Seminar für Sprachwissenschaft
EBERHARD KARLS UNIVERSITÄT TÜBINGEN

Negation, Polarity, N-words

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Seminar für Sprachwissenschaft

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Expressing negation

(1) John bought the book.

$bought(j, b)$

(2) a. John did not buy the book. (*negative marker*)

$\neg bought(j, b)$

b. Nobody bought the book. (*n-word: bare noun*)

$\neg \exists x[person(x) \wedge bought(x, b)]$

c. John bought no book. (*n-word: determiner*)

d. John never bought that book. (*n-word: adverb*)

Overview

1. Negation and Polarity
2. Negative Concord
3. Tests for N-words (Romanian)

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Overview

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1. Negation and Polarity
2. Negative Concord
3. Tests for N-words (Romanian)

Negation and Polarity - Topics

1. Negative vs. positive polarity
2. NPI licensers
3. Downward entailing contexts
4. Degrees of polarity

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Polarity items

(3) a. John didn't buy any/ *some book.

$$\neg\exists x[book(x) \wedge bought(j,x)]$$

b. John didn't buy some book.

$$\#\neg\exists x[book(x) \wedge bought(j,x)]$$

$$\exists x[book(x) \wedge \neg bought(j,x)]$$

(4) a. *John bought any book. (*negative polarity*)

b. John bought some book. (*positive polarity*)

NPIs vs. PPIs

(5) a. *Anybody didn't buy the book.

b. Somebody didn't buy the book.

- NPIs: expressions that appear only in the scope of negation.
- PPIs: expressions that cannot appear in the scope of negation.

Examples of PPIs

(6) a. John has already fallen asleep.

b. * John hasn’t already fallen asleep.

(7) a. I would rather go to a club.

b. * I wouldn’t rather go to a club.

(8) a. He was pretty upset yesterday.

b. * He wasn’t pretty upset yesterday.

(9) a. He took some time off.

b. * He didn’t take some time off.

Examples of NPIs

(10) a. John hasn't fallen asleep yet.
b. * John has fallen asleep yet.

(11) a. He wouldn't ever go to a gay club.
b. * He would ever go to a gay club.

(12) a. He wasn't upset at all yesterday.
b. * He was upset at all yesterday.

(13) a. He didn't take any time off.
b. * He took any time off.

(14) a. He didn't lift a finger to help me.
b. * He lifted a finger to help me.

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NPI licensers

- Negative contexts:

(15) a. He didn't recognize anybody.

b. Nobody recognized anybody.

c. I doubt he recognized anybody there.

- Quantifiers:

(16) Few people ever saw her happy.

NPI licensers

- If-clauses:

(17) If anybody calls me, tell them I'm away.

- Yes/ No questions:

(18) Did he leave anything for me?

Monotonicity - a formal definition

- Upward monotonicity (UM)
  A function f of type $< \sigma, \tau >$ is upward monotone iff for all x, y of type σ such that x $\Rightarrow$ y: f(x) $\Rightarrow$ f(y).
- Downward monotonicity (DM)
  A function f of type $< \sigma, \tau >$ is downward monotone iff for all x, y of type σ such that x $\Rightarrow$ y: f(y) $\Rightarrow$ f(x).
- Upward entailing (UE) expressions denote UM functions; Downward entailing (DE) expressions denote DM functions.

NPI licensers and DE

- Ladusaw (1980): NPIs are acceptable only if they are interpreted in the scope of a DE expression

(19) a. John ran fast. $\rightarrow$ John ran.

b. Nobody ran. $\rightarrow$ Nobody ran fast.

c. Nobody ran fast. $\nrightarrow$ Nobody ran.

(20) a. I doubt that John ran. $\rightarrow$ I doubt that John ran fast.

b. I doubt that John ran fast. $\nrightarrow$ I doubt that John ran.

NPI licensers and DE

(21) a. Few people run. $\rightarrow$ Few people run fast.

b. Few people run fast. $\not\rightarrow$ Few people run.

