

Hybrid negative concord and quantifier-internal vs. clausal particles

Anna Szabolcsi, NYU
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- Hungarian has a hybrid (strict + non-strict) negative concord system (Surányi 2006). Somewhat modifying Zeijlstra (2004, 2008) and Chierchia (2013), I propose a unified analysis of that system. The sentential negation marker (nem) invariably expresses negation ¬. All NC items are existentials within the immediate scope of either syntactically-represented or abstract negation.
- The focus of the discussion will be on two types of particles. Those that precede their hosts form strict NC items. Those that follow their hosts form non-strict NC items. I argue that the former are quantifier-internal and the latter are heads on the clausal spine. Negative concord is related to positive polarity and weak negative polarity in Hungarian.

Setting the stage: Russian (strict NC), Italian (non-strict NC), Hungarian (hybrid)

(1) a.	Nikto	ne	videl	nichego.	* w/o <i>ne</i>	No one saw anything
(2) a.	Nessuno		ha visto	niente.	* with <i>non</i>	No one saw anything
(3) a.	Senki	nem	látott	semmit.	* w/o <i>nem</i>	No one saw anything
(4) a.	Senki sem		látott	semmit sem.	* with <i>nem</i>	No one saw anything
(1) b.	Marija	ne	videla	nichego.	* w/o <i>ne</i>	M didn't see anything
(2) b.	Maria	non	ha visto	niente.	* w/o <i>non</i>	M didn't see anything
(3) b.	Mari	nem	látott	semmit.	* w/o <i>nem</i>	M didn't see anything
(4) b.	Mari	nem	látott	semmit sem.	* w/o <i>nem</i>	M didn't see anything

Strict and non-strict NCs peacefully coexist in the same sentence:

- (5) a. Senki nem látott semmit (sem) soha (sem). 'No one ever saw anything'
 n-one not saw n-thing nor n-ever nor
- b. Senki sem látott semmit (sem) soha (sem). 'No one ever saw anything'
 n-one nor saw n-thing nor n-ever nor
- c. Mari nem látott semmit (sem) soha (sem). 'M didn't ever see anything'
 Mari not saw n-thing nor n-ever nor

A unified analysis is not yet available:

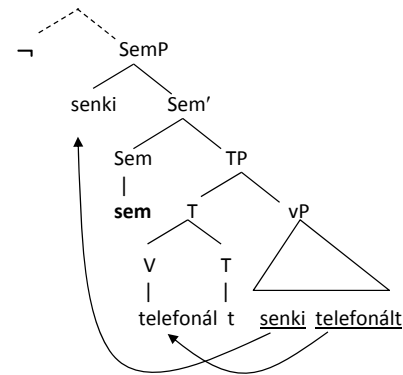
- (6) a. Surányi (2006: 272) "N-words in Hungarian can be semantically negative or non-negative, and both types are lexically ambiguous between a universally quantified and a non-quantificational interpretation."
 b. Zeijlstra (2004, 2008) predicts that such hybrid systems do not exist:
 English not, Dutch niet, Italian non ¬ vs. Czech, Russian ne [uNeg]

Proposal: Hung. SEM as in (4) is an analog of the Italian phonetically null negation head. Hungarian has no phonetically null negation head in syntax. (See Brody & Szabolcsi (2003) for the reiteration of operator head sequences below T.)

Hung. NEM as in (3), (4) is a head that invariably expresses ¬. Preverbal NCI is in the scope of ¬, because it is (remnant-) moved to nem's specifier.

Non-strict NC Chierchia for Italian ∅: O_{ALT} ¬ [nessuno_{[[+n-D]]} NEG_{[[+n-D]]} ha telefonato]
 Szabolcsi for Hung. sem: O_{ALT} ¬ [senki_{[[+n-D]]} sem_{[[+n-D]]} telefonált]

(7)

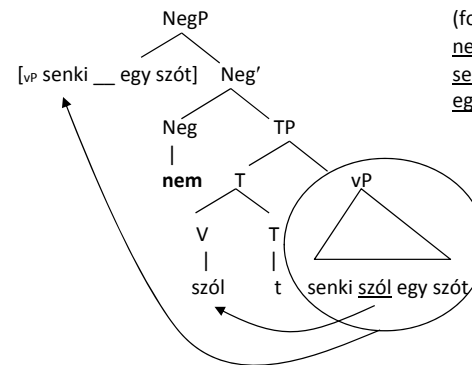


(fold in O_{ALT} for Chierchia)
sem, needs to have NCI in Spec and to be in the immediate scope of negation
senki, existential
 Abstract ¬ right above SemP-above-TP (same fseq that could have overt nem)

Strict NC NCI occurs in the specifier, and thus in the scope of, the Neg head nem. A quantifier in the spec of a higher head (Dist or Ref) would scope above nem.

