Neg-Raising
The Case of Persian

Zahra Mirrazi & Ali Darzi

University of Massachusetts, Amherst
University of Tehran

April 28, 2017

Introduction

- ▶ Certain negated predicates (e.g. think, believe, want) imply a reading in which the negation is interpreted in the embedded clause. For example, (1a) implies (1b).

(1) a. I don't think she'll come.
     b. I think she won't come.

(2) a. She doesn't believe unicorns exist.
     b. She believes unicorns don't exist.

Introduction

- Most other predicates do not have such readings, as shown in (3) and (4) below.(3a) and (4a) do not infer (3b) and (4b):

(3)   a. I didn't say she'll come.
      b. I said she won't come.

(4)   a. She doesn't claim unicorns exist.
      b. She claim unicorns don't exist.

INTRODUCTION

▷ Terminology

- ▶ Predicates that have such readings: *Neg-Raising predicates*.
- ▶ Those that do not have such readings: *non-Neg-Raising predicates*.
- ▶ Readings invoked by Neg-Raising predicates where negation is interpreted the embedded clause: *Neg-Raising readings*.

INTRODUCTION

▷ Two Approaches

▶ **Sytactic account**: movement of negation (Fillmore 1963, Horn 1971 and Collins & Postal 2014)

▶ **Semantic-pragmatic account**: Neg-Raising predicates come with excluded middle presupposition (Bartch 1973, Horn 1989, Gajewski 2005, 2007 and Homer 2012, among many others)

Syntactic Account

- ▶ Negation is base-generated in the embedded clause and then raises to the higher clause via syntactic movement.
- ▶ The lowest copy of NEG is semantically interpreted and the highest copy of NEG is phonologically realized.

(5) a. I NEG think she'll <NEG> come.

Introduction

Semantic Account

▶ Neg-Raising predicates like think p presupposes that either p is thought, or not-p.

▶ This presupposition, together with the asserted negation on NRPs, gives rise to *Neg-Raising reading*.

(6) Assertion: ¬ NRP (S)
Presupposition: NRP (S) ∨ NRP (¬S) (Gajewski 2005:14)
Therefore: NRP (¬S)

(7) Assertion: I don't think that she'll come.
Presupposition: I think that she'll come or I think that she won't come.
Therefore: I think that she won't come.

OUTLINE

The arguments against the semantic approach come from:

- ▶ Section 2: NPI Licensing
- ▶ Section 3: Progressive Aspect
- ▶ Section 4: Island Effect
- ▶ Section 5: Low Scope Negation

NPI Licensing

- Negated *Neg-Raising predicates* are able to license so-called Strong NPIs (e.g., until, in years) in their comPLements.

(8) a. Bill doesn't think Mary will leave **until** tomorrow.
    b. Mary doesn't believe Bill has left the country **in years**.
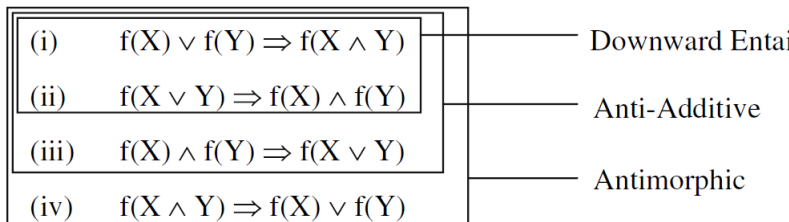   (Gajewski 2005:13)

NPI Licensing

- A negation above a *non-Neg-Raising predicate* (e.g., claim, regret, know) cannot license until/in years.

(9) a. *Bill didn't claim/regret/know that Mary would arrive **until** tomorrow.
   b. *Mary didn't claim/regret/know that Bill had left the country **in years**.
   (Gajewski 2005:13)

NPI Licensing

- ▶ The licensing of NPI depends on the logical properties of the environment in which an NPI occurs, as opposed to c-commanding licensers. (Gajewski 2005, 2007; Zwarts 1996, among others)

(10) Strength of Negation (Zwarts 1998)

(i)	$f(X) \vee f(Y) \Rightarrow f(X \wedge Y)$	Downward Entai
(ii)	$f(X \vee Y) \Rightarrow f(X) \wedge f(Y)$	Anti-Additive
(iii)	$f(X) \wedge f(Y) \Rightarrow f(X \vee Y)$	Antimorphic
(iv)	$f(X \wedge Y) \Rightarrow f(X) \vee f(Y)$	

NPI Licensing

- Gajewski (2007) proposes that negated *Neg-Raising predicates* provide Anti-Additive environment.
- That's why negated they license Strong NPI.

