The paper discusses two types of quantifier particles in Hungarian that both participate in reiterated constructions. One type follows and the other precedes its host, which makes it easy to compare them. The particles that follow their hosts are argued to be heads on the clausal spines of independent propositions. Host+particle does, but need not, occur in reiterations, and the particles do not build quantifier words. In contrast, the particles that precede their hosts are argued to be quantifier-phrase internal. Particle+host must occur in reiterations, and the particles build quantifier words. The two types of reiterated constructions also differ in having their own distinctive internal "connectives" and in forming strict vs. non-strict negative concord expressions. The paper focuses on syntax, with some attention to semantics. It argues for propositional coordination for both types, and propositional quantification for the second type. Constituent-size reiterations are derivable via ellipsis, raising the question whether they are necessarily so derived. The paper concludes with data from Bosnian, French, Japanese, Malayalam, Mandarin, Persian, Russian, Sinhala, Telugu, and Turkish, which indicate the cross-linguistic interest of recognizing the two types of particle constructions.

Keywords: particle; reiteration; Junction Phrase; propositional quantification; Hungarian

1 Introduction
There is a substantial literature on English both_and, either_or, whether_or, and neither_nor constructions, especially relating to how the possibly mismatched positions of either and or come about and how the position of either correlates with the scope of the disjunction. The Hungarian (Turkish, Russian, Telugu, etc.) counterparts present a somewhat different descriptive profile that has received less attention. Here the particles take the same shape in all the juncts, occur at the same structural height in all the juncts and, in a subset of the cases, are obligatorily present in all the juncts. Moreover, the same particles may show up as additive or negative concord elements and as building blocks of quantifier words. They are quantifier particles in the sense of Szabolcsi (2015).

The reiterated quantifier particle constructions are propositional (type t) coordinations, Junction Phrases in the sense of den Dikken (2006). They involve ellipsis or structure-sharing when they look like constituent coordinations. In the focus of the paper is the fact that they come in two distinct types. The difference pertains to syntactic structure and, accordingly, to the way the meanings are composed. It cannot be predicted from the basic truth-conditional semantics. The overall meanings of the two constructions may be similar or identical, and the same particle may participate in both constructions.

1 The neutral cover term junct for conjunct and disjunct is borrowed from Mitrović (2014); to match, the term coordination will serve as a cover term for conjunction and disjunction.
In one type, the particles are heads on the clausal spine, with a focus-accented constituent of the complement in their specifier. In the other type, the particles are uninterpreted and realize a silent propositional quantifier on each junct. Propositional quantification was introduced in Kratzer & Shimoyama (2002) for cases where the set of propositions quantified over are alternatives generated by an indeterminate pronoun. Our case aligns with this nicely, but here the propositions quantified over are those expressed by the juncts.

The bulk of the paper analyzes data from Hungarian, a language in which particles in the first type follow and those in the second type precede their hosts, making the distinction especially convenient to keep track of. The detailed investigation of Hungarian is followed by a look at ten languages that likewise exhibit reiterated quantifier particle constructions, some of them plausibly both types. These data are interesting, among other things, because they raise questions about how to provide a unified semantics for the particles in their various roles. More generally, they bear on the syntax of the logical operators that make up some of the critical scaffolding of sentence meanings.

Below is a preview of the analyses and the Hungarian diagnostics they are based on.

(1)–(2) represent the type where each particle is argued to be a head on the clausal spine, with a focus-accented constituent of the complement in its specifier. The reiteration is a coordination of self-contained propositions. For readability, the schematic Junction Phrase in (1) shows just two juncts:

(1) \[ \text{JP} \]
\[ \text{Host} \]
\[ \text{IsP/SemP} \]
\[ \text{Is'/Sem'} \]
\[ \text{J} \]
\[ \text{IsP/SemP} \]
\[ \text{Is/Sem} \]
\[ ... \]
\[ \text{TP} \]
\[ ... ... \]
\[ \text{Host} \]
\[ \text{Is'/Sem'} \]
\[ \text{Is/Sem} \]
\[ ... \]
\[ \text{TP} \]
\[ ... ... \]

where `is` ‘too’, `sem` ‘nor’

(2) a. A hó is esik, a szél is fúj, a gyerek is nyűgös.
   the snow **too** falls, the wind **too** blows, the child **too** cranky
   ‘The snow is falling, likewise the wind is blowing, and likewise the child is cranky.’

   b. A hó is ellen-ünk **van**, a szél is ellen-ünk **van**.
   the snow **too** against-1PL is **van**, the wind **too** against-1PL is **van**
   ‘The snow, as well as the wind, is against us.’

The type in (3)–(4) has not, to my knowledge, been scrutinized in the literature on Hungarian or other languages. The reiterated construction is argued to represent one big quantifier, interpreted in terms of propositional quantification in the spirit of Kratzer & Shimoyama (2002). The overt particles are uninterpreted and merely signal the presence
of a contentful but unpronounced quantifier. Again, for readability, the JP schema in (3) shows just two juncts:

\[
\begin{align*}
\text{(3)} & \quad \text{QP} & \text{JP} \\
& \quad \text{where mind} \text{ ‘all’} \\
& \quad \text{vagy} \text{ ‘or’} \\
& \quad \text{akdr} \text{ ‘whether’} \\
& \quad \text{sem} \text{ ‘nor’}
\end{align*}
\]

\[
\begin{align*}
& \quad \text{Q} \\
& \quad \{[[\text{Mind}], \forall] \}
& \quad \text{Host} \\
& \quad \{[[\text{Vagy}], \exists] \}
& \quad \text{JP} \\
& \quad \{[[\text{Akdr}], \exists] \}
& \quad \text{J'}
& \quad \{[[\text{Sem}], \exists] \}
\end{align*}
\]

\[
\begin{align*}
\text{mind/vagy/akdr/sem} & \quad \text{Host} \\
[\text{uMind}, \text{etc}] & \quad \text{J'}
\end{align*}
\]

(4) a. Vagy a hó esik, vagy a szél fúj, vagy a gyerek nyűgös. 
   for example, the snow falls or the wind blows or the child is cranky
   ‘Either the snow is falling, or the wind is blowing, or the child is cranky.’

b. Vagy a hó esett, vagy az eső esett.
   for example, the snow fell or the rain fell
   ‘Either the snow or the rain was falling.’

Section 2 motivates the proposed analyses with reference to the descriptive properties in (5). Throughout the paper, reiterations will be referred to as “tuples” for short.

(5) Head on the clausal spine, cf. (1)–(2): 
   is, sem

   Particle follows host.
   Need not be part of a tuple.
   Tuple-internal connective: és ‘and’.
   Doesn’t build quantifier words.
   Builds non-strict negative concord items.

   Quantifier-internal, cf. (3)–(4):
   mind, vagy, akdr, sem

   Particle precedes host.
   Must be part of a tuple.
   Tuple-internal connective: pedig.
   Builds quantifier words.
   Builds strict negative concord items.

To make parsing the data easier for the reader, Section 2 focuses on examples like (2b) and (4b), with superficially constituent-size juncts, temporarily pushing the propositional aspect to the background as much as possible.

Sections 3 and 4 flesh out the syntax of the two types in terms of propositional coordination and propositional quantification. The treatment of ellipsis connects to Valmala (2012; 2013) regarding two types of Right Node Raising, and to Hirsch (2017) regarding constituent coordination as vP-coordination. The basics of the semantics are outlined.

Section 5 explains how the syntactic difference between the two constructions correlates with strict vs. non-strict negative concord (NC) in Hungarian. Chierchia (2013) proposed that non-strict NC involves a null functional head NEG with an n-word in its specifier. Szabolcsi (2016) adapted this proposal to Hungarian, identifying the sem in (1) as an overt counterpart of Chierchia’s NEG and as a spell-out of is under clause-mate negation. In contrast, the sem in (3) naturally instantiates strict NC.

Section 6 links the present investigation to a programmatic proposal in Szabolcsi (2015) to offer a unified semantics for the various uses of quantifier particles. The question is how the syntactic differences affect the prospects of unification. This section lays out new data from nine languages, with many examples of both types of quantifier particles, placing the discussion into a wider cross-linguistic context.
Finally, some comments on how the particles are glossed. Finding transparent glosses is not trivial, because English does not have identical reiterating particles, irrespective of linear order, but the reader still deserves some crutches.

The universal quantifier particle *mind*, which also serves as a floating quantifier, is glossed as ‘all’, although ‘all’ may look awkward in combination with singulars.

The free-choice particle *akár* is etymologically related to *akar* ‘want’, a cross-linguistically not unusual situation (Haspelmath 1997). Abrusán (2007) analyses *akdr* as ‘even’ in one non-reiterated use. Neither of these connections yield appealing glosses, so ‘whether’ will be used in its unconditional sense (Rawlins 2013).

The remaining glosses are more straightforward, with an eye on better-known Indo-European counterparts. Vagy *vagy* ‘or_or’ builds jointly exhaustive and mutually exclusive disjunctions, much like Russian *ili_ili* and French *ou_ou* (Spector 2014). The negative concord item *sem_sem* ‘nor_nor’ is reminiscent of Russian and French *ni_ni*. The fact that *is_is* ‘too_too’ builds distributive conjunctions is paralleled by Russian *i_i* and Romanian *şi_şi*. Like *is*, *i* and *şi* also serve as additive particles.

The tuple-internal connective *pedig* mentioned in (5) will be glossed as PEDIG. Although Section 6 points out various cross-linguistic counterparts, no morpheme of English presents itself as a good gloss option.

2 Systematic differences between *is*-type and *mind*-type particles

This section demonstrates that the two constructions and the particles in them are syntactically quite different. It enumerates arguments for the structures in (1) and (3) above. Sections 3 and 4 will follow with theoretical aspects of the syntax and the semantics.

2.1 Constituent order: Particle follows vs. precedes host

We begin with the most straightforward difference between the two types of particles, already highlighted in Section 1: one type follows and the other precedes its host. Hungarian orthography mandates a comma between the members of the iterations. The commas will help structure the examples for the reader, so they are retained.

(6) Particle follows host
a. Kati *is*, Mari *is* Kati *too* Mari *too* ‘K as well as M’

b. Kati *sem*, Mari *sem* Kati *nor* Mari *nor* ‘neither K nor M’

(7) Particle precedes host

b. *vagy* Kati, *vagy* Mari, *or* Kati, *or* Mari ‘either K or M, not both’


When they occur in subject position, all of these trigger singular agreement on the verb, which is generally the case even with simple conjunctions in Hungarian:

b. Kati is, Mari is alud-t.
   Kati too Mari too sleep-PAST.3SG  ‘K as well as M slept.’

c. Mind Kati, mind Mari alud-t.
   all Kati all Mari sleep-PAST.3SG  ‘Both K and M slept.’

2.2 Host+particle is happy on its own, particle+host must be part of a tuple

The bluntest sign of a significant syntactic difference is that reiteration is optional in one type but mandatory in the other. Compare is in (9a) with mind in (10a). Kati is ‘Kati too’ by itself is perfect in both preverbal and postverbal position (and similarly for Kati sem ‘Kati nor’), whereas mind Kati ‘all Kati’ by itself is entirely unacceptable in both preverbal and postverbal position. It must come in tuples (pairs, triples, etc.).