- (8) SENKI egy SZÓT nem szólt. (after Zeijlstra, Surányi)
 n-one one word.acc not spoke
 'No one said a word'

(9)



(fold in O_{ALT} for Chierchia)
nem, ¬
senki, existential
egy szót, existential, minimizer

“Particle preceding host” is **quantifier-internal**.
 “Particle following host” is a **head on the clausal spine**.

Now focus on senki and senki sem. The main novel descriptive observation is that they are paralleled by two distinct ‘neither_nor’ constructions:

- (10) **Senki** nem aludt. ≈ **Sem** Kati **sem** Mari nem aludt. **strict NC**
 n-one not slept nor Kati nor Mari not slept PRT precedes host
- (11) **Senki sem** aludt. ≈ Kati **sem** (Mari **sem**) aludt. **non-strict NC**
 n-one nor slept Kati nor Mari nor slept PRT follows host

There are at least three **differences** between the two constructions.

Diff #1 “PRT precedes host” version **needs a pair**. “Host precedes PRT” version is **happy on its own**.

- (12) a.(*) **Sem** Kati nem aludt. only as ‘Nor did Kate sleep’
 nor K not slept.
 b.* Nem aludt **sem** Kati.
 not slept nor K
- (13) a. Kati **sem** aludt. ‘K didn’t sleep, either’
 K nor slept
 b. Nem aludt Kati **sem.** ‘K didn’t sleep, either’
 not slept K nor

Other particles with the same behavior:

(14) “Particle precedes host”

- a. sem Kati sem Mari ‘neither K nor M’ (strict NC)
 b. mind Kati mind Mari ‘K as well as M’ lit. ‘all K all M’
 c. vagy Kati vagy Mari ‘either K or M, not both’
 d. akár Kati akár Mari ‘whether/either K or M’

(15) “Particle follows host”

- a. Kati sem (Mari sem) ‘neither K nor M’ (non-strict NC)
 b. Kati is (Mari is) ‘K as well as M’ lit. ‘K too (M too)’

Analysis to be proposed:

- (16) a. The particle that precedes its host within a pair (n-tuple) is a phrase-internal particle, much like the sen-/sem- component of the n-words senki and semmi.
 b. The particle that follows its host is a head on the clausal spine, cf. sem in (7). When we don’t see two clauses, ellipsis is involved.

Diff #2 The tuples in both series optionally contain overt connectives, but **different connectives**.
Pedig and és are not interchangeable.

(17) “Particle precedes host”

- a. sem Kati sem (**pedig**) Mari ‘neither K nor M’ (strict NC)
 b. mind Kati mind (**pedig**) Mari ‘K as well as M’
 c. vagy Kati vagy (**pedig**) Mari ‘either K or M, not both’
 d. akár Kati akár (**pedig**) Mari ‘whether/either K or M’

(18) “Particle follows host”

- a. Kati sem (**és**) Mari sem ‘neither K nor M’ (non-strict NC)
 b. Kati is (**és**) Mari is ‘K as well as M’

Hungarian és ‘and’ as a mere pair-forming operator (Szabocsi 2015). The connective pedig that occurs in second position in the last conjunct/disjunct is somewhat contrastive, similarly to Russian a. It is better characterized as a marker of a completed list of partial answers to a question under discussion. (I thank M. Esipova for discussion on this point.)

Diff #3 Particles preceding hosts **form quantifier words** with indeterminate pronouns:

(19) “Particle precedes host”

- a. senki, semmi, sehöl ‘no one, nothing, nowhere’
 b. mindenki, minden(*mi), mindenhol ‘everyone, everything, everywhere’
 c. valaki, valami, valahol ‘someone, something, somewhere’
 d. akárki, akármi, akárhol ‘whoever, whatever, wherever’

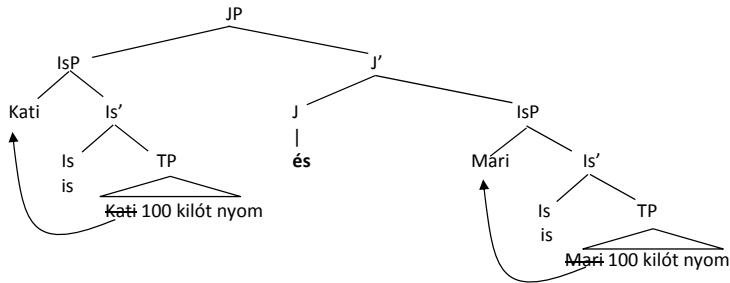
(20) “Particle follows host”

