interpretation.
- Note that, as predicted, even NPIs can survive as fragment answers to negative questions (cf. Marcel den Dikken and Wilder 2000, Weir 2015).

(26) Q: What didn't you bring?  
 A: Any wine.

- The NC reading comes about straightforwardly, as in (27)– the presence of SN in the question licenses its presence in the ellipsis site, which in turn can license the n-word, similarly to the non-elided version in (25a).

(27) [Nimeni <nu a venit>] negative concord reading

- What is surprising, however, is the fact that such answers can also receive a DN interpretation.
- To understand why a DN reading is possible for a fragment n-word, but not for its non-elliptical counterpart (25), recall the condition in (15), which says that CN can only be invoked by an n-word if the vP is not spelled out.
- In cases where the negation is elided, (21)-(23), an n-word may invoke CN, giving rise to the LF in (28), thereby conforming with the condition in (15).

(28) [CN [Nimeni <nu a venit>]] double negation reading

- In (28), CN licenses the n-word (similarly to what happens in answers to positive questions) and since SN is still underlyingly present, the overall meaning will be a DN reading ( $\neg\exists\neg = \forall$ ).
- In sentences like (25), CN cannot be invoked since condition (15) would be violated, given the presence of an overt negation and the absence of a second n-word (which could invoke CN by appealing to the PMC).
- **Side note:** observe that for some speakers DN is the preferred reading.
  - One possibility: the fragment answer, which is ambiguous, competes with the non-elided answer, which is unambiguously NC, hence the preference for a DN reading.



## 5 Conclusions

- We offered an updated version of the hypothesis that n-words are strong NPIs, which allows for an easier integration of n-words within the broader typology of polarity-sensitive indefinites.
- We brought to light a new puzzle with respect to the different possible interpretations of n-words in elliptical vs non-elliptical constructions.
- We preserved the insight that n-words in (strict) NC languages can invoke covert negation (Ladusaw, 1992, Zeijlstra, 2004, a.o.), but argued that this is a last resort strategy.
- Our proposal captured the fact that fragment n-words give rise to ambiguous interpretations (both NC and DN) in response to negative questions in strict NC languages.
- By invoking the PMC, we also explained why DN readings in strict NC languages can only arise with two n-words in non-elliptical constructions.
- A broader question: what is the connection between focus and CN?
  - What is the role of prosody and focus in the availability of DN readings for non-elliptical constructions?
  - Why is CN more easily invoked by n-words in preverbal position in non-strict NC languages (e.g. Italian, Spanish)?
- We argued for 2 points of variation between n-words and NPIs: (i) ability to reconstruct and (ii) ability to invoke covert negation. A natural follow-up question is whether there is a correlation between these two parameters. Cross-linguistic data illustrates that all possible configurations are attested, which suggests that there is no correlation:

	N-words	NPI modals ( <i>need</i> )	Italian <i>mai</i>	NPIs ( <i>any, in weeks</i> )
Reconstruction	✓	✓	✗	✗
Covert negation	✓	✗	✓	✗

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## Appendix

LANGUAGE	SN+N-WORD	SN+2 N-WORDS	FA: POS Q	FA: SN Q	FA: SN+N-WORD Q
Czech 1	NC	NC	NC	DN**	DN**
Czech 2	NC	NC+DN*	NC	weird	weird
Greek 1	NC	NC+DN*	NC	NC+DN	NC+DN
Greek 2	NC	NC+DN*	NC	DN	DN
Japanese 1	NC	NC	NC	DN**	DN**
Japanese 2	NC	NC	NC	NC	DN**
Polish 1	NC	NC+DN*	NC	weird	DN
Polish 2	NC	NC+DN*	NC	DN	DN
Romanian 1	NC	NC+DN*	NC	NC+DN	DN
Romanian 2	NC	NC+DN*	NC	NC+DN	NC+DN
Romanian 3	NC	NC+DN*	NC	NC+DN	NC+DN
Russian 1	NC	NC	NC	NC+DN	NC+DN
Russian 2	NC	NC	NC	NC+DN	DN
Serbo-Croatian 1	NC	NC	NC	NC+DN	NC+DN
Serbo-Croatian 2	NC	NC	NC	NC+DN	NC+DN
Serbo-Croatian 3	NC	NC	NC	NC+DN	NC+DN
Slovenian 1	NC	NC	NC	NC+DN	NC+DN
Slovenian 2	NC	NC	NC	NC+DN	DN

NC+DN\* - indicates that this reading is only acceptable under a particular focus marking, generally non-default prosody, or if different word order is involved.

DN\*\* - indicates that the reading is acceptable but pragmatically odd.

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