(22) a. If John runs, I will come. $\rightarrow$
If John runs fast, I will come.

b. If John runs fast, I will come. $\not\rightarrow$ If John runs, I will come.

- See von Fintel (1999) for a critical view on if-clauses as DE.

NPI licensers and DE - questions

The meaning of a question = the set of propositions which constitute its true and complete answer (cf. Karttunen (1977)).

(23) a. Did John run? (Yes) $\nrightarrow$ Did John run fast?

b. Did John run fast? (Yes) $\rightarrow$ Did John run?

- Ladusaw (1980)'s answer: pragmatics.

(24) Did John find some/ any unicorns in the garden?

NPI licensers and DE - questions

- NPI: the answer is expected to be negative.
- PPI: the answer is expected to be positive.

(25) a. Did John run? (No.) $\rightarrow$ Did John run fast?

b. Did John run fast? (No.) $\nrightarrow$ Did John run?

- Ladusaw (1980)'s principle:
  S should pose the question q only when he believes it to be possible for H to express its denotation set without major revision of the form of the question.
- See van Roy (2003) for a detailed view on questions as DE.

Degrees of Polarity

- Van der Wouden (1997): degrees of polarity wrt the kind of negative context.
- Negative contexts defined with respect to De Morgan's Laws:

(26) a. $\neg(X \cap Y) = \neg(X) \cup \neg(Y)$

b. $\neg(X \cup Y) = \neg(X) \cap \neg(Y)$

Negative Contexts - Van der Wouden (1997)

(27) a. Downward entailing: *few*, *at most three*, *hardly*

$$X \subseteq Y \rightarrow f(Y) \subseteq f(X)$$

b. Anti-additive: *nobody*, *never*, *nothing*

$$f(X \cup Y) = f(X) \cap f(Y)$$

c. Antimorphic: *not*, *not the teacher*

$$f(X \cap Y) = f(X) \cup f(Y)$$
$$f(X \cup Y) = f(X) \cap f(Y)$$

NPIs and PPIs

- A classification of NPIs/ PPIs in terms of (in)compatibility with different negative contexts:

Negation	NPI			PPI		
	strong	medium	weak	strong	medium	weak
DE	–	–	+	–	+	+
Anti-additive	–	+	+	–	–	+
Antimorphic	+	+	+	–	–	–

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Examples of NPIs

(28) a. [Chomsky was**n't**/ ***No one** was/ ***At most three linguists** were] a bit happy about these facts.

b. [Chomsky did**n't** talk/ **No one** talked/ ***At most three linguists** talked] about these facts yet.

c. [Chomsky did**n't** talk/ **No one** talked/ **At most three linguists** talked] about any of these facts.

	not	no one	at most
a bit	ok	*	*
yet	ok	ok	*
any	ok	ok	ok

Examples of PPIs

(29) a. [*Someone has**n't**/ ***No one*** has/ ??**Hardly anyone** has/ ?**Few people** have] eaten some of the soup.

b. [*John has**n't**/ ***No one*** has/ ?**Hardly anyone** has/ **Few people** have] already finished the exam.

c. [*John would**n't**/ ***No one*** would/ **Hardly anyone** would/ **Few people** would] rather be in Cleveland.

	not	no one	hardly	few
some	*	*	??	?
already	*	*	?	ok
rather	*	*	ok	ok

Negation and Polarity - Topics

1. Negative vs. positive polarity √
2. NPI licensers √
3. Downward entailing contexts √
4. Degrees of polarity √

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Expressing negation in natural language

(30) a. John did not buy the book.

$\neg bought(j, b)$

b. Nobody bought the book.

$\neg \exists x[person(x) \wedge bought(x, b)]$

(31) a. Ion **nu** a cumpărat cartea. (Romanian)
John NM has bought book-the

b. **Nimeni nu** a cumpărat cartea.
Nobody NM has bought book-the

What are n-words?