(9)  Host + particle happy on its own
   a. Kati is aludt.
      Aludt Kati is.
      Kati too slept slept Kati too
   b. Kati sem aludt.
      Nem aludt Kati sem.
      Kati nor slept not slept Kati nor

(10)  Particle + host must be part of a tuple
      *Aludt mind Kati.
      all Kati slept slept all Kati
   b. *Vagy Kati aludt.2
      *Aludt vagy Kati.
      or Kati slept slept or Kati

2 It was pointed out in Szabolcsi (2015: 165) that English or has a unary use; I now add that neither and nor do too. The same holds for Hungarian vagy and sem. Consider the following discourses:

   (i) A: Mary liked the soup.
       B: Or (perhaps) KATE liked it.

   (ii) A: Mary didn’t like the soup.
       B: Nor did KATE.

   In both cases, B’s response re-evaluates what A just said. It incorporates A’s assertion into a (positive or negated) disjunction, so to speak. This use is restricted to the sentence-initial position, and (ii) clearly involves inversion. Furthermore, overt linguistic antecedents are required, as in (i)–(ii). Imagine that we see Mary taste the soup and spit it out. In this context, (iii) is acceptable, but (iv) with inversion is not.

   (iii) Kate didn’t like it, either.
   (iv)  *Nor did Kate like it.

Hungarian vagy Kati and sem Kati have similar uses when they occur preverbally. In this paper I do not offer an analysis for these data in English or Hungarian, but I contend that they are different from the entirely neutral and unconstrained varieties with Kati is and Kati sem.

3 Hungarian reiterated akár may form either plain free-choice expressions licensed by a possibility modal or unconditionals. The ungrammatical past episodic example in (10d) aims to be an unconditional. As (i) shows, free choice with a modal is acceptable in the unary version. But, unlike in the reiterated akár version, an additional particle (is) or very high stress is required. Akár Kati and akár Kati is are critically distinct. This paper investigates the variant without is.

   (i) a. ?Akár KATI jö-het.
         whether Kati come-may
   b. Akár Kati jö-het.
         whether Kati too come-may
            ‘Even Kati may come.’

   (ii) a. Akár Kati, akár Mari jö-het.
         whether Kati whether Mari come-may
            ‘Either Kati or Mari may come.’
   b. *Akár Kati is, akár Mari is jö-het.
       whether Kati too whether Mari too come-may
   nor Kati not slept not slept nor Kati

d. *Akár Kati aludt, nem számít.3 *Aludt akár Kati, nem számít.
   whether Kati slept, not matters slept whether Kati not matters

The same is true of vagy, sem, and akár (10b,c,d), although confounds from what I believe represent different constructions may make the strings acceptable when particle + host occurs in the preverbal position (the postverbal versions are inescapably bad). See the footnotes; note 2 pertains to both (10b) and (10c). For the purposes of this paper, all the examples in (10) are ungrammatical.

These contrasts unambiguously point to a global difference between the two constructions, postulated in (1) and (3). Even though the particles that follow their focused hosts (is, sem) participate in “reiterated” constructions, those arise from the coordination of independent and self-sufficient propositions. In contrast, in the case of the particles that precede their hosts (mind, vagy, sem, and akár), grammar must ensure that the hosts form a tuple.

2.3 Different optional connectives inside the tuples

Reiterated constructions of both types optionally contain what I will call “connectives” – but different connectives, és vs. pedig. És is the default Junction head corresponding to and (Szabolcsi 2015).4 It optionally occurs in iterations with particles that follow the host, confirming that those iterations are vanilla conjunctions. The optionality of és is due to the fact that Hungarian generally allows asyndetic (connectiveless) conjunctions. Pedig requires a more elaborate introduction, see below.

We first demonstrate that és and pedig are not interchangeable and do not combine. (11)–(12) illustrate the lack of interchangeability and combinability with particle sem, whose two versions offer minimal pairs. Afterwards only the grammatical examples are given, see (13)–(14). Notice that unlike és, pedig intervenes between the particle and the host.

(11) Host + sem only co-occurs with és
   a. Kati sem és Mari sem
   b. *Kati sem, Mari pedig sem
   c. *Kati sem, pedig Mari sem
   d. *Kati sem, és Mari pedig sem

(12) Sem + host only co-occurs with pedig
   a. sem Kati, sem pedig Mari
   b. *sem Kati, sem és Mari
   c. *sem Kati és sem Mari
   d. *sem Kati és sem pedig Mari

(13) Host + particle optionally co-occurs with és
   a. Kati is (és) Mari is ‘K as well as M’
   b. Kati sem (és) Mari sem ‘neither K nor M’

4 In many languages, the particle ‘too’ and the connective ‘and’ are homophonous, e.g. Russian i, Romanian şt. Hungarian is ‘too’ is historically a reduction of és ‘and’. (És and is have not been interchangeable for many centuries.) I do not believe that the analysis should pursue this connection. As Szabolcsi (2017) points out, is also has an indispensable role in productively building negative polarity and free choice items. It is difficult to imagine that the J head or the conjunction ‘and’ has any relevance there. Is and és will thus be kept apart. The relation between these items, in Hungarian and cross-linguistically, is left for future research.
Particle + host optionally co-occurs with **pedig**

1. mind Kati, mind (**pedig**) Mari  
   ‘both K and M’
2. vagy Kati, vagy (**pedig**) Mari  
   ‘either K or M, not both’
3. akár Kati, akár (**pedig**) Mari  
   ‘whether/either K or M’
4. sem Kati, sem (**pedig**) Mari  
   ‘neither K nor M’

To my knowledge, the connective **pedig** has not been discussed in the modern literature on Hungarian (although data of the type of (14) are cited in Lipták 2001).

**Pedig** has what seem to be two distinct versions. One version, which may be called adversative, occurs in clause-initial position and can be translated as ‘even though’ or ‘despite the fact’. The present paper will not be concerned with this version.

Mari elkésett, **pedig** Peti figyelmeztette.  
Mari was.late **pedig** Peti warned.her  
‘Mari was late, even though Peti warned her.’

The **pedig** that interests us follows the topic in the last member of a propositional coordination or list, and its contribution can be approximated as ‘on the other hand’ or ‘however’ or ‘lastly’. It marks the last member of a set of two or more partial answers to an overt or covert question, and thus indicates that the answer is now complete. **Pedig** is an entirely opaque element. It will be glossed as **PEDIG**, for lack of a non-misleading option.

[K where are the kids?]  
Kati otthon van, Mari (**pedig**) énekel, Peti (**pedig**) úszik.  
‘Kati is at home, Mari (**PEDIG**) is singing, Peti (**PEDIG**) is swimming.’

[Where did you go in recent days?]  
Hétfőn haza, kedden (**pedig**) énekelné, ma (**pedig**) úszni.  
‘On Tuesday, home, on Wednesday (**PEDIG**) to sing, today (**PEDIG**) to swim.’

In the reiterated particle construction, **pedig** occurs in the second (or last) member of the iteration, intervening (as noted above) between the particle and its host. Its interpretation is very much in the same spirit as in its sentential use illustrated in (16)–(17). For example,

a. Mind Kati, mind Mari, mind **pedig** Peti (otthon van).  
   all Kati all Mari all **pedig** Peti (at.home is)  
   ‘Each of Kati, Mari, and, lastly, Peti.’

---

5. The Historical-Etymological Dictionary states that modern-day **pedig** collapses earlier **pedig**, **penig**, and **kedig**. But no information is readily available about the difference between these, and I never encountered **penig** and **kedig** in the wild.

6. According to Esipova (2016; 2017), Russian *a* has two similar functions: adversative and a marker of the last member of a set of partial answers. In contrast to **pedig**, Russian *a* is in first position both in full clauses and in reiterated constructions. This will be illustrated in Section 6.2. M. den Dikken (p.c.) informs me that Dutch **tenslotte** ‘finally’ is a functional counterpart of **pedig**, and it occurs in ‘neither nor’ disjunctions in positions in which it cannot be treated as a constituent with the nominal string that follows it (as shown by V2). He provides the following naturally-occurring example (https://books.google.com/books?isbn=9065502017):

(i) omdat zij noch de hunnen, noch zichzelf, noch tenslotte  
   because they neither the theirs nor themselves nor finally  
   hun eigen leven ontzien hebben  
   their own life spared have  
   ‘because they spared neither their [families], nor themselves, nor finally their own lives’

Note though that **tenslotte** transparently means ‘lastly’, while H. **pedig** and R. **a** are pure particles.
b. Vagy Kati, vagy Mari, vagy pedig Peti (van otthon).
    or Kati or Mari or PEDIG Peti (is at home)
    'Either Kati or Mari or, lastly, Peti.'

The interpretation of pedig jibes with the fact that it occurs in that construction which always comes in tuples. The tuple as a whole provides an answer to an overt or implicit question under discussion, enumerating propositions that serve as partial answers. If pedig is present, the list is complete. The particle mind ‘all’ tells us that all the propositions in the tuple are true; vagy ‘or’ tells us that one of them is true. In the next subsection we will see this even more vividly.

2.4 Particles that precede their hosts build quantifier words, those that follow do not

Hungarian forms its quantifier words by combining particles with indeterminate (wh-) pronouns. They are built with the particles that are confined to tuples. Those particles precede their hosts both in the reiterated construction and in combination with indeterminate pronouns. Vala- ‘some’ is an allomorph of vagy ‘or’.

(19) Particle precedes host

a. mind-en-ki, mind-en(*-mi), mind-en-hol
   all-EN-who all-EN-what all-EN-where
   ‘everyone, everything, everywhere’

b. vala-ki, vala-mi, vala-hol
   some-who some-what some-where
   ‘someone, something, somewhere’

c. akár-ki, akár-mi, akár-hol
   whether-who whether-what whether-where
   ‘whoever, whatever, wherever’

d. sen-ki, sem-mi, se-hol
   nor-who nor-what nor-where
   ‘no one, nothing, nowhere’

Tying these together with the findings of the previous subsection, compare:

(20) mind Kati, mind Mari, mind (pedig) Peti ≈ mindenki
    all Kati all Mari all PEDIG Peti everyone

In contrast, the particle is that follows its host does not form quantifier words, in either order, see (21). The NC particle sem of course does participate in quantifier words but, given the double life it leads, there is every reason to believe that sen-ki, sem-mi, se-hol are simply instances of (19d).

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7 The role of the -en morpheme in minden is unknown. The gap in *minden-mi extends to all m-based indeterminate pronouns: *minden-melyik (but mindégyik ‘each’), *minden-milyen (but mindenféle ‘every kind’), and *minden-mikor (but mindig and mindenkor ‘always’). These gaps do not concern us.

8 Minden forms strictly distributive quantifier phrases with count nouns, but also combines with mass nouns, and floating mind is possible in both cases (see Csirmaz & Szabolcsi 2012: Section 3.8.1).

