Two types of quantifier particles:
Quantifier-phrase internal vs. heads on the clausal spine*
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Abstract 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 also 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 a small survey of data from Bosnian, French, Japanese, Mandarin, Persian, Russian, Sinhala, Telugu, and Turkish, which indicate the cross-linguistic interest of recognizing the two types of particle constructions.

Keywords particle, quantifier, additive, disjunctive, reiteration, Hungarian

1. Introduction

This paper investigates the Hungarian counterparts of as_well_as, both_and, either_or, whether_or, and neither_nor constructions -- reiterated quantifier particle constructions, in the terminology of Szabolcsi (2015). Presenting novel data and analyses, it argues that they come in two distinct syntactic types.

In one type, 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. When the propositions share material, optional ellipsis may produce superficially constituent-size coordinations. Coordination is represented as a Junction Phrase (den Dikken 2006). JP may contain any number of juncts.¹ For readability, the schema in (1) presents just two juncts:

¹ The neutral cover term junct for conjunct and disjunct is due to Mitrović (2014).
For example,

(2)  
a. A hó is esik, a szél is fúj, a gyerek is nyűgős.  
   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 ellenünk van, a szél is ellenünk van.  
   the snow too against-us is the wind too against-us is  
   'The snow, as well as the wind, is against us'

The other type 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 unpronounced quantifier. When the propositions share material, optional ellipsis or structure-sharing may produce superficially constituent-size units. Again, JP may contain any number of juncts. For readability, the schema in (3) presents just two juncts:²

(3)  

For example,

² In contrast to English either_or, the particles in Hungarian mind_mind, vagy_vagy, etc. and their cross-linguistic counterparts to be discussed in Section 6 always appear at the same "height" in all the juncts.
(4) a. Vagy a hó esik, vagy a szél fúj, vagy a gyerek nyügös.
   or the snow falls or the wind blows or the child 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.
   or the snow fell or the rain fell
   ‘Either the snow or the rain was falling’

The difference between the two types pertains to syntactic structure and, accordingly, to the way the meanings are composed. It cannot be predicted from the basic logical semantics of the individual particles. The overall meanings of the two constructions may be similar or identical, as would be the case with is_is and mind_mind. Also, the same particle may participate in both constructions; sem ‘nor’ features in both types.

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

<table>
<thead>
<tr>
<th>Head on the clausal spine, cf. (1)-(2)</th>
<th>Quantifier-internal, cf. (3)-(4)</th>
<th>see section</th>
</tr>
</thead>
<tbody>
<tr>
<td>is, sem</td>
<td>mind, vagy, akár, sem</td>
<td>2.1</td>
</tr>
<tr>
<td>particle follows host</td>
<td>particle precedes host</td>
<td></td>
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<tr>
<td>need not be part of a tuple</td>
<td>must be part of a tuple</td>
<td>2.2</td>
</tr>
<tr>
<td>tuple-internal connective: és `and’</td>
<td>tuple-internal connective: pedig</td>
<td>2.3</td>
</tr>
<tr>
<td>doesn’t build quantifier words</td>
<td>builds quantifier words</td>
<td>2.4</td>
</tr>
<tr>
<td>builds non-strict negative concord items</td>
<td>builds strict negative concord items</td>
<td>2.5</td>
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To make parsing the data easier for the reader, Section 2 will focus on examples like (2b) and (4b), with superficially constituent-size junctcs, temporarily pushing the propositional aspect to the background as much as possible. Sections 3 and 4 return to propositional coordination, invoking further data from ellipsis, and spell out the semantics. Section 5 takes up negative concord. Section 6 comments on cross-linguistic data and significance. Section 7 concludes.

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 item pedig is not glossed, because non-no misleading option presents itself.

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 akár 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 și_și; like is, i and și also serve as additive particles.
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 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*  'K as well as M'
      Kati too Mari too
   b. Kati *sem, Mari sem*  'neither K nor M'
      Kati nor Mari nor

(7) **Particle precedes host**

   a. **mind** Kati, **mind** Mari  'both K and M'
      all Kati all Mari
   b. **vagy** Kati, **vagy** Mari  'either K or M, not both'
      or Kati or Mari
   c. **akár** Kati, **akár** Mari  'whether/either K or M'
      whether Kati whether Mari
   d. **sem** Kati, **sem** Mari  'neither K nor M'
      nor Kati nor Mari

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:

(8)  a. Kati *és Mari aludt.*  'K and M slept'
      Kati and Mari sleep-past.3sg
   b. Kati *is, Mari is aludt.*  'K as well as M slept'
      Kati too Mari too sleep-past.3sg
   c. Mind Kati, mind Mari aludt.
      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* (9a) with *mind* (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 is both preverbal and postverbal position. It must come in tuples (pairs, triples, etc.).