- The term comes from Laka (1990): for Spanish words expressing negation.
- Examples: nadie (nobody), nada (nothing), ningun (no), but also apenas (hardly).
- Used for words expressing negation, different from the sentential operator (e.g. English not), usually referred to as negative marker (NM).
- Include:
  - bare nouns and adverbs: nobody, nothing, never, nowhere;
  - determiners: no

Negative concord - topics

1. Language typology
2. The compositionality problem
3. Two options and their motivation
4. The NEG approach
5. The NonNEG approach

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Language typology

- The Law of Double Negation

  $\neg\neg p \leftrightarrow p$

(32) a. Nobody didn't buy the book.

b. $\neg\exists x[person(x) \wedge \neg bought(x, b)]$

c. Everybody bought the book.

d. $\forall x[person(x) \rightarrow bought(x, b)]$

(32a) $\leftrightarrow$ (32c); (32b) $\leftrightarrow$ (32d)

- English = a double negation (DN) language.

Language typology

(33) a. **Nimeni nu** a cumpărat cartea.
Nobody NM has bought book-the
'Nobody bought the book.'
'Everybody bought the book.'

b. $\neg\exists x[person(x) \wedge bought(x, b)]$

- Romanian = a negative concord (NC) language.

Other DN languages

- German

(34) **Niemand** hat das Buch **nicht** gekauft.
nobody has the book not bought
'Nobody didn't buy the book./ Everybody bought the book.'

- Dutch

(35) Frank heeft **niet niemand** gezien.
Frank has not nobody seen
'Frank didn't see nobody./ Frank saw somebody.'

Other NC languages

- Non-standard English

(36) Maria didn't say nothing to nobody.
'Maria didn't say anthing to anybody.'

- Slavic

(37) a. Meri **ne** kaza **nishto** na **nikogo**. (Bulgarian)
Mary not said nothing to nobody

b. Marija **nikomu niczogo ne** skazala. (Ukrainian)
Mary nobody nothing NM said

Other NC languages

- Romance

(38) a. Mario **non** a visto **nessuno**. (Italian)
Mario NM has seen nobody
'Mario didn't see anybody.'

b. Pedro **no** a visto a **nadie**. (Spanish)
Peter NM has seen A nobody

- Greek

(39) **Dhen** agorasa **kanena** vivlio.
NM bought no book
'I didn't buy any book.'

Strict vs. non-strict NC

- Romance - non-strict NC

(40) a. Mario *(**non**) a visto **nessuno**. (Italian)
Mario NM has seen nobody
'Mario didn't see anybody.'

b. **Nessuno** (***non**) a visto **nessuno**.
nobody NM has seen nobody
'Nobody saw anybody.'

Strict vs. non-strict NC

- Slavic - strict NC

(41) a. Marysia *(**nie**) dała **niczego** Piotrowi. (Polish)
Mary NM gave nothing Peter
'Mary didn't give anything to Peter.'

b. Marysia **nigdy** *(**nie**) dała Jasiowi książki.
Mary never NM gave John book
'Mary has never given a book to John.'

The case of Romanian

(42) a. **Nimeni** *(**nu**) citeşte **nimic**.
nobody NM reads nothing
'Nobody reads anything.'

b. Acest articol, *(**ne**)citat de **nimeni**, a rămas
this article not-cited by nobody has remained
uitat.
forgotten
'This article, which hasn't been cited by anybody, was forgotten.'

c. Acest articol, de **nimeni** (***ne**)citat, a rămas
this article by nobody not-cited has remained
uitat.
forgotten

The Principle of Compositionality

- The Principle of Compositionality (Frege)

  The meaning of a compound expression is a function of the meanings of its parts. (cf. Janssen (1997))

(43) a. Every student read a book.

b. $\forall x[student(x) \rightarrow \exists y[book(y) \wedge read(x,y)]]$

c. $\exists y[book(y) \wedge \forall x[student(x) \rightarrow read(x,y)]]$

NC and compositionality

- NC - a problem for ‘Frege’s principle’:

(44) a. Mario **non** a visto **nessuno**. (Italian)
Mario NM has seen nobody

$$\#\neg\neg\exists x[person(x) \wedge saw(m,x)]$$
$$\neg\exists x[person(x) \wedge saw(m,x)]$$

b. Mario **non** a visto Gianni.
Mario NM has seen John

$$\neg saw(m,g)$$

- The solution should be looked for in n-words!