(11) not NPR $(\text{P})(\text{x})$ and not NPR $(\text{Q})(\text{x}) \implies$ not NRP$(\text{P}\vee\text{Q})(\text{x})$ (Gajewski 2005:13)

NPI Licensing

- Examples (12) and (13) shows the contrast between *Neg-Raising predicates* and *non-Neg-Raising predicates* in terms of providing Anti-Additivity.

(12) John doesn't think Mary left and John doesn't think Bill left. $\Rightarrow$ John doesn't think Mary left or Bill left

(13) John isn't certain that Mary left and John isn't certain that Bill left. $\nRightarrow$ John isn't certain that Mary left or Bill left. (Gajewski 2005:13)

NPI Licensing

- Under syntactic approach, NPIs needs a clause-mate negation to be licensed.(Lakoff 1969, Progovac 1994)
- The interaction of NPIs and *Neg-Raising predicates* is pointed to as an argument in favor of the syntactic theory of Neg-Raising.
- The negation occurring above a *Neg-Raising predicates* is base-generated in the embedded clause, as a clausemate with *until* and *in years*.

(14) a. Bill does NEG think Mary will <NEG> leave **until** tomorrow.
b. Mary does NEG believe Bill has <NEG> left the country **in years**.

Persian Super Strong NPI

- ▶ Some NPIs like *aslan* and *abadan* in Persian which seem to need a stronger negative environment than Anti-Additivity.
- ▶ Examples in (15) and (16) show that the Anti-Additive contexts fail to license such NPIs.

(15) *eddeye kami   **aslan(abadan)** dars xundan.
      group-EZ few-INDF at-all   lesson studied-3PL
      'few people studied their lessons at all.'

(16) *hameye kasayi   ke **aslan(abadan)**
      all-EZ   person-PL-INDF that at-all
      didanesh,   dustesh darand.
      see.PST-3PL-her, like-her have-3PL
      'all people who have ever seen her,like her.'

Persian Super Strong npi

- ▶ These npis are only licensed in an Anti-Morphic context which can be provided by *not* or *without*.

(17) Sara **aslan(abadan)** dars naxund.
Sara at-all lesson neg-studied
' Sara didn't study her lessons at all.'

(18) Bedoone in-ke **aslan(abadan)** dars xunde
Without this-that at-all lesson studied-perf
bashe, dar emtehan sherkat kard.
be-3sg in exam participate did
' She participated in exam without studying at all.'

Persian Super Strong npi

- (19) shows that negated *Neg-Raising predicates* do not provide Anti-Morphic context.

(19) not $\mathrm{NRP}(P \wedge Q)(x) \nRightarrow$ not NPR $(P)(x) \vee$ not NPR $(Q)(x)$
      John doesn't think Mary left and Bill left $\nRightarrow$ John doesn't think Mary left or John doesn't think Bill left.

- However, *aslan* can still be licensed in the complement of a negated *Neg-Raising predicate*.

(20) doost nadaram   in   ettefagh **aslan(abadan)**
      like neg-have-1sg this event   at-all
      biofte.
      sub-fall-3sg
      'I don't like that this will happen at all.'

Persian Progressive Aspect

- One of the puzzles of Persian grammar is the incompatibility of Progressive Aspect with a clause-mate negation as shown in (21).

(21) Man (*na)daram   shir (*ne)mixoram
     I   NEG-have.1SG milk NEG-IMPF-eat-1SG
     'I am not drinking milk.'

Persian Progressive Aspect

- ▶ The example in (22) demonstrates that Progressive Aspect can tolerate the existence of negation in the matrix clause.

(22) Man nagoftam   daram   dars   mixunam.
      I   NEG-said-1SG have-1SG lesson IMPF-study-1SG
      'I didn't say that I'm studying.'

Persian Progressive Aspect

▶ Progressive aspect is not felicitous under negated *Neg-Raising predicates*.

(23) *Man fekr nakonam Ali dare dars
     I   think neg-did-3sg Ali have-3sg lesson
     mixune
     impf-study-3sg
     'I didn't think that Ali is studying.'

Persian Progressive Aspect

- ▶ Ungrammaticality of Progressive Aspect is not related to Anti-Additive environment they appear in.
- ▶ Examples in (24) and (25) show that Progressive Aspect is perfectly fine in Anti-Additive contexts.

(24) eddeye kami   daran   dars mixunan.
     group-EZ few-INDF have-3PL lesson IMPF-study-3PL
     'few people are studying their lessons at all.'

(25) hameye kasayi   ke   darand
     all-EZ person-PL-INDF that have-3PL
     mibinanesh,   dustesh darand.
     IMPF-see.PST-3-her,   like-her have-3PL
     'all people who are watching her,like her.'