(9) Host+particle -- happy on its own

<table>
<thead>
<tr>
<th></th>
<th>Kati</th>
<th>aludt.</th>
<th>Aludt</th>
<th>Kati</th>
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<tbody>
<tr>
<td>a</td>
<td>Kati</td>
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(10) Particle+host -- must be part of a tuple

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<tr>
<td>a</td>
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<td>all Kati</td>
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<tr>
<td>b</td>
<td>*Vagy</td>
<td>Kati</td>
<td>aludt.3</td>
<td>*Aludt</td>
<td>vagy Kati.</td>
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<td></td>
<td>or</td>
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<td>or Kati</td>
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<td>*Akár</td>
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<td>*Aludt</td>
<td>akár</td>
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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

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3 It was pointed out in Szabolcsi (2015: 165) that English or has a unary use; I now add that neither/nor does 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)-(iii). 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.

4 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 (v) shows, free choice with a modal is acceptable in the unary version. But, unlike in the reiterated *akár, *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.

     b. Akár Kati is alhat itt. * Akár Kati is, akár Mari is alhat itt.
     ‘Even Kati can sleep here’ ‘Either Kati or Mari can sleep here’
the preverbal position (the postverbal versions are inescapably bad). See the footnotes; fn. 3 pertains to two examples. 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). 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) 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

    (host+sem co-occurs with és `and’)

(12) 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

    (sem+host co-occurs with pedig)

(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’

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5 In many languages, the particle ‘too’ and the connective ‘and’ are homophonous, e.g. Russian i, Romanian și. Hungarian is ‘too’ is historically a reduction of és ‘and’. (They 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.
(14) Particle+host optionally co-occurs with *pedig*

a. mind Kati, mind (*pedig*) Mari ‘both K and M’
b. vagy Kati, vagy (*pedig*) Mari ‘either K or M, not both’
c. akár Kati, akár (*pedig*) Mari ‘whether/either K or M’
d. 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.\(^6\) 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.

(15) Mari elkésett, pedig Peti figyelmeztette.
‘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.

(16) [Where are the kids?]
Kati otthon van, Mari (*pedig*) az iskolában, Peti (*pedig*) úszóedzésen.
‘Kati is at home, Mari (*pedig*) at school, Peti (*pedig*) at swim practice’

(17) [Where did you go in recent days?]
Kedden haza, szerdán (*pedig*) az iskolába, pénteken (*pedig*) úszni.
‘On Tuesday, home, on Wednesday (*pedig*) to school, on Friday (*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).\(^7\) For example,

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\(^6\) The Historical-Etymological Dictionary informs 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.

\(^7\) According to Esipova (2016), 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. Only this latter is illustrated below.

(i) Na každom lyžnom kurorte, kotoryj posešali...

   on each ski resort which visit.IPFV.PAST.3PL
   a. to americanskie, (a) / *i/ *ili to nemeckie
      TO American A and or TO German
   b. kogda americanskie, (a) / *i/ *ili kogda nemeckie
      WHEN American A and or WHEN German

... turisty, ljudi byli ščastlivy.
   tourists people were happy
(18) Ki van otthon? ‘Who is at home?’

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’

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 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 (‘wh.’) pronouns. Vala-is an allomorph of vagy.

(19) Particle precedes host\(^8\)

a. mind-en-ki, mind-en(*-mi), mind-en-hol ‘everyone, everything, everywhere’

b. vala-ki, vala-mi, vala-hol ‘someone, something, somewhere’

c. akár-ki, akár-mi, akár-hol ‘whoever, whatever, wherever’

d. sen-ki, sem-mi, se-hol ‘no one, nothing, nowhere’

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‘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.’

XX (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 (according to V2). He provides the following naturally-occurring example:

(ii) omdat zij noch de hunnen, noch zichzelf, noch tenslotte hun eigen leven ontzien hebben because they neither the theirs nor themselves nor finally their own life spared have

Note though that tenslotte transparently means ‘lastly’, while H. pedig and R. a are pure particles.