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Two options: negative/ non-negative

1. N-words are negative quantifiers (like in DN languages). (*The NEG Hypothesis*)
   - NC interpreted via an operation of absorption:

     (45) a. $[\neg][\neg\exists x] \rightarrow [\neg\exists x]$

     b. $[\neg\exists x][\neg\exists y] \rightarrow [\neg\exists x, y]$
   - In: Zanuttini (1991), Haegeman (1995), De Swart and Sag (2002), Richter and Sailer (2003) and others.
2. N-words are non-negative. (*The NonNEG Hypothesis*)

N-words as non-negative

- N-words are just a (special) kind of NPIs.

(46) a. Mario **non** a visto **nessuno**.
Mario NM has seen nobody
'Mario didn't see anybody.'

b. nessuno = anybody (an existential quantifier)

- In: Ladusaw (1992), Déprez (1997), Richter and Sailer (1999), Giannakidou (2002), among others.

Arguments for NEG

- Express negation:

(47) a. **Nessuno** e venuto.
nobody has come
'Nobody came.'

b. Chi a telefonato? **Nessuno**.
who has called nobody
'Who called? Nobody.'

c. E înalt ca **nimeni** altul.
is tall like nobody else
'He is tall like nobody else.'

d. **Personne** (n')a **rien** fait. (French)
nobody (NM)'has nothing done
'Nobody did nothing.' (DN)
'Nobody did anything.' (NC)

Arguments for NEG

- Appear in contexts where NPIs are excluded:

(48) a. *Anybody came.
b. Who called? *Anybody.

- In DE contexts - not always possible:

(49) Pochi capiscono **alcunché**/ ***niente** di logica.
few understand anything/ nothing about logic

- The almost test:

(50) a. * **Non** a detto *quasi* **alcunché**.
NM has said almost anything

b. **Non** a detto *quasi* **niente**.
NM has said almost nothing

'He said almost nothing.'

c. * He didn't say almost anything.

Versions of a NEG analysis

- Model: multiple Wh-questions

  (51) Who loves who?

  $WHx, y[love(x, y)]$

  'Which pair of individuals (x,y) are members of the love relation?'

- The NEG-criterion (Zanuttini (1991)) - the WH-criterion (Rizzi)
  - There is a Neg(ative)P(hrase), with Neg^0[NEG].
  - N-words move to [Spec,NegP].
  - A rule of NC: quantifi er absorption, negation factorization.

    $[\forall x \neg][\forall y \neg] \rightarrow [\forall x, y]\neg$

    $[\forall x \neg][\neg] \rightarrow [\forall x]\neg$

Versions of a NEG analysis

- Polyadic quantifiers (De Swart and Sag (2002)):
  - function application:
    $[NO^{Human}\, NO^{Human}](love)$
    $\neg\exists x\neg\exists y[love(x,y)]$ (DN)
  - resumption:
    $NO^{Human\times Human}(love)$
    $\neg\exists x\exists y[love(x,y)]$ (NC)
- The Negation Complexity Constraint (Richter and Sailer (2003))
  - subject to language variation.
  - NC languages: only one negation per ‘sign’.
  - French: at most two negations (DN).

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Arguments for NonNEG

- Obligatory licensing:

(52) a. *(**Non**) ho visto **nessuno**.
NM have seen nobody

b. I did *(**not**) see anybody.

- Other DE contexts, without negative meaning:

(53) a. A telefonato **nessuno**?
has called nobody
'Has anybody called?'

b. Mi domando se verrà **nessuno**.
me ask if will-come nobody
'I wonder whether anybody will come.'