(i) a. Minden doboz nehéz.
   every box heavy
   ‘Every box is heavy (individually).’

b. A doboz-ok mind nehez-ek.
   the box-pl all heavy-pl
   ‘The boxes are all heavy (individually).’

(ii) a. Minden víz elpárolgott.
    all water evaporated
    ‘All (the) water evaporated.’

b. A víz mind elpárolgott.
   the water all evaporated
   ‘The water all evaporated.’

Mind(en) can be preceded by nem ‘not’ and the only possible meaning is ‘not every/not all’.

9 The first to notice such correspondences was Hunyadi (1987).
(21)  Host precedes particle
*is-ki/ki-is,*is-mi/mi-is, *is-hol/hol-is

Is participates in the composition of NPIs and FCI s, see (22), but in that case it combines with a full quantifier word, which is a different matter (see Szabolcsi 2017).

(22)  
a.  vala-ki  is
some-who  too
‘anyone, NPI’

b.  akár-ki  is
whether-who  too
‘anyone, NPI/FCI’

The data just reviewed converge with the observations above. Mind-type particles must be part of a reiterated construction that is semantically equivalent to a quantifier, and they also form actual quantifier words with the indeterminate pronouns that correspond to the same domains as their hosts. Is-type particles on the other hand do not have to be part of a reiterated construction; when they are, those are “accidental” coordinations. They do not build quantifier words.

2.5 Strict vs. non-strict negative concord items
At this point we have evidence for the overall structures of the two constructions and for the quantificational role of mind-type particles; less so for the nature of is and the sem that patterns with is (follows its host). Negative concord (NC) provides some fine-grained evidence about those syntactic details.

The negative concord particle sem (more colloquially: se) occurs in both constructions under investigation but, interestingly, builds different kinds of NCIs in the two cases.

Hungarian is a negative concord language that is usually thought to be of the strict type, where the sentential negation marker nem ‘not’ is always mandatory, as in Russian. But Surányi (2006) showed that Hungarian NC is a hybrid: there is a set of NC-expressions that do not co-occur with nem when they are in preverbal position, mimicking non-strict NC languages like Italian. Consider the n-expressions senki ‘n-one’ and senki sem ‘n-one nor’ in preverbal position (which distinguishes strict vs. non-strict negative concord) and in postverbal position (which does not distinguish them). We see that senki has the distribution of a strict NCI like Russian nikto, whereas senki sem has the distribution of a non-strict NCI like Italian nessuno. All three examples below mean ‘No one slept’.

(23)  Senki nem aludt.  vs.  *Senki aludt.
n-one  not  slept  n-one slept
pre-V, strict NC, requires nem

(24)  Senki sem aludt.  vs.  *Senki sem nem aludt.
n-one nor  slept  n-one nor not slept
pre-V, non-strict NC, rejects nem

not slept  n-one nor  slept  n-one nor
post-V, strict/non-strict, require nem

I observe that the two types of reiterated sem construction differ in that the “particle precedes host” one builds a strict NC expression, and the “particle follows host” one builds a non-strict one.

(26)  Sem Kati, sem Mari  *(nem) aludt.
nor Kati  nor Mari  not slept
pre-V, strict NC, requires nem
(27) Kati sem, Mari sem (*nem) aludt.  
    Kati nor Mari nor not slept  
    pre-V, non-strict NC,  
    rejects nem

(28) Nem aludt sem K, sem M / K sem, M sem.  
    not slept nor K nor M K nor M nor  
    post-V, strict/non-strict,  
    require nem

In other words,

(29)  
    sem Kati, sem Mari ≈ sen-ki  
    nor Kati nor Mari n-one  
    strict NCI, cf. nikto

(30)  
    Kati sem, Mari sem ≈ sen-ki sem  
    Kati nor Mari nor n-one nor  
    non-strict NCI, cf. nessuno

Notice that in the strict NC version, the particle sem precedes its lexical hosts as well as the indeterminate pronoun ki ‘who, viz. human’ that it combines with, whereas in the non-strict NC version sem follows its lexical hosts as well as the n-word senki that it combines with.

Szabolcsi’s (2016) proposes a unified analysis for the hybrid negative concord facts involving senki and senki sem. It will be briefly reviewed and extended to the new data in Section 5. At this point, we note that Szabolcsi treats the sem in the non-strict NC construction as an overt counterpart of Chierchia’s (2013) NEG, a functional head that invokes an abstract negation above its projection. The account of the contrast in (29)–(30) converges with the overall syntactic analyses for the two constructions.

2.6 Interim summary

The preceding subsections substantiated the claim that the host + particle and particle + host reiterations are syntactically distinct, over and beyond linear order. Reiterations of host+particle represent the coordination of two or more independent propositions, with or without ellipsis. Since each of the propositions can stand on its own, reiteration is not mandatory. This contrasts with the case of particle + host, where reiteration is mandatory, and the construction can be seen as providing a set of partial answers to a question. The quantifier particles indicate whether each, some, or none of those partial answers is true; addition of pedig to the last junct marks the set as constituting a complete answer. Finally, with the particle sem the first type constitutes non-strict and the second, strict negative concord expressions. We anticipated that this squared with the claim that the particles following their hosts are heads on the clausal spine, whereas the particles preceding their hosts spell out a (propositional) quantifier.

Having presented and compared the basic data of the two constructions, Sections 3 and 4 zoom in on each construction in turn. Negative concord is relegated to Section 5.

3 Is ‘too’ and sem ‘nor’ are heads on the clausal spine

The syntactic role of is/sem can be conveniently explicated in terms of the feature-checking theory of quantifier scope. See among others Beghelli & Stowell (1997); Szabolcsi (1997); É. Kiss (2002); Brody & Szabolcsi (2003); Lipták (2005), and an overview in Szabolcsi (2010: Chapter 11). On this view, in Hungarian, members of a sequence of functional heads overtly attract operator phrases to their specifiers. Because the movement is overt, it is reflected in linear order at spell-out. Linear order directly maps to c-command, determining the relative scope of the operators (with some complications extensively discussed in Brody & Szabolcsi 2003).

For example, the Ref(erential) head attracts definites and indefinites, and the Dist(rIBUTive) head attracts universals and existentials that receive a distributive interpretation in its specifier. Revising her earlier FocP analysis, Horvath (2010; 2013) adds an unpronounced EI head

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(EI for exclusive identification) right above the final landing site of the verb. EI attracts a phrase modified by csak ‘only’ or by an unpronounced EI-operator to its specifier. These latter operators in turn attach to focus-accented phrases, accounting for the well-known correlation of focus accent, preverbal position, and exhaustive interpretation in Hungarian.

Is ‘too’ has been recognized as a head that attracts a focus-accented phrase to its specifier since Brody (1990). The sem that follows its host is the negative concord variant of is and has the same property. In principle, two analyses are possible. (i) IsP and SemP are operator phrases that occupy the specifier of some unpronounced functional head H somewhere in the Ref > Dist > Neg > EI > Neg sequence in the clausal spine. H might be Dist for IsP, and a variant of Neg that has the properties of Chierchia’s (2013) NEG for SemP. Alternatively, (ii) Is and Sem themselves are functional heads in the clausal spine.

Some reasons to prefer (ii) are as follows. First, phrase-internal operator particles invariably precede their sisters in Hungarian:

\[(31)\]
\[
\begin{align*}
a. & \text{ csak Mari ‘only Mari’, vagy tíz ‘some ten = ca. 10’, majdnem tíz ‘almost 10’} \\
b. & \text{ minden fiú ‘every boy’, mindenki ‘everyone’} \\
c. & \text{ mind Kati, mind Mari ‘both K and M’, vagy Kati, vagy Mari ‘either K or M’}
\end{align*}
\]

The particles is and sem would be the only phrase-internal particles to follow their sisters if analysis (i) were chosen.\(^{11}\) Second, focus-sensitive particles always allow for broad focus, even when only a focus-accented constituent of the larger unit appears in their specifier. Recall (2a), repeated as (32); the example works equally well with sem in the place of is.

\[(32)\]
\[
\begin{align*}
\text{A hó is/sem esik, … a gyerek is/sem nyűgös.} \\
\text{the snow too/nor falls … the child too/nor cranky}
\end{align*}
\]

‘The snow is falling, likewise the child is cranky.’ /

‘The snow isn’t falling, likewise the child isn’t cranky.’

Here each is and sem operates on a full proposition, which is better understood if they are heads with those propositions in their complements; this is only possible on analysis (ii). Third, the negative existential/locative verb nincs becomes sincs precisely in contexts where nem is replaced by sem. Likewise, A. Lipták (p.c.) suggests that complex particles such as még-is/még-sem ‘nevertheless,’ de-hogy-is/hogy-is-ne ‘of course not’ are compounded clausal heads, corroborating that status for is and sem.

The fact that Kati is and Kati sem can appear in either preverbal or postverbal position, see (9), might seem problematic for the clausal head analysis of is/sem. But Szabolcsi (1997) and Brody & Szabolcsi (2003) argued that the sequence of operator heads (except for Neg) repeats itself above each of TP, vP, VP, etc. Of these, only the highest sequence is preverbal at spell-out. Analysis (ii) does not require anything beyond this assumption.

As was anticipated in Section 1 and confirmed in Section 2, iterations of host + is/sem are Junction Phrases containing independent propositions, each of which can stand alone.\(^{12}\)

---

11 Horvath (2013) observes that csak either precedes the focused XP (as in (31a)) or immediately follows the verb. She explicitly argues that in the latter case, csak is an overt version of the clausal EI-head, and not a stranded EI-operator. Her representations for two synonymous sentences are as follows. My analysis of is/sem as a clausal head is congruent with Horvath’s (ii).

(i) Mari csak KATI-nak mutattak [be t, Laci-t t].
Mari only Kati-DAT showed PRT Laci-ACC
‘Mari only introduced Laci to KATI.’

(ii) Mari KATI-nak mutattak csak [be t, Laci-t t].
Mari Kati-DAT showed only PRT Laci-ACC
‘Mari only introduced Laci to KATI.’

12 In line with the fact that the juncts are independent clauses, the presence of is/sem in the first junct is not obligatory. In its absence, the structure is similar to Kate was asleep, and Mary too was asleep.
The Junction head is optionally pronounced. When the complements of Is/Sem are identical, both backward and forward ellipsis are possible. Importantly to us, segments like Kati is/sem (és) Mari is/sem, which may seem like constituent coordinations, straightforwardly result from backward ellipsis in clausal coordination, cf. (34a).