\(^8\) Three comments on minden. (i) The role of the -en morpheme in minden is unknown. (ii) The gap in *minden-mi extends to all m-based indeterminate pronouns in Hungarian (*minden-melyik (but mindegyik `each’), *minden-milyen (but mindenféle `every kind’), and *minden-mikor (but mindig and mindenkor `always’), etc.). These gaps do not concern us here. (iii) Minden forms strictly distributive quantifiers with count nouns, but it also co-occurs with mass nouns (Csirmaz & Szabolcsi 2012). This last point has some significance in comparison with Persian and Turkish in Section 6.
Tying these together with the findings of the previous subsection, compare:\(^9\)

\[(20)\] mind Kati, mind Mari, mind (pedig) Peti \(\approx\) mindenki etc.
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 (21a). 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 the items in (21b) are simply instances of (19d).

\[(21)\] Host precedes particle
a. * is-ki / ki-is, is-mi / mi-is, is-hol / hol-is
b. [*] sen-ki, sem-mi, se-hol

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

\[(22)\] vala-ki is and akár-ki is ‘anyone, NPI’
someone too whoever too

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 \textit{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 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, with the sentential negation marker nem always mandatory, as in Russian. But Surányi (2006) showed that it is in fact a hybrid: there is a set of NC-expressions that do not co-occur with nem when they are in preverbal position, mirroring non-strict negative concord 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). All three examples below mean ‘No one slept’. 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.

\(^9\) The first to notice such correspondences was Hunyadi (1987).
(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

(25) Nem aludt senki (sem) vs. *Aludt senki (sem). 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. n-one 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 Kati, sem Mari / Kati sem, Mari sem. not slept nor Kati nor Mari Kati nor Mari nor post-V, strict/non-strict require nem

In other words,

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

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

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+parti-
circle” 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. Discussion of 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).10

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 (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>El>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) a. csak Mari ‘only Mari’, vagy tiz ‘some ten = approx. ten’, majdnem tiz ‘almost ten’
   b. minden-ki ‘everyone’, vala-ki ‘someone’
   c. mind Kati mind Mari ‘both K and M’, vagy Kati vagy Mari ‘either K or M’

The particles is and sem would be the only phrase-internal particles to follow their sisters if

analysis (i) were chosen.\textsuperscript{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) A hó is/sem esik, ... a gyerek is/sem nyűgös.
    the snow too/nor falls ... the child too/nor cranky
    ‘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, ZZ (p.c.) suggests that complex particles such as még-is/még-sem ‘nevertheless,’ de-hogy-is ‘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 (excepting 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.\textsuperscript{12} 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).

\textsuperscript{11} Horvath (2013) observes that csak can precede the focused XP (as in (31a)) or immediately follow the verb. She explicitly argues that in the latter case, csak is an overt version of the clausal El-head, and not a stranded El-operator. Her representations for two synonymous sentences:

(i) Mari csak KATINAK\textsubscript{j} mutatta [be\textsubscript{tv} Lacit t\textsubscript{j}].
    Mari only Kati-dat showed.3sg PRT Laci.acc
    ‘Mari introduced Laci only TO KATI.’
(ii) Mari KATINAK\textsubscript{j} mutatta csak [be\textsubscript{tv} Lacit t\textsubscript{j}].
    Mari Kati-dat showed.3sg only PRT Laci.acc
    ‘Mari introduced Laci only TO KATI.’

My analysis of is/sem as clausal heads is congruent with Horvath’s (ii) above.

\textsuperscript{12} In line with the fact that the junctions 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.
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 preajacent) 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 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

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13 For a derivation of the additive presupposition of English *too* and Hungarian *is*, based on focus alternatives, see Szabolcsi (2017).
whether we should start heading home. The expressions *as well as* and *likewise* in the idiomatic translations correspond to this not-at-issue contribution.

Szabolcsi (2015) also observes, among other things, that reiterated examples like (34a) and its 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_mind, vagy_vagy, akár_akár* and (strict NC) *sem_sem* constructions is different from that of *is_is* and (non-strict NC) *sem_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).

\[(35)\]

\[
\text{Q} \quad \text{QP} \quad \text{JP} \quad \text{where mind ‘all’ vagy ‘or’ akár ‘whether’ sem ‘nor’}
\]

\[
\begin{aligned}
\text{[iMind], }& \text{ OR } & \text{mind/vagy/akár/sem } & \text{ [uMind], etc. } \\
\text{[iVagy], }& & \text{HOST } & \text{J’} \\
\text{[iAkár], }& & \text{J} & \text{ HOST} \\
\text{[iSem], }& & \text{mind/vagy/akár/sem } & \text{ [uMind], etc. }
\end{aligned}
\]
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.\(^{14}\)

An alternative tool might be borrowed from Case concord, discussed in Bayirli (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 \( \alpha \) merges with \( \beta \), forming \( [\alpha \alpha \beta] \), the grammatical features of \( \alpha \) are immediately copied on \( \beta \)
   b. Realization: … and are realized as morphology on all lexical head items dominated by \( \beta \)

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

Imitating Bayirli’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) \[
\begin{align*}
\text{QP} & \quad \text{[Mind], } \forall \\
\text{JP} & \quad \text{mind} \\
\text{S1} & \quad \text{J} \\
\text{S2} & \quad \text{mind}
\end{align*}
\]

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

\(^{14}\) Den Dikken (2006) argues that in English *either_or*-type constructions, *either* and *or* are not heads but maximal projections adjoined to the junct; my analysis of Hungarian is similar in not treating *vagy* as a head. 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.
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 operator. 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 doesn’t 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. by the unpronounced operator whose presence they signal).