NonNEG analyses

Ladusaw (1992): Romance and (NS) English

- NPIs = heimian indefinites (cf. Heim (1982)) that are existentially bound via roofing at some point in the interpretation;
- heimian indefinite= a variable plus descriptive content, but no quantificational/ referential force; needs to be bound by some operator.

(54) a. If a man owns a donkey, he always beats it.
'For every man and every donkey such that the former owns the latter, he beats it.'

b. Sometimes, if a cat falls from the fi fth floor, it survives.
'Some cats that fall from the fi fth floor survive.'

NPIs in Ladusaw (1992)

- roofing: no operator may intervene between the heimian indefinite and its binder (roof):

  (55) a. Meg didn't read every book to a student.

  b. $\neg(\forall x : book(x))(\exists y : student(y))[read(m, x, y)]$

  c. Meg didn't read every book to any student.

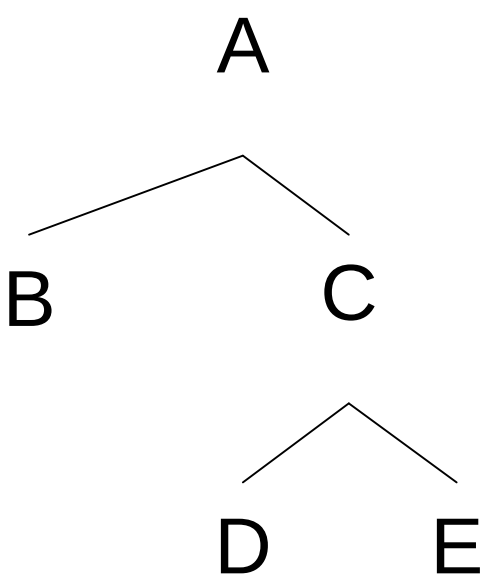
- NPIs = heimian indefinites
  - Logical form (lf) condition: roofed by DE operators;
  - Syntactic condition: need to be c-commanded by their binder:

    (56) a. *Anybody he didn't see.

    a. He didn't see anybody.

C(onstituent)- command

- Node A c-commands node B iff:
  1. neither dominates the other, and
  2. every (branching) node dominating A also dominates B



N-words in Ladusaw (1992)

- N-words = NPIs
  - If condition: roofed by anti-additive operators.

    (57) anti-additive functions:

    A function f is anti-additive iff $f(X \vee Y) \Leftrightarrow f(X) \wedge f(Y)$.
  - syntactic condition: an overt (NM) or abstract operator.

    (58) a. *She gave nothing to nobody.

    b. She didn't give nothing to nobody.

The `abstract` operator

(59) a. *She gave nothing to nobody.

b. Nobody said nothing.

c. *Ho visto nessuno.

d. Nessuno e venuto.

- It is constructional: a [neg] feature.
- It is licensed by an n-word which is in the right configuration wrt the head of the sentence.

How come an n-word licenses the operator by which it will be licensed?!

Other issues

- Strict NC languages do not pose the problem of an abstract operator.
- Is it so simple: n-words = indefinites?
- If non-negative, what are n-words?

(60) a. Non ho visto nessuno.

b. $\neg\exists x[human(x) \wedge saw(I,x)] \leftrightarrow$
$\forall x[human(x) \rightarrow \neg saw(I,x)]$

- existential quantifiers?
- universal quantifiers?
- heimian indefinites?

Negative concord - topics

1. Language typology √
2. The compositionality problem √
3. Two options and their motivation √
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What are n-words

(61) a. Non ho visto nessuno.

b. $\neg\exists x[human(x) \wedge saw(I,x)] \leftrightarrow \forall x[human(x) \rightarrow \neg saw(I,x)]$

- existential quantifiers?
- universal quantifiers?
- heimian indefinites?
- negative quantifiers?

The status of n-words - topics

1. Tests for n-words: Giannakidou (2002)
2. Locality
3. Existential commitment
4. Almost-modification
5. Donkey anaphora
6. Negative content and double negation

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Existential quantifiers - heimian indefinites

- Heimian indefinites: varying Q-force.
- N-words: only bound by a negative operator:

(62) a. *Uneori/ de obicei*, (cînd e supărat), Ion **nu** vorbeşte cu **nimeni**.
sometimes/ of habit when is upset, John NM speaks with nobody.

b. 'Sometimes/ usually, when he is upset, John doesn't speak to anybody.'