(33)

\[
\text{IsP/SemP} \rightarrow J' \rightarrow J \rightarrow \text{IsP/SemP}
\]

where is ‘too’

sem ‘nor’

\[
\text{Is/Sem} \ldots \rightarrow \text{Mari} \rightarrow \text{Is/Sem} \ldots
\]

\[
\text{TP} \rightarrow \text{Kati} 100 \text{ kg volt} \rightarrow \text{Mari} 100 \text{ kg volt}
\]

(34) a. \[
[\text{JP} \text{Kati is/sem 100 kg volt} [J' (és) \text{Mari is/sem 100 kg volt}]].
\]

Kati too/nor and Mari too/nor 100 kg was

‘Kati as well as Mari was 100 kg.’ / ‘Neither Kati nor Mari was 100 kg.’

b. \[
[\text{JP} \text{Kati is/sem 100 kg volt} [J' (és) \text{Mari is/sem 100 kg volt}]].
\]

Kati too/nor 100 kg was and Mari too/nor

‘Kati as well as Mari was 100 kg.’ / ‘Neither Kati nor Mari was 100 kg.’

Comments on the semantics are in order; they are presented with reference to is ‘too’, but carry over to its negative concord variant sem ‘nor’.

Is ‘too’ is an additive particle. It introduces the presupposition that a focus-alternative of the proposition it combines with (i.e., the asserted prejacent) is true. Following Kobuchi-Philip (2009), in the reiterated construction the two or more propositions mutually satisfy each other’s presuppositions, and thus the construction as a whole does not project any presupposition to the global context. Here, Kati is 100 kg volt presupposes that someone other than Kati was 100 kg, which is satisfied by the assertion about Mari. And vice versa, Mari is 100 kg volt presupposes that someone other than Mari was 100 kg, which is satisfied by the assertion about Kati. Brasoveanu & Szabolcsi (2013) address a theoretical problem that arises here. Effortless presupposition satisfaction usually works left-to-right, but here it is computed symmetrically. They propose that the additive requirements introduced by is and its cross-linguistic relatives are in fact post-suppositions in the sense of Brasoveanu (2013). In brief, they are not-at-issue requirements whose satisfaction is delayed within a local domain. Therefore, the juncts wait for one another, and mutual satisfaction is possible. If however nothing in the local domain satisfies the additive requirement, it projects to the global context, and becomes a traditional presupposition.

Szabolcsi (2015: Section 3.1.2) discusses of the behavior of what she calls MO particles in some detail, exemplified by Hungarian is, Russian i, and Japanese mo. In all these languages, the reiterated construction implies a perceived similarity in the juncts. In the case of broad focus, the conjoined propositions are implied to bear on the same salient issue

\footnote{For the derivation of the additive presupposition of English too and Hungarian is, based on focus alternatives, see Szabolcsi (2017).}
in a uniform way (typically, as all favorable or all unfavorable). To wit, example (2) could be used to present the snow’s falling, the wind’s blowing, and the child’s being cranky as congruent facts bearing on whether we should start heading home. The expressions as well as and likewise in the idiomatic translations correspond to this not-at-issue contribution.\(^{14}\)

Szabolcsi (2015) also observes that reiterated examples like (34a) and their cross-linguistic relatives are always interpreted distributively. (34a) can only mean that Kati and Mari individually weigh 100 kg; it cannot mean that they do so collectively. The explanation comes from the additive requirement (post-supposition). If the joint weight of Kati and Mari were 100 kg, the contextual requirement would not be satisfied. The mere presence of the same particle on multiple DPs does not by itself impose this requirement. Japanese A-to B-to ‘A-with B-with = A and B’ allows for both distributive and collective readings; to is a reiterating particle but, semantically, not a “MO particle”.

4 Mind, vagy, akár and pre-host sem are quantifier-internal particles

Reiterations involving particles that precede their hosts involve a JP structure as well, but as a complement of an unpronounced propositional quantifier. The discussion will proceed as follows. 4.1 presents the structure, with some remarks regarding how the particles get realized on the juncts. 4.2 clarifies the neutrality of the J head. 4.3 introduces the gist of the semantics in terms of propositional quantification, as in Kratzer & Shimoyama (2002). 4.4 investigates propositional vs. constituent coordination, bringing in new data pertaining to Right Node Raising.

4.1 JP as a complement of an unpronounced quantifier

Section 2 enumerated descriptive arguments to the effect that the structure of mind, vagy, akár and (strict NC) sem constructions is different from that of is and (non-strict NC) sem ones. The juncts obligatorily come in tuples, each junct bears the same particle, and the connective és ‘and’ cannot be added. (Pedig might be a J head, with the initial quantifier particle adjoining to it, or it may be internal to the last junct. This paper uses pedig primarily as a diagnostic tool and does not attempt to settle its syntax.)

I argue that a JP structure is involved but, unlike in (33), it is the complement of an unpronounced but contentful quantifier that is overtly realized in the form of identical particles on each of the juncts. The syntactic relation between Q and the particles can be seen as feature-checking, as indicated in (35), which repeats (3).

\[
\begin{align*}
\text{(35)} & \\
Q & \quad \text{JP} \\
& \quad \text{where mind ‘all’ vagy ‘or’ akár ‘whether’ sem ‘nor’} \\
& \quad \text{mind/vagy/akár/sem} \\
& \quad \text{[uMind], etc} \\
& \quad \text{Host} \\
& \quad J \\
& \quad \text{[uMind], etc} \\
& \quad \text{Host} \\
& \quad \text{J’} \\
& \quad \text{Host} \\
\end{align*}
\]

Feature checking is a standard tool, and it captures the idea that Q is contentful, whereas the particles merely signal its presence. Feature checking ensures that each and every junct carries the appropriate particle if it is subject to an ATB-style condition.\(^{15}\)

\(^{14}\) These observations are in the spirit of the Parallel discourse relation Asher & Lascarides (2003) attribute to too, but go further in view of the reiterated construction with its symmetrical semantics.

\(^{15}\) Den Dikken (2006) argues that in English either or-type constructions, either and or are not heads but maximal projections adjoined to the juncts. My analysis of Hungarian is similar in not treating vagy as a head.
An alternative tool might be borrowed from Case concord, discussed in Bayırlı (2017), based on Pesetsky (2013). Case concord is specifically pertinent, because Case originates outside DP, not on the Num head (like plural) or on the N head (gender). The realization of the Q-feature can be seen to spread to the coordinates in the manner of Feature Assignment, subject to the intervention of phasal domains:

(36) Feature assignment (FA)
   a. Copying: when α merges with β, forming [α β], the grammatical features of α are immediately copied on β
   b. Realization: … and are realized as morphology on all lexical head items dominated by β.

(37) Phasal domains
The overt manifestation of concord is suppressed by the intervention of phasal domains.

Imitating Bayırlı’s notation, we may instantiate mind mind constructions as follows, with the arc indicating a domain that is not penetrated by the copied particles. Read S as a variable over appropriate categories.

(38)

This paper will simply work on the assumption that some well-attested syntactic mechanism can account for the realization of the Q feature in the form of particles on each of the juncts.

4.2 Towards interpretation: junction merely forms tuples (sets)
Den Dikken (2006) employs JP for either or, neither nor, and both and structures. He does not specify what semantic contribution, if any, the J head makes, but his use of J in these varied cases indicates that it is meant to be semantically neutral. To make that idea precise, Szabolcsi (2015) couples JP with a proposal by Winter (1995). On that view, J merely forms an ordered tuple of the juncts. It is neither a conjunction, nor a disjunction. The tuple is converted to a set and, by default, an unpronounced operation interprets it as a conjunction, just as an unmarked sequence of sentences in a text is interpreted conjunctively. Additive (MO-) particles reinforce the conjunctive interpretation; in their presence, it is not merely a default. This is what happens in (33) above. But other particles on the juncts may override the default. Szabolcsi (2015) discusses KA-particles that invoke an unpronounced disjunctive operation. She argues that disjunctions are overtly marked, precisely because the conjunctive default needs to be overridden.

In what follows, I will likewise assume that J itself does not make JP a conjunction or a disjunction. It merely forms an ordered tuple, or set, of the juncts. What semantic operation is performed is determined by the particles on the juncts (i.e. the unpronounced Q whose presence they signal).

English differs from Hungarian in that either is distinct from or, and either is optional. But *either p, q and *either p and q, etc. are not grammatical, so English also requires some efficient regulation.
4.3 Unpronounced Q is a contentful propositional quantifier

Recall from Section 2.4 that the same particles that appear in (35) also form quantifier words with indeterminate pronouns, yielding the parallelisms below, and similarly for *akár* and *sem*:¹⁶

     all Kati all Mari all PEDIG Peti sleeps everyone sleeps

     or Kati or Mari or PEDIG Peti sleeps someone sleeps

The parallelism recalls an insight from Kratzer & Shimoyama (2002) and Kratzer (2005), presented for quantifier words that are built in the same way as *mindenki* and its brothers.

“Suppose we ... assumed that Indo-European indefinites, too, associated with independent quantificational operators. Their distinctive morphology might then tell us something about the nature of those operators. It might indicate syntactic agreement with matching non-overt propositional operators, as proposed in Beghelli and Stowell (1997) and thus create syntactic behavior not found with Japanese indeterminate pronouns. That speakers of Latvian, German, or Spanish, for example, perceive the pronouns and determiners of the *kaut*, *irgendein* or *algún* series as existentials would now no longer mean that those expressions are themselves existentials. Their existential look would be the overt expression of syntactic agreement with propositional [∃], the true carrier of existential force. Those indefinites might have an uninterpretable but pronounced [∃] feature, then, that must enter an agreement relation with a matching interpretable feature that happens to be unpronounced.” (Kratzer 2005: 131)

The propositional quantifiers referred to above are defined as follows:

(41)  a.  [∃](A) = {the proposition that is true in all worlds in which some proposition in A is true}
     b.  [∀](A) = {the proposition that is true in all worlds in which every proposition in A is true}

Kratzer and Shimoyama apply (41) in the interpretation of sentences with quantifier words. There, A is the set of propositional alternatives generated off of indeterminate pronouns (*who*) in Hamblin-style alternative semantics: the set of propositions such that, for any human there is, the proposition that this human sleeps is in the set.

(42)  [[who sleeps]]w,g = { p: ∃x [human(x)(w) & p = λwʹ. sleeps(x)(wʹ)] }

In our case, A is the set of propositions that JP assembles from the juncts in it, as described in 4.2 above. Hamblin semantics can be used but does not play any particular role.¹⁷

---

¹⁶ The “≈” is motivated by the fact that the reiterated *vagy_vagy* construction is exhaustive (see Spector 2014 on *soit_soit*), whereas *valaki* is a vanilla indefinite like *someone*. However, Szabolcsi (2015: Section 3.2.5) points out that in many languages, reiterated disjunctions are not exhaustive: such are Sinhala (Slade 2011), Malayalam and Kannada (Jayaseelan, p.c.), as well as English *either_or* on many of its uses. While exhaustivity needs to be accounted for, it is not an inescapable property of reiterated disjunctions. It is with this grain of salt that I take *vagy_vagy* and *valaki* to be approximate counterparts.

¹⁷ One of the anonymous reviewers notes that there is a large literature that points out problems with scope and binding in Kratzer & Shimoyama’s version of alternative semantics and offers solutions. An early piece is Shan (2004), and a very recent one is Charlow (2018).
(43) \( \{ \lambda w. \text{sleeps(kati)}(w), \lambda w.\text{sleeps(mari)}(w), \lambda w.\text{sleeps(peti)}(w) \} \)

For example, with particle \textit{mind} ‘all’ attached to the juncts, the matching \( Q \) is \( \forall \), and the result is the proposition that is true in all worlds where each of \textit{Kati sleeps}, \textit{Mari sleeps}, and \textit{Peti sleeps} is true.