Persian Progressive Aspect

- If we consider Progressive Aspect in Persian as an instance of PPI, it has to be a Super Strong PPI which is only sensitive to Anti-Morphic environment.

- We saw that negated *Neg-Raising predicates* do not provide Anti-Morphic environment.

Island Effect

▶ Collins and Postal (2014) support a syntactic treatment of Neg-Raising by showing that this phenomenon is subject to Island constraints.

(26) a. *I don't believe the rumor that Tom has found the solution **yet**.
b. *I don't think Tom has found the solution **yet** and is a reliable chap.
(Collins & Postal 2014:103)

Island Effect

▶ Persian data also show the same sensivity to island constraints.

(27) *Man in raftar   ke   **hič-vaqt** ba-haš   dargir
     I   this behavior that any-time with-him quarrel
     beši   ro pišnehad nemikonam.
     SUB-get-2SG ro suggest   NEG-IMPF-do-1SG

     I don't suggest the behavior that you ever quarrel with him.

(28) *Man fekr   nemikonam   Nima maqale ro
     I   thought NEG-IMPF-do-1SG Nima article ra
     xunde   va **hičči**   nevešt-e.
     read-PERF and anything wrote-PERF

     I don't think Nima has read the article and has written anything.

Island Effect

- ▶ Some might argue that in these constructions the NPI is no longer in the domain of Anti-Additive operator and that's why they cannot be licensed.

- ▶ *Neg-Raising predicates* in Persian can take as their complement an embedded proposition which is syntactically in form of a complex NP.

- ▶ (30) shows that these constructions are still Anti-Additive with respect to their complement propositions.

Island Effect

(29) not NPR (P)(x) and not NPR (Q)(x) $\implies$ not NRP(P∨Q)(x)

(30) Zahra in ke Ali bere ro doost nadare ∧
Zahra this that Ali SUBgo-3SG ro like NEG-have-3SG ∧
Zahra in ke Ehsan bere ro doost
Zahra this that Ehsan SUBgo-3SG ro like
nadare $\implies$ Zahra in ke Ali bere ∨ in
NEG-have-3SG $\implies$ Zahra this that Ali SUBgo-3SG ∨ this
ke Ehsan bere ro doost nadare
that Ehsan SUBgo-3SG ro like NEG-have-3SG

Zahra doesn't like that Ali leaves and Zahra doesn't like
that Ehsan leaves $\Rightarrow$ Zahra doesn't like that Ali leaves or
that Ehsan leaves.

Island Effect

- The data in (31) shows that being in an Anti-Additive context of negated *Neg-Raising predictes* still cannot rescue *aslan* which is trapped in an island.

(31) *oona in ke Ali **aslan(abadan)** be mehmooni
  They this that Ali at-all   to party
  biyad   ro doost nadaran.
  SUB-come-PST.3SG ra like NEG-have-3PL
  'They don't like that Ali would come to the party.'

Low Scope Negation

- ▶ Based on the formula of the Excluded Middle Presupposition, negation must take a wide scope over the embedded proposition.

(32) Excluded Middle Presupposition: NRP (P) ∨ NRP (¬P)

- ▶ The data in (33) shows that negation can have a narrow scope with respect to the indefinite object *ye ketab* "a book".

Low Scope Negation

Scenario: Someone tells me that Ali has to read 5 books for his exam. I don't have any idea what books he has to read. But I know that it take 45 minute to 1 hour for Ali to read a book. I learn that Ali has started reading books 3 and a half hours ago. Considering Ali's speed in reading a book, I know that there is at least one book that he didn't have time to read.

(33) fek   nemikonam   Ali ye ketabo xunde
     thought NEG-IMPF-did-1SG Ali a book-ra studied
     bashe.
     SUB.be-3SG

     'I don't think that Ali read a book.' (meaning: I think there is a book that Ali didn't read.)

Low Scope Negation

- The indefinite has a *de dicto* (non-specific and opaque) reading with respect to the attitude verb. So, it has to remain under the scope of attitude verb.

- The low scope of negation is not because the indefinite obligatorily has a narrow scope with respect to the negation. The sentence in (34) is ambiguous.

(34) Ali ye ketabo naxund.   NEG > a book; a book >
      Ali a book-ra NEG-studied
      NEG

      Ali didn't read a book.

Conclusion

▶ The semantic approach does not predict Super Strong NPIs which need Anti-Morphic environment to be licensed under *Neg-Raising predicates*.

▶ The semantic approach does not predict Super Strong PPIs which are sensitive to Anti-Morphic environment to be ungrammatical under *Neg-Raising predicates*.

▶ A purely semantic phenomenon is not expected to be subject to syntactic constraints.

▶ The low scope negation cannot be accounted for by the excluded middle presupposition.

Thank You!