- Even if heimian indefinites, n-words end up only interpreted as existential quantifiers.

Hypotheses for n-words

- Existential quantifiers. (E)
- Universal quantifiers. (U)
- Negative quantifiers. (N)

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Locality - long distance

- Giannakidou (2002):
  Long distance and syntactic island licensing:

  Existential quantifiers: Yes

  Universal quantifiers: No

(63) a. Mary told a student that she bought every book.
   i. $\exists > \forall$ ii. $*\forall > \exists$

b. Mary told every student that she bought a book.
   i. $\forall > \exists$ ii. $\exists > \forall$

Long distance n-words

(64) a. **Nu** ţi-am cerut să aduci **nimic**.
NM CL-have asked SUBJ bring nothing
'I didn't ask you to bring anything.'

b. * **Nu** am zis că am adus **nimic**.
NM have said that have brought nothing
'I didn't say that I brought anything.'

- N-words - like universals.

Locality - syntactic islands

(65) a. He revealed a secret [that exposed every student].

i. $\exists > \forall$ ii. $*\forall > \exists$

b. He revealed a secret [because every student had asked him to].

i. $\exists > \forall$ ii. $*\forall > \exists$

(66) a. He revealed every secret [that exposed a student].

i. $\forall > \exists$ ii. $\exists > \forall$

b. He revealed every secret [because a student had asked him to].

i. $\forall > \exists$ ii. $\exists > \forall$

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N-words - syntactic islands

(67) a. **Nu** am dezvăluit secrete [care au expus pe
NM have revealed secrets that have exposed PE
***nimeni**/ cineva].
nobody/ anybody
'I didn't reveal secrets that exposed anybody.'

b. **Nu** am spus asta [pentru că mi-o ceruse ***nimeni**/
NM have said this because CL-CL asked nobody/
cineva].
anybody
'I didn't say that because anybody had asked me to
(but because I wanted to.)'

- N-words - like universals.

Existential commitment

- Giannakidou (2002):
  Obligatory existential commitment:

  Existential quantifiers: No

  Universal quantifiers: Yes

(68) a. # John saw every unicorn.

b. John saw a unicorn.

c. # John didn't see every unicorn. Unicorns don't even exist.

d. John didn't see any unicorn. Unicorns don't even exist.

N-words - existential commitment

(69) a. Ion **nu** a văzut **nici un** unicorn. Nici nu
John NM has seen no unicorn neither NM
există unicorni.
exist unicorns
'John didn't see any unicorn. Unicorns don't even exist.'

- N-words - like existentials.

Opaque contexts

- Richter and Sailer (1999):

  De dicto reading: U: No
  E: Yes

(70) a. John seeks a unicorn.

b. There is a unicorn and John seeks it. (de re)
$\exists x[unicorn(x) \wedge seek(j,x))]$

c. John is a unicorn-seeker. (de dicto)
$seek(j, \lambda P \exists x[unicorn(x) \wedge P(x)])$

(71) a. John seeks every unicorn.

b. $\forall x[unicorn(x) \rightarrow seek(j,x))]$ (de re)

c. # de dicto

N-words - opaque contexts

(72) a. Ion **nu** caută **nici un** unicorn.
John NM seeks no unicorn

b. There is no unicorn such that John seeks it. (de re)

c. John is not a unicorn-seeker. (de dicto)

- N-words - like E.

Almost-modification

- Zanuttini (1991), Giannakidou (2002):

  Almost-modification: U: Yes
  E: No

(73) a. They bought almost everything in that shop.

b. * They didn't buy almost anything in that shop.

c. They bought almost **nothing** in that shop.

(74) a. **N**-a cumpărat aproape **nimic**.
NM-has bought almost nothing

- N-words - like U.