Note that at the end of the day the following two sentences have the same truth conditions:

(44) a. \textbf{Mind} Kati (alszik), \textbf{mind} Mari (alszik), \textbf{mind} Peti alszik.

   all Kati sleeps all Mari sleeps all Peti sleeps

b. Kati \textbf{is} (alszik), Mari \textbf{is} (alszik), Peti \textbf{is} alszik.

   Kati \textbf{too} sleeps Mari \textbf{too} sleeps Peti \textbf{too} sleeps

The reason is that “every proposition in \( \{ p, q, r \} \) is true” is logically equivalent to “\( p \) is true, and \( q \) is true, and \( r \) is true”. The overall meaning of these sentences leaves us in the dark as to how that meaning might be composed. Only detailed analysis can help. This is especially important to bear in mind if one investigates a language in which, for some reason or other, even linear order does not distinguish between the two types of particles.

4.4 Propositional coordination and quantification

We have arrived at propositional quantification from two directions. On the one hand, Kratzer & Shimoyama use it for the equivalents of \textit{Someone/Everyone sleeps}, for reasons related to Hamblin semantics. (In this paper, we are not specifically concerned with quantifier words.) On the other hand, the ellipsis-free versions of particle+host reiterations are straightforward representatives of propositional quantification.

(45) a. Mind a nap kisütött, mind a szél elállt.

   ‘Each of \{the sun came out, the wind died down\} is true.’

b. Vagy a hó esik, vagy a szél fúj.

   ‘Just one of \{the snow is falling, the wind is blowing\} is true.’

c. Akár a hó esik, akár a szél fúj, bajban vagyunk.

   ‘No matter which of \{the snow is falling, the wind is blowing\} is true, we are in trouble.’

d. Sem a hó nem esik, sem a szél nem fúj.

   ‘Not one of \{the snow is falling, the wind is blowing\} is true.’

In other examples, the particles seemingly attach to smaller constituents (\textit{Mind Kati, mind Mari alszik}, etc.). Starting with the introduction, I suggested that these are obtained by the optional ellipsis of shared material. The examples below provide further evidence that ellipsis or structure-sharing must be involved in some of the examples where the juncts are not complete propositions. I first illustrate the phenomenon with comparable examples from English:

(46) a. Bring me both the blue __ and the green bottles.

b. Bring me either every blue __ or every green bottle.

c. Neither at least five blue __ nor more than six green bottles were provided.

(47) a. Invite both the left- __ and the right-handed children.

b. Invite either every left- __ or every right-handed child.

c. Neither at least five left- __ nor more than six right-handed children participated.
These examples bring to mind Right-Node Raising, which is often handled by movement. But neither *bottle(s)* in (46), nor *-handed child(ren)* in (47) could be shared by the two juncts as a result of rightward across-the-board extraction. I thank A. Lipták (p.c.) for directing me to work by V. Valmala that solves the problem. Using Right Node Raising as a pre-theoretical cover term, Valmala (2012; 2013) distinguishes *focal-pivot* right-node raising and *non-focal pivot* right-node raising, and argues that the confusingly mixed properties of RNR can be neatly sorted out once this distinction is made. Valmala proposes a set of diagnostics; see his work for details. Below I give a bird’s eye review.

**Focal-pivot** RNR obtains when the shared string (the pivot) has focus accent. Focal pivots are always extractable expressions. For example:

(48)  I brought _ from the pantry and put _ on the table A TEN-POUND BIRTHDAY CAKE.

**Non-focal pivot** RNR obtains when the last element before the pivot is focused and the pivot crucially is not. In this case the pivot may or may not be an extractable expression; non-extractable ones can only participate in this latter kind of RNR. (46) and (47) would be examples. Valmala argues that here the gap is not a result of movement; instead, interpretation is in-situ. He considers two possible mechanisms: ellipsis or structure-sharing (multidominance), without committing to a choice. I will not not address this theoretical issue, and simply use the label ellipsis.

As A. Lipták (p.c.) observes, Hungarian never moves constituents to the right to be assigned stress, even pretheoretically and non-anti-symmetrically speaking, and so it does not exhibit focal-pivot RNR, although it allows non-focal-pivot RNR of the same string:

(49)  a. *Peti hallott— és Mari olvasott— MINDEN NOBEL-DÍJAS-ról.
    Peti heard and Mari read every Nobelist-ABOUT
   
   ‘Peti heard and Mari read about every Nobelist.’

Turning to the quantifier particle constructions, Hungarian exhibits a huge variety that exemplify the non-focal pivot RNR case. Verb-initial (50b), (51b) and (52) plausibly involve leftward across-the-board extraction of the verb, and (51b), the subsequent merger of negation.

    all one tall all six short child-ACC invited-1SG
   ‘I invited both one tall and six short children.’
   
    b. Meghívtam mind egy magas — mind hat alacsony gyerek-et.
    invited-1SG all one tall all six short child-ACC

(51)  a. Sem a JOBB- — sem a BAL-kezes gyerekek nem sírt-ak.
    nor the right- nor the left-handed child-PL not cried-3PL
   ‘Neither the right- nor the left-handed children cried.’
   
    b. Nem sírtak sem a JOBB- — sem a BAL-kezes gyerek-ek.
    not cried-PL nor the right- nor the left-handed child-PL
(52) Adj-ál vagy minden fiúnak négy KÉK __
give-2sg or every boy-DAT four blue
vagy minden lány-nak hat ZÖLD golyót.
or every girl-DAT six green marble-ACC

‘Give either every boy four blue _ or every girl six green marbles.’

These examples most likely derive from propositional coordination and quantification. The question arises whether the simpler ones involve DP-level (generalized quantifier) coordination and quantification, e.g.:

(53) a. Vagy sok fiú, vagy kevés lány aludt.
or many boy or few girl slept
‘Either many boys or few girls slept.’

b. QP

\[ \lambda P[\text{many}_\text{boys}'(P) \lor \text{few}_\text{girls}'(P)] \]

At least two works have recently called into question the availability of phrase-level coordination, arguing for conjunction reduction: Schein (2017) and Hirsch (2017). Schein’s arguments primarily come from plurals and event semantics. Hirsch investigates semantically simpler cases and proposes that syntactic well-formedness and the availability of certain scope relations are best understood if coordinate structures are derived from vP-coordination, coupled with well-attested mechanisms for ellipsis, e.g. gapping. Importantly, he notes that as soon as generalized quantifiers are coordinated, semantically speaking we have propositional (type t) coordination (though not necessarily full-clausal coordination). Therefore, in the domain of data that he investigates, the general unavailability of constituent coordination must be a syntactic matter.

The same argument extends to the question of (53). If the formation of the generalized-quantifier level JP and QP is not possible even for such an innocent-looking case, that probably has to do with what syntactic mechanisms are available. At this point I cannot pinpoint any syntactically disastrous effects that would emerge if (53b) were allowed to co-exist with the various possibilities for ellipsis. However, the data discussed in this paper will offer new grounds for hypothesis testing.

5 Negative concord

Finally, we come back to the strict vs. non-strict negative concord facts observed in 2.5. To attack them, we must first know how NC works in Hungarian.

Szabolcsi (2016) proposes a unified account of the hybrid negative concord data in (23)–(24), as follows. Senki ‘n-one’ is an existential that must occur within the immediate scope of clause-mate semantic negation. The negation may be contributed by the Neg head nem ‘not’. The requisite scope relation automatically holds when senki is in postverbal position, cf. (25). When senki occurs preverbally, as in (23), it is in the specifier of the Neg head nem. It moves there by remnant movement, by itself or possibly along with another NCI or a minimizer like egy szemhunyás ‘a wink’. Remnant movement reconstructs, so the moved item or sequence continues to be in the scope of nem.
The structure in (54) contains a phonetically null operator $O_{\text{ALT}}$. Szabolcsi (2016) follows Chierchia’s (2013) explanation of why negative polarity and negative concord items must be within the immediate scope of a suitable decreasing operator (here: negation). The explanation is that these items have obligatorily active alternatives, which by definition must be exhaustified. $O_{\text{ALT}}$ is an exhaustifier. The exhaustification of positive alternatives leads to a contradiction, but the exhaustification of negated alternatives is innocuous. See Chierchia (2013) for details.

Crucially, Szabolcsi (2016) also adopts, and adapts, Chierchia’s analysis of non-strict, Italian-style negative concord. Chierchia argues that Italian has a phonetically null functional head that he calls NEG that has two critical properties: (i) it must agree with an NCI in its specifier, (ii) it is capable of invoking a contentful but abstract (disembodied) negation, $\sim$ at the edge of its projection. Preverbal nessuno ‘n-one’ sits in the specifier of null NEG, and the contradiction $O_{\text{ALT}}$ would produce is averted by the disembodied negation, $\sim$.

Szabolcsi (2016) argues that in examples like (32), Hungarian $\langle\text{sem}\rangle$ ‘nor’ is an overt counterpart of Chierchia’s NEG, and so a functional head above TP.

(55) Senki sem aludt. ‘No one slept.’

Non-strict NC
Abstract $\sim$ right above SemP-above-TP
$\langle\text{sem}\rangle$ ‘nor’ needs a focus-accented XP in its spec, and to be in the immediate scope of $\sim$
$\langle\text{senki}\rangle$ ‘n-one’, existential, NCI
One aspect of this analysis that is important to us is that the sem ‘nor’ that follows its host is now established as a functional head on the clausal spine. Szabolcsi (2016) identifies sem ‘nor’ as the negative concord counterpart of is ‘too’. Both is and sem are focus-sensitive and therefore attract focus-accented elements to their specifiers (not restricted to NCIs).

We can now turn to the negative concord structures that involve reiterations. The reiterated construction in (56) represents non-strict negative concord, because it is a conjunction of two clauses, with ellipsis in the first. Each of those clauses contains the functional head Sem with a focus-accented DP in its specifier and an abstract negation, cf. (55). It effectively says, ‘Kati didn’t sleep and likewise Mari didn’t sleep’.

(56) Non-strict NC
Kati nor aludt and Mari nor slept n-one nor slept
‘Neither Kati (slept), nor Mari slept.’

The reiterated construction in (57) represents strict negative concord. Sem Kati, sem Mari being analogous to senki ‘n-one’, (57) contains one large existential quantifier over propositions, within the scope of nem ‘not’. It effectively says, ‘It is not the case that there is a true proposition in the set {Kati slept, Mari slept}’.

(57) Strict NC
not slept nor Kati nor PEDIG Mari not slept n-one
‘Neither Kati slept, nor Mari slept.’

nor Kati nor PEDIG Mari not slept n-one not slept
‘Neither Kati slept, nor Mari slept.’