- a. (not distinguishable from (19a))
 b. * iski, ismi, ishol

Szabolcsi (2015) discussed is-type particles in detail, and the analysis proposed here is compatible with that discussion. The existence of mind-type particles was also recognized, but left as a puzzle (2015: 183-84):

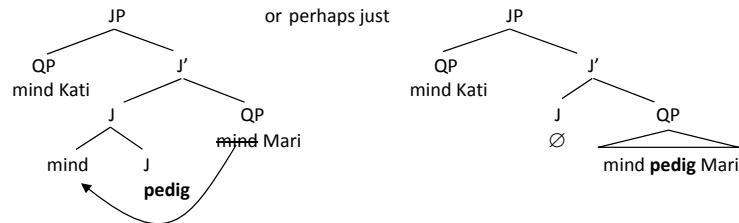
- (21) a. **mind**-en-ki dare-**mo** ‘everyone/anyone’
 b. **mind** A **mind** B } A **mo** B **mo** ‘A as well as B, both A and B’
 A is (és) B is
 c. A is } A **mo** ‘A too/even A’

is `too' is a distributive head on the clausal spine (Szabolcsi 2015, den Dikken 2006)



- (22) a. $[_{JP} \text{ Kati is } 100 \text{ kilót nyom } [_{J'} (\text{és}) [_{JP} \text{ Mária is } 100 \text{ kilót nyom}]]]$ (opt. ellipsis)
 'Kate as well as Mary weigh 100 kg' (individually/*together)
- b. $[_{JP} \text{ Kati is } 100 \text{ kilót nyom } [_{J'} (\text{és}) [_{JP} \text{ Mária is } 100 \text{ kilót nyom}]]]$ (opt. ellipsis)
 'Kate as well as Mary weigh 100 kg' (individually/*together)

Mind `all' is a quantifier-internal particle (-ki = human indeterminate pronoun, "who")



- (23) a. mind X mind Y mind Z = mindenki, when the universe is {X, Y, Z} 'everyone'
 b. sem X sem Y sem Z = senki, when the universe is {X, Y, Z} 'no one, NC'
 c. akár X akár Y akár Z = akárki, when the universe is {X, Y, Z} 'whoever'
 d. vagy Z vagy Y vagy Z ≈ valaki, when the universe is {X, Y, Z} 'someone'

- Differences in **ellipsis size** possibilities, in line with the clausal vs. quantifier-internal distinction

- (24) Nem vehetsz tíznél több széket sem, és hatnál kevesebb*(et) sem.
 not buy-may-you 10-than more chair-acc nor and 6-than fewer-acc nor
- (25) Nem vehetsz sem tíznél több*(et), sem pedig hatnál kevesebb széket.
 not buy-may-you nor 10-than more-acc nor pedig 6-than fewer chair-acc

- Interesting new syntactic and semantic questions arise about the clausal vs. quantifier-internal versions of the same particle. I do not have general answers yet.

How do the meanings of is and mind compare?

- is `too' is disjunctive, strengthened to conjunction by recursive exhaustification in non-negative contexts. See below.
- Mind `all' may well be a genuine conjunctive/universal particle. Minden- has a universal interpretation in the immediate scope of negation: Nem láttam mindenkit 'I didn't see everyone'.
- Aside: M. Hebrew kol has a similar dual semantic behavior (Bar-Lev & Margulis 2014).

Negative concord, positive polarity and negative polarity

Two components: disjunction/existential + interaction with negation via blocking

Se(m) is historically a combination of is `too' plus nem `not'. Se is a more colloquial version. Se(m) forms NCIs that occur only with clause-mate negation. Modern Greek oute has the same etymology (Classical Greek ou `not' + te `and, both') and the same properties (Giannakidou 2007).

Se(m) blocks is within the immediate scope of clause-mate negation.

Senki et al. block valaki et al. within the immediate scope of clause-mate negation.

"Immediate scope" means that at most plain existentials intervene (e.g. Ch7 of Chierchia 2013).