Donkey anaphora

- Richter and Sailer (1999), Giannakidou (2002): Binding pronouns outside their own clause:
  - U: No
  - E: Yes

(75) Studenţii care au cumpărat o/ *fi ecare carte$_i$,
students-the who have bought a/ every book
s-o$_i$ aducă cu ei.
SUBJ.-it bring with them
'The students who bought a/ *every book$_i$ should bring it$_i$ with them.'

N-words - donkey anaphora

(76) * Studenţii care **n-**au cumpărat **nici o** carte$_i$,
students-the who NM-have bought no book
s-o$_i$ aducă cu ei.
SUBJ.-it bring with them
'The students who bought no book$_i$ should bring it$_i$ with them.'

(77) * Studenţii care **n-**au cumpărat o carte$_i$,
students-the who NM-have bought no book
s-o$_i$ aducă cu ei.
SUBJ.-it bring with them
'The students who didn't buy a book$_i$ should bring it$_i$ with them.'

Dynamic binding across negation

(78) a. Ori **nu** există baie$_i$ în casa asta, ori au
either NM exists bathroom in house this, either have
construit-o$_i$ într-un loc ciudat.
built-it in-a place strange
'Either there doesn't exist a bathroom in this house, or they built it in a strange place.'

b. Ori **nu** există **nici o** baie$_i$ în casa asta, ori
either NM exists no bathroom in house this, either
au construit-o$_i$ într-un loc ciudat.
have built-it in-a place strange
'Either there is no bathroom in this house, or they built it in a strange place.'

Dynamic binding - universals

- Richter and Sailer (1999) - U is still *:

(79) * Ori a amuţit fi ecare cîine$_i$ de pe strada
either has become-silent every dog in street
asta, ori l$_i$-au alungat tunetele.
this, either it-have scared-away thunders-the
'Either every dog in this street has turned silent, or the thunders scared him away.'

But:

(80) * Ori **nici un** cîine$_i$ de pe strada asta **nu** mai latră,
either no dog in street this NM more barks
ori l$_i$-au alungat tunetele.
either it-have scared-away thunders.
'Either no dog in this street barks anymore, or the thunders scared him away.'

Dynamic binding - n-words

(81) a. * În grupa asta, ori **nici un** student$_i$ **nu** e
in group this, either no student NM is
inteligent, ori l$_i$-am buimăcit cu exemplele
intelligent, either him-have confused with examples
mele întortocheate.
mine crooked
'Either no student in this group is intelligent, or I confused him with my crooked examples.'

b. În grupa asta, ori **nu** e **nici un** student$_i$ inteligent,
in group this, either NM is no student intelligent,
ori l$_i$-am buimăcit cu exemplele mele
either him-have confused with examples mine
întortocheate.
crooked
'Either there is no intellingent student in this group, or I confused him with my crooked examples.'

Donkey anaphora - conclusion

- N-words bind outside their clause only if they are in an existential context.
- Universal quantifiers are forbidden in existential contexts (cf. Milsark (1974)).
- Milsark (1974): weak vs. strong quantifiers:

(82) a. There is a/ no/ *every dog in the street.
There are three/ many/ few/ some/ *most/ *all/ *the dogs in the street.

b. A/ no/ every dog in that street is intelligent.
Three/ many/ few/ some/ most/ all/ the dogs are intelligent.

N-words so far

	E	U	**n-words**
Locality	Yes	No	No
Existential commitment	No	Yes	No
Almost-modification	No	Yes	Yes
Donkey anaphora	Yes	No	Yes/ No

N-words as weak quantifiers

- Existential commitment:

(83) a. Ion n-a văzut *trei* unicorni. Nici nu există
John NM-has seen three unicorns. Neither NM exist
unicorni.
unicorns
'It's not true that John saw three unicorns. Unicorns don't even exist.'

b. Ion caută *trei* secretare.
John seeks three secretaries
i. 'There are three secretaries such that John is looking for them.' (de re)
ii. 'John has (three) vacant secretary-positions, and he's in search of (three) secretaries to fi ll them.' (de dicto)

N-words as weak quantifiers

- Locality:

(84) Mary told every student that she read three books.

i. $\forall > 3$ ii. $3 > \forall$

- Almost-modification: end-of-scale determiners.