(57a) can be derived by across-the-board movement of the verb from sem Kati alud-, sem (pedig) Mari alud-, adjoining it to T, with the subsequent merging of nem ‘not’. In (57b), those steps are followed by remnant movement of sem Kati, sem (pedig) Mari to the specifier of nem.

The two particles sem ultimately compose the same meanings, in two different ways. The strict/non-strict distinction is a consequence of the structures. In particular, the non-strict NC property is due to the fact that the sem that follows its host is a counterpart of Chierchia’s NEG head that is capable of invoking an abstract negation. The sem that is instantiated preceding its host on every member of a tuple is an existential quantifier that requires to be in the scope of negation but is not capable of pulling one out of thin air; hence the need for overt nem, a hallmark of strict negative concord.

In sum, the negative concord facts square with the analyses of the two constructions discussed in Sections 3 and 4.

As a supplement, I comment on strict-NC iterations that include the verb (i.e. where the verb is not ATB extracted, cf. (57)). These are notoriously complicated and difficult to account for in Russian, for example (e.g. Tiskin 2017). In Hungarian, pattern (58) without nem ‘not’ only exists as a frozen idiomatic expression that preserves a stage of the Jespersen cycle from more than 500 years ago (É. Kiss 2015), whereas the parallel pattern in Russian is the only possible one:

(58) Hungarian
Peti se lát, se hall. Petija ni (*ne) el, ni (*ne) pil.
Peti nor sees nor hears Petija nor not ate nor nor drank
‘Peti neither sees nor hears = ‘Petja neither ate nor drank.’
is too excited to perceive anything.’
Modern Hungarian differs from Russian: nem ‘not’ invariably appears on each verb.

(59) Peti **sem** nem evett, **sem** (pedig) nem ivott.
    Peti **nor** not ate **nor** PEDIG not drank
    ‘Peti neither ate nor drank.’

What explains the obligatory sem nem sequences? Predicate clefting, i.e. contrastive topicalization of the verb, as in (60), could be the source (Szabolcsi 1981: 145). It provides truth-conditionally vacuous material that sem can attach to:

(60) Peti **sem** en-ni nem evett, **sem** (pedig) in-ni nem ivott.
    Peti **nor** eat-INF not ate **nor** PEDIG drink-INF not drank
    ‘As for eating, Peti didn’t eat, as for drinking, he didn’t drink.’

(60) exhibits the same sem X nem VERB, sem Y nem VERB pattern as (61), and if the non-finite verbs enni and inni are silently present in (59), then (59) does, too:

(61) **Sem** Mari nem evett, **sem** (pedig) Kati nem ivott.
    **nor** Mari not ate **nor** PEDIG Kati not drank
    ‘Neither Mari ate, nor Kati drank.’

Now the puzzle, shared by (60) and (61), is this. The sem sem construction is a propositional existential QP that must be within the immediate scope of negation. Consider two conceivable sources that are ungrammatical as they stand. If the source of (61) is (62a), then each sem is within the scope of its own nem, but it is not clear how the sem sem QP is ever formed. If the source is (62b), it is not clear how a subsequently merged nem will insert itself into the two juncts. Thus, (62a,b) are not promising. A similar paradox is pointed out in Tiskin (2017).

(62) a. (*) [JP [ nem evett sem Mari] [J [ nem ivott sem Kati] ]
    nor Mari not drank nor Kati
    b. (*) [NegP nem ... [QP [ [sem Mari evett] [J [ sem Kati ivott] ]]]]
    nor Mari ate nor Kati drank

A possible solution may be to extend the propositional QP structure in (35) to a propositional NemP structure, as in (63). On this assumption, nem is present in both juncts but, just like mind, vagy, akdr and (strict NC) sem, it merely signals the presence of an unpronounced but contentful operator. It is an open question why the intervening [Sem] does not prevent [Nem] from reaching its target via feature checking or concord.

(63) \[
\text{NemP} \\
\quad \text{[Nem]} \leftarrow \text{QP} \\
\quad \quad \text{[Sem]} \exists \text{JP} \\
\quad \quad \quad \text{sem M nem evett} \\
\quad \quad \quad \quad \text{nor M not ate} \\
\quad \quad \quad \quad \quad \text{J′} \\
\quad \quad \quad \quad \quad \quad \text{sem K nem ivott} \\
\quad \quad \quad \quad \quad \quad \quad \text{nor K not drank}
\]
The unpronounced [Nem], ¬ and the overt, contentless nem morphemes will immediately remind the reader of Zeijlstra’s (2004) proposal for strict negative concord, under which nem would be [uN], to be checked by a null [iN] operator interpreted as ¬. Szabolcsi (2016) argues against such an analysis. First, the assumption that the overt sentential negation marker is uninterpreted leaves its mandatory presence unexplained. Second, because strict and non-strict negative concord co-exist in Hungarian, the two types cannot be distinguished by uninterpreted vs. contentful sentential negation markers. The straightforward choice is to have a unitary, contentful nem. Notice that the problem that arises in (59), (60), and (61) is fairly specialized; it has to do with the presence of nem in all the juncts of a reiterated strict NC construction when the verb stays in the juncts. It remains to be seen if the problem eventually necessitates a major revision, or it can be handled more locally. Since Russian presents a similar paradox, a good solution should extend cross-linguistically.\(^{18}\)

6 Cross-linguistic significance

Languages like Japanese and Malayalam have particles that occur in all of the following three constructions (possibly also in others):

(64) **Japanese** (Szabolcsi, Whang & Zu 2014: 139, 142, 165)

a. dare-mo, dono-kyouju-mo ‘everyone, every prof’

b. John-mo Mary-mo ‘John as well as Mary’

c. kare-mo ‘also/even he’

(65) **Malayalam** (Jayaseelan 2001: 64, 65; 2011: 281)

a. aar-um, eppoozh-um ‘anyone, always’

b. John-um Bill-um Peter-um ‘John and Bill and Peter’

c. oru kúTTi-(y)um ‘a child also’

The existence of the above paradigms in historically unrelated languages suggests that they do not result from accidental homonymy. See especially Slade (2011) and Mitrović (2014) for arguments against homonymy, grounded in synchronic and historical comparisons. Szabolcsi et al. (2014) and Szabolcsi (2015) argued that a truly compositional analysis must offer a unified semantics for the full range of each particle’s occurrences. While arguing for a unified analysis, Szabolcsi also pointed out the need for finer distinctions:

“Shimoyama (2006, p. 147) suggests that mo ‘every/any’ and mo ‘too/even’ are distinct, in view of the fact that an intervening mo ‘too’ does not block the association of an indeterminate pronoun within a relative clause with mo ‘every’ outside the relative clause. Shimoyama does not specify exactly how the two mo’s have to be distinct in order not to interfere with each other. But the fact that Hungarian covers the territory of mo with two distinct segments, mind and is, would be consonant with Shimoyama’s suggestion that there is a difference. See [2], repeated as [51]:

(51) 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 ‘A as well as B, both A and B’

c. A is A-mo ‘A too/even A’

The relation between mind and is has not been investigated, and I have nothing useful to add here. But, mind A mind B is synonymous with A is (és) B is. This

\(^{18}\) Jeretič (2017) addresses the optionality of ne in Turkish. Turkish NC patterns differently from Hungarian and quite possibly differently from Russian, cf. Tiskin (2017).
suggests that, by transitivity, \textit{mind(enki)} and \textit{is} legitimately belong under the same semantic umbrella.” Szabolcsi (2015: 183)

The present paper undertook the investigation of the relation between \textit{mind} and \textit{is}, set in the context of larger sets of Hungarian particles. The results show that, at least in Hungarian, there is no unbroken syntactic line from the unary particle to the quantifier: the difference between \textit{is} and \textit{mind} has proved to be syntactically significant. \textit{Is} ‘too’ is analyzed as a head on the clausal spine, which is in line with its distribution displayed in [51]. This converges with its treatment in Szabolcsi (2015). The analysis of \textit{mind} is novel. \textit{Mind} ‘all’ is analyzed as a quantifier-internal particle, also in line with its distribution displayed in [51]. But, despite the syntactic divergence, the truth-conditional equivalence of \textit{is} \textit{is} and \textit{mind mind} that was critical for the semantic concerns of Szabolcsi (2015) remains in place.

Naturally, the syntactic difference does not only matter for syntax. It matters for compositional semantics, i.e. for how the possibly shared meanings are composed.

6.1 Cross-linguistic questions

This situation calls for further research directed at the division of labor in this area of the syntax/semantics interface. What is the best way to strike the theoretical balance between the syntactic differences and the semantic similarities, within one language and across languages? Is it justified to generalize over the clausal head and the quantifier-internal versions in languages where the same particle morphemes show up in both roles? Are the reiterated constructions actually syntactically ambiguous in some of those languages, even if there is no difference in linear order that might draw attention to the possibility of a structural ambiguity? How to deal with this overarching question in languages that are largely similar to Malayalam, Japanese, and Hungarian in the pertinent respects, but quantifier words are generally not built from wh-pronouns and independently active particles?

Below I illustrate the interest of these questions with reference to Persian and Turkish on the one hand, and Telugu and Japanese on the other. This is followed in Section 6.2 by a survey of data from a broader range of languages that have both types of particle construction.

The possibility of syntactic ambiguities is highlighted by the \textit{sem} data discussed in the foregoing sections. The right-hand column of (66) recaps how \textit{sem} syntactically parallels both \textit{mind} and \textit{is}:

\[
\begin{align*}
\text{(66)} & \quad \begin{array}{lllll}
\text{a. mind-en-ki} & \text{‘everyone’} & \text{sen-ki} & \text{‘n-one’} \\
\text{b. mind X mind Y} & \text{X as well as Y} & \text{sem X sem Y} & \text{‘neither X nor Y’} \\
\text{X is Y is} & \text{X as well as Y} & \text{X sem Y sem} & \text{‘neither X nor Y’} \\
\text{c. X is} & \text{‘X too’} & \text{X sem} & \text{‘nor X’} \\
\text{d. *mind X} & \text{*sem X} & & \\
\end{array}
\end{align*}
\]

Now consider Persian in the right-hand column of (67) (A. Kahnemuyipour, p.c.):

\[
\begin{align*}
\text{(67)} & \quad \begin{array}{llll}
\text{Hungarian} & \text{Persian} \\
\text{a. mind-en-ki} & \text{‘everyone’} & \text{[har kas, harki]} & \text{‘everyone’} \\
\text{b. mind X mind Y} & \text{X as well as Y} & \text{ham X ham Y} & \text{‘X as well as Y’} \\
\text{X is Y is} & \text{X as well as Y} & \text{X ham Y ham} & \text{‘X as well as Y’} \\
\text{c. X is} & \text{‘X too’} & \text{X ham} & \text{‘X too’} \\
\text{d. *mind X} & \text{*ham X} & & \\
\end{array}
\end{align*}
\]

(67b, c, d) make it plausible that Persian \textit{ham} plays the syntactic roles of both Hungarian \textit{is} and Hungarian \textit{mind}, even though there is a gap in (67a): Hungarian \textit{mind} builds \textit{mindenki} ‘everyone’ (and serves as the floating quantifier \textit{mind} ‘all’), whereas Persian \textit{ham} does neither.
Turkish, in turn, borrows herkes and hem X hem Y from Persian (B. Kamali, p.c.), but has $dA$ for a clausal head (Kamali & Karvovskaya 2013):

\[(68)\]

- **Hungarian**
  - a. mind-en-ki ‘everyone’
  - b. mind Y mind X ‘Y as well as X’
  - c. X is Y is ‘X as well as Y’
  - d. *mind X ‘X too’

- **Turkish**
  - [her-kes] ‘everyone’
  - hem X hem Y ‘Y as well as X’
  - X dA Y dA ‘X as well as Y’
  - X dA ‘X too’

Again, the syntactic parallelisms in (68b, c, d) seem solid.