- (26) $[_{JP} \neg [_{\text{SemP}} \text{ Kati sem nyom } 100 \text{ kilót}] [_{J'} (\text{és}) \neg [_{\text{SemP}} \text{ Mária sem nyom } 100 \text{ kilót}]]]$ (cf. (22))
 'Neither Kate nor Mary weigh 100 kg'

Consequences: positive polarity items and negative polarity items formed with is

- (27) (... or X) disjunction with active alternatives
- X sem in the immediate scope of clause-mate negation. Therefore, X sem is a negative concord item, NCI.
 - X is elsewhere. Therefore, X is is a positive polarity item, PPI and X is can be a negative polarity item, NPI.
- (28) (\exists + indet. pron.) existential with active alternatives
- sem + indeterminate pronoun in the immediate scope of clause-mate negation, so NCI.
 - vala + indeterminate pronoun elsewhere so PPI.

- Balusu (NELS 47) proposes a near-identical analysis for Telugu -ee-N-VV and ee-N-ainaa.

For Q&A

Indeed, X is 'X too' is a **positive polarity item (PPI)** like valami 'something' (Szabolcsi 2004)

- (29) * Siettem, de **nem** törtem el valamit / a poharat is.
'I was in a hurry but I didn't break something / the cup too'
- (30) Context: Eltörtél valamit. Context: Eltörted a poharat is.
'You broke something' 'You broke the cup too'
Nem igaz, **nem** törtem el **valamit!** Nem igaz, **nem** törtem el a poharat **is!**
'Not true, I didn't break something!' 'Not true, I didn't break the cup too!'
- (31) Ha **nem** törtél el **valamit**, akkor minden rendben.
'If you didn't break something, then all is well'
- (32) Ha **nem** törted el a poharat **is**, akkor minden rendben.
'If you didn't break the cup too, then all is well'
- (33) Ha **nem** törted el a poharat **sem**, akkor minden rendben.
'If you didn't break the cup either, then all is well'
- Why not blocked by sem?
¬ EXH EXH (a∨b) → OK
is not in imm. scope of ¬
- EXH ¬ (a∨b) → OK
sem in imm. scope of ¬

When and only when X is a **minimizer**, or is optionally interpreted as a minimizer, X is is a **weak negative polarity item (NPI, not a negative concord item, NCI)**

Non-NC negative polarity items are licensed in decreasing contexts other than clause-mate negation, so is has the ability to form such NPIs. Serbo-Croatian non-NC NPIs are formed with i 'and, even, too' (Progovac 1994 calls them I-NPIs, in distinction to NI-NPIs). Similarly, Hungarian non-NC NPIs are formed with is (Szabolcsi 1996, Tóth 1999). This phenomenon has become popularly known as the "bagel problem." Hindi NPIs are formed by bhii 'even, too' (Lahiri 1998).

Below, a poharat is 'the cup too' is not an NPI, but valamit is 'even something' and akár csak a poharat is 'even the cup' are NPIs.

- (34) Eltörted a poharat is. 'You broke the cup too'
- (35) * Valamit is eltörtél. / * Eltörtél valamit is.
- (36) * Akár csak a poharat is eltörted. / * Akár csak a poharat is eltörted.
- (37) Nem állítom, hogy eltörted a poharat is. -- not [CP ... the cup too]
'I am not claiming that you broke the cup too'
- (38) Nem állítom, hogy valamit is eltörtél. -- not [CP ... even something = anything]
'I am not claiming that you broke anything'
- (39) Nem állítom, hogy akár csak a poharat is eltörted. -- not [CP ... even the cup]
'I am not claiming that you broke even the (worthless) cup'

- Lahiri (1998) and Chierchia (2013) on minimizers as NPIs [Notation: $\wedge VP(z) = \lambda w.VP(z)(w)$]

- (40) [[EVEN Z VP]] Asserts: $VP(z)$
Additive presupp.: $\exists x[x \neq z \ \& \ VP(x)]$
Scalar presupp.: $\forall y[y \neq z] [\text{likelihood}(\wedge VP(z)) < \text{likelihood}(\wedge VP(y))]$

If Z is interpreted as a minimizer, and Z VP is an increasing context, the scalar presupposition leads to a contradiction: I have even ONE book!, I paid even the slightest attention! The most likely proposition is presupposed to be the least likely.

Hindi Raam bhii does not have a life as an NPI. Same for a poharat is 'the cup too'. In Hungarian, addition of akár (csak) turns a non-scalar item into a minimizer, so is can form an NPI. Plain indefinite pronouns of the 'something, somewhere' sort are happy to be interpreted as weakest predicates and thus as minimizers. But they need not be, and so they can combine with plain additive is 'too': Valakit is és valamit is látok 'I see both someone and something.'