(85) a. John read almost three books yesterday.

b. ??There were almost three people at the party.

c. There were almost three hundred people at the party.

- The weak quantifier hypothesis - consistent with the behaviour of n-words, except the locality test.

Negative quantifiers (in DN languages)

- Locality:

(86) Anne hat *jedem* Student gesagt dass sie **kein** Buch
Anne has every student said that she no book
gekauft hat.
bought has

'Anne told every student that she didn't buy any book.'

i. $\forall > \neg\exists$ ii. * $\neg\exists > \forall$

- Almost-modification:

(87) Sie hat fast **nichts** gekauft.
she has almost nothing bought

Negative quantifiers (in DN languages)

- Existential commitment:

(88) a. Hans hat **kein** Einhorn gesehen. Es gibt
Hans has no unicorn seen there give
gar keine Einhörner.
absolutely no unicorns
'Hans didn't see any unicorn. There are no unicorns at all.'

b. Hans sucht **kein** Einhorn.
Hans seeks no unicorn
i. 'There is no unicorn such that Hans is looking for it.
ii. Hans is not a unicorn-seeker.'

Latest results

- Dynamic binding:

(89) a. Either there is no bathroom$_i$ in this house, or it$_i$'s in a funny place.

b. * Either no dog$_i$ in that street barks at all, or it$_i$ is very quiet.

	E	U	WQ	N	**n-words**
Locality	Yes	No	Yes	No	No
Existential comm.	No	Yes	No	No	No
Almost-modif.	No	Yes	Yes	Yes	Yes
Donkey anaphora	Yes	No	Yes/No	Yes/No	Yes/No

Negative content

- Participial constructions:

(90) Acest articol, de **nimeni** citat, a rămas uitat.
this article by nobody cited has remained forgotten
'This article, which hasn't been cited by anybody, was forgotten.'

- Fragmentary answers:

(91) Cine era la uşă? **Nimeni**.
who was at door nobody
'Who was at the door? Nobody.'

Negative content

- Comparative structures:

(92) E înalt ca **nimeni** altul de la el din grupă.
is tall like nobody else from him from group
'He is tall like nobody else in his group.'

- DE contexts:

(93) Era cineva/ *__nimeni__ la uşă?
was anybody/ nobody at door

Double negation

(94) Acest articol, de **NIMENI ne**citat, a devenit foarte
this article by nobody not-cited has become very
cunoscut.
well-known

(95) a. Ion **nu** iubeşte pe **nimeni**.
John NM loves PE nobody
i. NC. ii. *DN.

b. **Nimeni nu** iubeşte pe **nimeni**.
nobody NM loves PE nobody
i. ?NC. ii. ?DN.

c. Aici **nu** iubeşte **nimeni** pe **nimeni**.
here NM loves nobody PE nobody
i. NC. ii. *DN.

Double negation - context

(96) a. A: Aceşti oameni **nu** iubesc pe **nimeni**, nici măcar
these people NM love PE nobody not even

pe ei înşişi.
PE them themselves

'These people don't love anybody, not even themselves.'

b. B: **Nimeni nu** iubeşte pe **nimeni**.
nobody NM loves PE nobody

i. *NC. ii. DN.

Conclusions (Romanian)

- If available (depending on the context), DN in a finite sentence appears only with 2 n-words (besides CN cases).
- In NC structures, the NM is a mere syntactic condition.
- N-words should be treated as a subclass of weak quantifiers, with a negative content.

The status of n-words - topics

1. Tests for n-words: Giannakidou (2002) √
2. Locality √
3. Existential commitment √
4. Almost-modification √
5. Donkey anaphora √
6. Negative content and double negation √

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Overview

1. Negation and Polarity √
2. Negative Concord √
3. Tests for N-words (Romanian) √

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