Since Persian $ham$ X and Turkish $hem$ X are unacceptable outside tuples (in contrast to $X ham$ and $X dA$), the $ham/hem$ that occur in $ham/hem$ X $ham/hem$ Y are probably not counterparts of Hungarian is ‘too’. Given the discrepancies in (67a)–(68a), it would be rash at this point to jump to the conclusion that they are synonymous with Hungarian mind ‘all’. This is why the solid parallelisms are qualified as syntactic. However, although Persian has no quantifier word $^*ham$-ki ‘everyone’, the noun $hame$ ‘all’ forms universal quantifier phrases with count and mass nouns and serves as a floating quantifier (Toosarvandani & Nasser 2017: 666, 683–4, 690). This is quite similar to the behavior of mind(en), illustrated in fn. 8. If $ham$ and $hame$ are at least historically related, then it is possible that the $ham$ that precedes its host more generally parallels mind(en), in contrast to the $ham$ that follows its host and parallels is. Naturally, the gaps with quantifier words require a systematic explanation, and the compositional interpretation needs to be developed.

Now consider the relation between clausal head particles and the universal quantifier particles from another angle. In Sections 2 and 3, it was observed that Hungarian is ‘too’ does not build quantifier words with wh-pronouns (*is-ki, *ki-is); this was taken to be one argument for its clausal head, as opposed to QP-internal, character. The same holds for counterparts in Russian, for example (see 6.2), but not in Japanese (Shimoyama 2011) or Telugu (Balusu 2017):

\[(69)\]

- **Japanese**
  - dare-mo ‘anyone, NCI’ or ‘everyone’
  - Akira-mo ‘Akira too/even Akira’

- **Telugu**
  - eppuD-uu ‘ever, NCI’ or ‘always’
  - evar-uu ‘anyone, NCI’ but *‘everyone’
  - Ravi-uu ‘Ravi too/even Ravi’

How can the Japanese and Telugu data be made sense of now, given our syntactic vigilance?

---

19 (i) (Toosarvandani & Nasser 2017: (58))

Man hame=ye ketâb=â=ro xarid-am.

I all=EZ book=PL=ACC buy.PST-1SG

‘I bought all the books.’

(ii) (Toosarvandani & Nasser 2017: (57))

Hame=ye yax âb shod=e.

all=EZ ice water become.PTCP=be.PRS.3SG

‘All the ice melted.’

In addition, A. Anvari (p.c.) points out the existence of $hame$-kas ‘everyone’ and $hame$-chiz ‘everything’ that emphasize universality, and $ham$ dige ‘each other’.
Balusu (2017) proposes that the Telugu particle -VV (harmonizing long vowel) primarily forms polarity sensitive expressions with wh-pronouns, and the availability of the universal reading is a result of subsequent exhaustification (limited to eppuD-uu in Telugu). If the same analysis can be extended to Japanese and the generally available universal reading for wh + mo is obtained by exhaustification, then it may be possible to maintain that both -VV and -mo are heads on the clausal spine that have the ability to accommodate wh-pronouns in their specifiers. That would in turn provide a link to the analysis of the Hungarian string senki sem, analyzed with senki in the specifier of the clausal head sem; see the discussion of (55) in Section 5:

(71)  

\[
\begin{array}{c}
\text{Sem} \\
\text{sen-ki} \\
\text{sem} \\
\text{...} \\
nor
\end{array}
\]  

‘non-strict NCI’

Similarly, Hungarian is accommodates existential pronouns in its specifier, with the effect of creating weak negative polarity items, cf. (22), repeated below:

(72)  

\[
\begin{array}{c}
\text{Is} \\
\text{vala-ki} \\
\text{is} \\
\text{...} \\
too
\end{array}
\]  

‘anyone, NPI’

\[
\begin{array}{c}
\text{Is} \\
\text{akár-ki} \\
\text{is} \\
\text{...} \\
too
\end{array}
\]  

‘anyone, NPI’

It remains an open question why Telugu -VV and Japanese -mo combine with bare wh-pronouns and Hungarian is/sem with ones that have (uninterpreted) existential particles. (Note that senki sem and valaki/akárdki is are strings, not single “quantifier words”.)

Szabolcsi (2017) proposes a semantics for Hungarian is/sem that subsumes the additive, scalar, negative polarity and free choice readings. In brief, is/sem seeks out a set of alternatives induced by its host and activates them. These may be focus alternatives or subdomain/scalar alternatives. Activation in the sense of Chierchia (2013) entails that the alternatives must be incorporated into the meaning of the sentence by way of some strengthening (e.g. exhaustification) mechanism, typically with the assistance of further, overt or covert operators. According to Szabolcsi (2017), English too and either fall under the same generalizations, although they apparently specialize in working with focus-alternatives. This is in the same spirit as Balusu (2017), although the latter only investigated combinations with wh-pronouns.

With this last ingredient added and generalized cross-linguistically, it appears that the apparently contradictory properties of -mo and -VV can be reconciled.

6.2 A survey of Bosnian, French, Japanese, Mandarin, Persian, Russian, Sinhala, Telugu and Turkish

The present paper cannot undertake a thorough descriptive and theoretical investigation of the questions raised above, but as a starting point, this subsection presents the results of a small cross-linguistic survey. The data establish the prevalence of two distinct constructions, even though cross-linguistically, the distinction does not track the relative order of the particles and their hosts.

The data were solicited from semanticists and syntacticians. The survey did not ask them to commit to syntactic or semantic analyses, although sometimes I was able to rely on their closely related publications; see especially Kobuchi-Philip (2009); Slade (2011);

20 I am grateful for data and discussion to A. Anvari (Persian), R. Balusu (Telugu), M. Esipova (Russian), P. Jeretič (French, Turkish), B. Kamali (Turkish), J. Kornfilt (Turkish), A. Kahnemuyipour (Persian), H. Li (Mandarin), M. Kobuchi-Philip (Japanese), B. Slade (Sinhala), and D. Veselinović (Bosnian). The survey was not meant to be broad; instead, it hoped to benefit from the related expertise of the sources.
Kamali & Karvovskaya (2013); Balusu (2017); Esipova (2017); Jeretič (2017). The data typically came in the form of full sentences, but the summary below distills them into schemas. We did not try to track down all the pertinent constructions in the given languages, so the important distinction is between one or more representative, or no representative, of each type.

Each of Bosnian, Japanese, Mandarin, Persian, Russian, Modern Colloquial Sinhala, Telugu, and Turkish appears to have a counterpart of Hungarian is is ‘too_too’. Some particles have restrictions on the size of the propositional (i.e. type t) hosts they combine with. Whether the particle precedes or follows its host is not cross-linguistically consistent and thus not diagnostic. Instead, the diagnostic properties are the following:

\[(73)\quad \text{Head on the clausal spine Too_Too} \]
\[a. \quad \text{The particle need not be part of a tuple, cf. Mari is aludt ‘Mari too slept’ is happy on its own.} \]
\[b. \quad \text{Where an optional connective is possible in iterations, it can occur between all of the juncts (not only before the last junct), and it is typically plain ‘and’.} \]

Consider the following schematic data in Table 1; comments follow below. Three juncts are displayed to bear out one critical difference between the two types of reiterated constructions. (Telugu -VV and Turkish -dA exhibit vowel harmony.)

In multiple languages, no optional connective is possible. This does not entirely correlate with whether ‘too’ is homophonous with ‘and’ in the table. Moreover, Mitrović & Sauerland (2016: 482) cite Macedonian [i Roska] i [i Ivan] ‘both Roska and Ivan’.

Whether the optional connective (if one exists) may appear between all the juncts is a somewhat delicate matter. Notice that in English, John and Mary and Bill is grammatical

\[\text{Table 1: Too_Too.}\]

<table>
<thead>
<tr>
<th></th>
<th>X is (és)</th>
<th>Y is (és)</th>
<th>Z is X is és</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungarian</td>
<td>X is (és)</td>
<td>Y is (és)</td>
<td>Z is X is és</td>
</tr>
<tr>
<td>Telugu</td>
<td>X-VV</td>
<td>Y-VV</td>
<td>Z-VV X-VV mariu/inkaa</td>
</tr>
<tr>
<td>Japanese</td>
<td>X mo (? soshite)</td>
<td>Y mo (soshite)</td>
<td>Z mo X mo soshite</td>
</tr>
<tr>
<td>Bosnian</td>
<td>i X (? a)</td>
<td>i Y (a)</td>
<td>i Z i X i</td>
</tr>
<tr>
<td>Russian</td>
<td>i X (i Y)</td>
<td>* i Z (i X)</td>
<td></td>
</tr>
<tr>
<td>Persian</td>
<td>X ham (i Y)</td>
<td>* Z ham X ham n/a</td>
<td></td>
</tr>
<tr>
<td>Turkish</td>
<td>X-dA * (i Y)</td>
<td>Z-dA X-dA ve</td>
<td></td>
</tr>
<tr>
<td>Sinhala</td>
<td>X-(u)y * (u)y * Z-(u)y X-(u)y n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandarin</td>
<td>ye X * ye (u)y * ye Z ye X he</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21 In Japanese and many other languages, particles generally do not occur in coordinations of tensed clauses (coordination is at the VP level). Hungarian and Russian do not share this property with Japanese; see examples in Szabolcsi (2015: 182). I consider this to be an independent issue. Likewise, some languages may have specialized entity-type conjunctions that produce plural individuals (Mitrović & Sauerland 2016). In all the constructions discussed in this paper, the predicate strictly distributes to each junct, so this does not seem to be a factor here. On the other hand, in Russian (and possibly Bosnian), i DPI i DP2 ‘both DP1 and DP2’, while semantically distributive, requires or prefers plural inflection on the verb, casting some doubt on i ‘too’ being invariably a clausal head. Following Valmala (2012), this fact might be described in terms of RNR using ATB extraction as opposed to in-situ interpretation. The other languages in the sample either do not have number agreement on the verb, or (like Hungarian and Turkish) have singular agreement when the subject is a coordination or has a numeral. The Slavic data must be scrutinized in the future.
but dispreferred in comparison with John, Mary and Bill. For the same reason, the single and may indicate the completion of the list, but that is probably a Gricean inference. The Japanese and Bosnian data can be interpreted in the same way, but caution is in order. Almost all the languages in the sample have one or more ‘either_or’ constructions that seem to exemplify quantifier-phrase internal particles. As above, whether the particle precedes or follows its host is not cross-linguistically consistent. The diagnostic properties are the following:

(74) Quantifier-phrase internal Or_Or
a. The particle and its host must be part of a tuple.
b1. The optional connective, if it exists, is typically a specialized item that has contrastive or adversative uses, similarly to Hung. pedig discussed in the paper. It occurs only before the last junct and indicates that the list is complete.
b2. Alternatively, the optional connective is an exclusive disjunction particle and can occur between all the juncts.
c. The same particle often forms an indefinite (existential quantifier word) with a wh-pronoun. (The epistemic specificity properties are not examined here.)