- Scope assumptions I am following:

- (41) * Mary saw anyone ok Mary didn't see anyone surface string
(42) Mary saw > anyone Mary didn't see > anyone syntactic scope
(43) EVEN ($\exists x.saw(x)(m)$) EVEN ($\neg \exists x.saw(x)(m)$) LF scope

The literature does not address the "separation" of exhaustifier EVEN from the existential at LF. I assume that the solution is the same as what Szabolcsi (2015) already proposes for KA and MO particles in general. The particle points to a semantic actor but is not one itself. Valaki is must occur in the correct syntactic scopal position (within the syntactic scope of a DE operator), and the presence of is signals that there is a higher, phonetically null or even disembodied operator that operates on the DE-context as a whole.

- Reiterated Kati is (és) Mari is 'Kate as well as Mary' and Kati sem (és) Mari sem 'neither Kate nor Mary' cannot receive scalar interpretations. Only additive readings are available.
- (44) [_{CP} Kati is 100 kilót nyom [_{CP} (és) [Mari is 100 kilót nyom]]]
'Kate as well as Mary weigh 100 kg'
- (45) [_{CP} Nem nyom 100 kilót Kati sem [_{CP} (és) nem nyom 100 kilót Mari sem]]]
'Neither Kate nor Mary weigh 100 kg'

The "no scalar reading" restriction follows from the approach to reiterated particle constructions in Szabolcsi (2015): the unary (non-iterated) version of the particles are basic, and in reiterated cases all the particles play the same role that the unary version plays. If is were interpreted as 'even', the reiterated construction in (44) would have to mean (46), which is an inescapable contradiction. Kate and Mary may be similar in weighing 100 kg, but they cannot both be the least likely.

- (46) # Kate weighs 100 kg and she is the least likely to, and Mary weighs 100 kg and she is the least likely to.

Furthermore, since NPIs rely on the 'even' exhaustification of minimizers, then the reiterated X is, Y is construction cannot have NPI occurrences, in the absence of 'even' readings.

The same holds for oute (*kan) -- oute (*kan) in Modern Greek (Giannakidou 2007).

In contrast, the blocking rule says that sem spells out is in the immediate scope of clause-mate negation. Therefore, Kati sem (és) Mari sem is a fully legitimate negative concord construction.

- | | | | | | |
|------|------------|---------------|----------|------------|-----------|
| (47) | valaki | 'someone' | senki | 'n-one' | |
| | valami | 'something' | semmi | 'n-thing' | |
| | valahol | 'somewhere' | sehol | 'n-where' | |
| | valamennyi | 'some amount' | semennyi | 'n-amount' | and so on |

From the two blocking rules:

In the scope of a merely DE operator	<u>valaki is</u>	(NPI)	or	<u>valaki</u>	(PPI)
In the imm. scope of clause-mate negation	<u>senki sem</u>	(NCl)			

How come sem blocks both vala- 'some' and is 'too, even'?

In terms of Szabolcsi (2015), vala- is a KA particle: it postsupposes that its immediate context has a \cup (join) semantics.

But, in Szabolcsi (2015), is is a MO particle: it postsupposes that its immediate context has a \cap (meet) semantics.

See also Ahn (2015):

$$[\text{too}](q)([p]-c) = \lambda w: q \in C - \{[p]^o\} . q_w \wedge [p]^w$$

$$[\text{either}](q)([p]-c) = \lambda w: q \in C - \{[p]^o\} . q_w \vee [p]^w$$

We want to unify vala- and is, so is must be re-analyzed. It must start out as a disjunctive (join) particle. Its conjunctive (meet) flavor in upward mon. contexts must be due to recursive exhaustification.

Models for the idea:

- Bar-Lev & Margulis (2013):
M. Hebrew kol is an existential with only subdomain alternatives (no scalar alternative). With recursive exhaustification in an upward mon. non-modal context, kol comes out as a universal.
- Mitrović (2014)
MO (his μ) is a recursive exhaustifier that applies to existentials/disjunctions.
- Bowler (2014)
Warlpiri P manu Q 'P and Q' is a recursively exhaustified disjunction.

Three of the many open questions left for further research:

- (48) What is the exact morpho-syntactic and semantic relation between is and sem, vala- and sem? Is it allomorphy?
- (49) Could the etymological similarity between Hungarian sem and Modern Greek oute (Giannakidou 2007) be exploited in explaining how both form non-strict N-expressions in basically strict-NC languages? Both are composed of and/too/even + not, with a now-defunct negation. (NB Jespersen cycle, Kiss n.d.)
- (50) Many languages have constructions of the form ni X ni Y 'neither X nor Y'. Some are strict and others are non-strict N-expressions. Are there structural differences hidden under the uniform surface?

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