Consider the following schematic data in Table 2; comments follow below. The optional connective often intervenes between the particle and its host, indicated by a caret (^) in the column for junct Z.22

Table 2: Or_Or.

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>‘someone’</th>
<th>plain ‘or’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hungar.</td>
<td>vagy X</td>
<td>vagy Y</td>
<td>vagy ^ Z</td>
<td>vala-ki</td>
<td>vagy</td>
</tr>
<tr>
<td></td>
<td>akár X</td>
<td>akár Y</td>
<td>akár ^ Z</td>
<td>akár-ki</td>
<td></td>
</tr>
<tr>
<td>Turkish</td>
<td>ya X</td>
<td>ya Y</td>
<td>ya ^ Z</td>
<td>–</td>
<td>veya</td>
</tr>
<tr>
<td>Bosnian</td>
<td>ili X</td>
<td>ili Y</td>
<td>ili ^ Z</td>
<td>–</td>
<td>ili</td>
</tr>
<tr>
<td>Russian</td>
<td>ili X</td>
<td>ili Y</td>
<td>ili ^ Z</td>
<td>–</td>
<td>ili</td>
</tr>
<tr>
<td></td>
<td>libo X</td>
<td>libo Y</td>
<td>libo ^ Z</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to li X</td>
<td>to li Y</td>
<td>to li ^ Z</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Persian</td>
<td>ya X</td>
<td>ya Y</td>
<td>ya ^ Z</td>
<td>–</td>
<td>n/a</td>
</tr>
<tr>
<td>Sinhala</td>
<td>X hari</td>
<td>Y hari</td>
<td>Z hari</td>
<td>kau-ki</td>
<td>hara</td>
</tr>
<tr>
<td></td>
<td>X da</td>
<td>Y da</td>
<td>Z da</td>
<td>kau-da</td>
<td></td>
</tr>
<tr>
<td>Mand.</td>
<td>huoze X</td>
<td>huoze Y</td>
<td>huoze Z</td>
<td>–</td>
<td>huoze</td>
</tr>
<tr>
<td></td>
<td>yaome X</td>
<td>yaome Y</td>
<td>yaome Z</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Telugu</td>
<td>leedaa X</td>
<td>leedaa Y</td>
<td>leedaa Z</td>
<td>evaru-ainaa</td>
<td>leedaa</td>
</tr>
<tr>
<td></td>
<td>X-ainaa</td>
<td>X-ainaa</td>
<td>X-ainaa</td>
<td>evaru-kaani</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-kaanii</td>
<td>Y-kaanii</td>
<td>Y-kaanii</td>
<td>evaru-oo</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X-oo</td>
<td>Y-oo</td>
<td>Z-oo</td>
<td>–</td>
<td>oo (reit.)</td>
</tr>
<tr>
<td>Japan.</td>
<td>X-ka</td>
<td>Y-ka</td>
<td>Z-ka</td>
<td>dare-ka</td>
<td>ka</td>
</tr>
<tr>
<td></td>
<td>X-demo</td>
<td>Y-demo</td>
<td>Z-demo</td>
<td>dare-demo</td>
<td></td>
</tr>
</tbody>
</table>

22 Russian uses two distinct contrastive “connectives”, a vs. zhe (only zhe intervenes between the particle and the host). M. Esipova (p.c.) comments that a goes with conjunctive (to) constructions (all juncts have to be true), and zhe with disjunctive ones. On the other hand, ili and negative concord ni ni are not contrastive, so they are not compatible with either a or zhe.
Usually, medial ‘or’ is inclusive and reiterated ‘or_or’ is exclusive/exhaustive, but there are two exceptions that show that the correlation is not necessary. Sinhala X-hari Y-hari and Telugu X-oo Y-oo are inclusive; Telugu X leeda Y ‘X if-not Y’ is exclusive/exhaustive.

Turkish and Persian in general do not build quantifier words from particles and wh-pronouns, as noted above; in Bosnian and Russian, only some particles fail to participate.

Note that Turkish dA leads a double life as an additive clausal head (Table 1) and as a “contrastive” connective (Table 2), calling for a semantic or pragmatic unification.

There are further examples of the “quantifier-phrase internal” construction, although in fewer languages in my sample. Syntactically, they come from the same mold as the disjunctions in Table 2: tuples are necessary; the optional connective is the same “contrastive” item that occurs in Table 2 and indicates the completion of the list; quantifier-word formation is possible.

At least Russian, Turkish, and Hungarian have two “alternation” constructions, whose semantics is analyzed in Esipova (2016; 2017). The first one involves particles, see Table 3. The second one involves wh-words. Lipták (2001; p.c.) suggests that it might be possible to bring them into the fold by postulating null particles; I will not pursue an analysis here. But notice the same general pattern. See Table 4.

Table 5 recaps the discussion of Persian ham ham and Turkish hem hem in Section 6.1. French and other Romance languages have reiterating constructions that may represent the two types, but the analysis is not straightforward. See Table 6.

Finally, we turn to negative concord, so far as it involves specialized particles and/or optional connectives. Recall that Hungarian sem has both clausal head and quantifier-phrase internal versions, each of which solidly patterns with the other representatives of

Table 3: “Alternately/taking turns” with particles.

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>‘someone’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian</td>
<td>to X</td>
<td>*</td>
<td>to Y</td>
<td>(a)</td>
</tr>
<tr>
<td>Turkish</td>
<td>bir X</td>
<td>*</td>
<td>bir Y</td>
<td>(dA)</td>
</tr>
</tbody>
</table>

Table 4: “Alternately/taking turns” with wh-words.

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian</td>
<td>kogda/gde X</td>
<td>*</td>
<td>kogda/gde Z</td>
</tr>
<tr>
<td></td>
<td>kto vp1</td>
<td></td>
<td>kto vp3</td>
</tr>
<tr>
<td>Hungarian</td>
<td>mikor/hol X</td>
<td>*</td>
<td>mikor/hol Z</td>
</tr>
<tr>
<td></td>
<td>ki vp1</td>
<td></td>
<td>ki vp3</td>
</tr>
</tbody>
</table>

23 TO_TO / WHEN_WHEN, necessarily contrastive (Esipova 2016: (7)):

(i) Na každom lyžnom kurorte, kotoryj posešali...
on each ski resort which visil.IPV.PAST.3PL
   a. to americanske, (a) / *i / *ili to nemeckie turisty,
      TO American A I or TO German tourists
   b. kogda amerikanske, (a) / *i / *ili kogda nemeckie turisty,
      WHEN American A I or WHEN German tourists
      ... ljudi byli ščastlivy.
      people were happy
      ‘At each ski resort that was...
      a. = alternately visited by American and German tourists
      b. = sometimes visited by American and sometimes by German tourists
      ... people were happy.’
its type. Given this duality, it is not surprising that both types seem to be represented in the data, based on the optional particles, for example. But the properties are fairly mixed, and so it would be rash to attempt labels at this point. See Table 7.

Seeing how difficult 'nor_nor' type negative concord is to analyze in many languages, it is unsurprising but at the same time somewhat disappointing that our diagnostics do not straightforwardly point to one analysis or another. But they probably provide some useful starting points.

7 Conclusion

This paper argued that there exists a cross-linguistically prevalent distinction between two types of quantifier particles. One type is a head on the clausal spine, the other is an uninterpreted pointer to an unpronounced but meaningful propositional quantifier. Highly regular linear order with respect to the host and the availability of a full slew of corresponding quantifier words make the two types straightforward to study in Hungarian; the data and discussion in Section 6 shows that many other languages exhibit distinctions that are consistent with the Hungarian ones. Although this research has benefited from the existence of important syntactic and/or semantic literature on some of those languages, both the syntax of reiterated constructions and the internal syntax of the quantifier words at hand have received scarce attention so far. It is hoped that this report will contribute to changing that.

Abbreviations

1 = first person, 2 = second person, 3 = third person, SG = singular, PL = plural, ACC = accusative, LOC = locative, NC = negative concord, NPI = negative polarity item.

Table 5: Counterparts of Mind_Mind.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>no tuple?</th>
<th>‘everyone’</th>
<th>fl. ‘all’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung.</td>
<td>mind X</td>
<td>mind Y (pedig)</td>
<td>mind ^ Z</td>
<td>* mind X</td>
<td>mind</td>
</tr>
<tr>
<td>Turkish</td>
<td>hem X</td>
<td>hem Y (dA)</td>
<td>hem ^ Z</td>
<td>* hem X</td>
<td>n/a</td>
</tr>
<tr>
<td>Persian</td>
<td>ham X</td>
<td>ham Y *</td>
<td>ham Z</td>
<td>* ham X</td>
<td>[hame kas] hame</td>
</tr>
</tbody>
</table>

Table 6: Et_Et ‘conjunction’ and Ou_Ou ‘disjunction’.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>‘too’ and inclusive ‘or’</th>
</tr>
</thead>
<tbody>
<tr>
<td>French et X</td>
<td>et Y</td>
<td>et Z</td>
<td>* et</td>
</tr>
<tr>
<td>French ou X</td>
<td>ou Y</td>
<td>ou Z</td>
<td>ou</td>
</tr>
</tbody>
</table>

Table 7: Nor_Nor “negative concord”.

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>n-word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung.</td>
<td>X sem X</td>
<td>Y sem Y</td>
<td>Z sem Y (és)</td>
</tr>
<tr>
<td>Bosnian</td>
<td>ni X *</td>
<td>ni Y *</td>
<td>(a) (pak)</td>
</tr>
<tr>
<td>Russian</td>
<td>ni X (? i)</td>
<td>ni Y (? i)</td>
<td>ni Z</td>
</tr>
<tr>
<td>Turkish</td>
<td>ne X *</td>
<td>ne Y (dA)</td>
<td>ne ^ Z</td>
</tr>
<tr>
<td>Persian</td>
<td>ne X *</td>
<td>ne Y *</td>
<td>ne Z</td>
</tr>
<tr>
<td>Sinhala</td>
<td>X vat *</td>
<td>Y vat *</td>
<td>Z vat</td>
</tr>
</tbody>
</table>
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Competing interests
The author has no competing interests to declare.

References


Spector, Benjamin. 2014. Global positive polarity items and obligatory exhaustivity. *Semantics and Pragmatics* 7. 1–61. DOI: https://doi.org/10.3765/sp.7.11


Valmala, Vidal. 2012. Two types of right-node raising, Ms. Barcelona: UPV-EHU.


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