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:  

    all Kati all Mari all pedig Peti sleeps everyone sleeps

(40) Vagy Kati, vagy Mari, vagy (pedig) Peti alszik ≈ Valaki alszik.
    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)

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15 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, as pointed out by Szabolcsi (2015: 2015, section 3.2.5), in many languages the same type of reiterated disjunction is 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 the reiterated construction. It is with this grain of salt that I take vagy_vagy and valaki to be approximate counterparts.
The propositional quantifiers referred to above are defined as follows:

(41) a. $[\exists](A) = \{\text{the proposition that is true in all worlds in which some proposition in } A \text{ is true}\}$  
   b. $[\forall](A) = \{\text{the proposition that is true in all worlds in which every proposition in } A \text{ is true}\}$

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 semantics: the set of propositions such that, for any human there is, the proposition that this human sleeps is in the set.

(42) $[[\text{-who sleeps}]]_{w,g} = \{p: \exists x [\text{human}(x)(w) \& p = \lambda w'. \text{sleeps}(x)(w')]\}$

In our case, $A$ is the set of propositions 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.

(43) $\{\lambda w. \text{sleep}(kati)(w), \lambda w. \text{sleeps}(mari)(w), \lambda w. \text{sleeps}(peti)(w)\}$

For example, with particle mind `each’ attached to the juncts, the matching Q is $\forall$, and the result is the proposition that is true in all worlds where each of “Kati sleeps”, “Mari sleeps”, and “Peti sleeps” is true.

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

(44) a. Mind Kati (alszik), mind Mari (alszik), mind Peti alszik.  
   all Kati sleeps all Mari sleeps all Peti sleeps  
   b. Kati is (alszik), Mari is (alszik), Peti is alszik.  
   Kati too sleeps Mari too sleeps Peti 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 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. Ha mind a hó esik, mind (pedig) a szél fúj, otthon maradunk.  
   ‘If each of {the snow is falling, the wind is blowing} is true, we are staying at home’
b. Vagy a hó esik, vagy (pedig) a szél fúj.
   'Just one of (the snow is falling, the wind is blowing) is true'

c. Akár a hó esik, akár (pedig) 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 (pedig) a szél nem fúj.
   'None of (the snow is falling, the wind is blowing) is true'

In other examples, the particles seemingly attach to smaller constituents (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 some 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 YY (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 kitchen 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 but interpretation is in-situ. He considers two possible mechanisms: ellipsis or structure-sharing, without committing to a choice. I will not not address this theoretical issue, and will simply label it ellipsis.

As YY (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-DÍJASRÓL.
   Peti heard and Mari read every Nobelist-about
b. Peti HALLOTT _ és Mari OLVASOTT minden Nobel-díjasról.
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.

(50)  a. Mind egy MAGAS __ mind hat ALACSONY gyerek- et meghívtam. all one tall all six short child-acc invited-I

`I invited both one tall and six short children’

b. Meghívtam mind egy MAGAS __ mind hat ALACSONY gyerek-et. invited-I all one tall all six short child-acc

(51)  a. Sem a JOBB- __ sem a BAL- kezes gyerekek nem sírtak.

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 gyerekek.

not cried-pl nor the right- nor the left-handed child-pl

(52) Adjál vagy minden fiúnak négy KÉK _

give-2sg or every boy-to four blue

vagy minden lánynak hat ZÖLD golyót.

or every girl-to six green marble-acc

`Give either every boy four blue or every girl six green marbles’

The above 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. 

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

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 simple 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-claustral coordination). Therefore, in the domain of data that he investigates, the general unavailability of DP-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*.

\[(54)\] *Senki nem aludt* ‘No one slept’

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. $O_{ALT}$ 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, $\neg$ at the edge of its projection. Preverbal nessuno ‘n-one’ sits in the specifier of null NEG, and the contradiction $O_{ALT}$ would produce is averted by the disembodied negation, $\neg$.

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

(55) Senki sem aludt ‘No one slept’

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) Kati sem aludt (és) Mari sem aludt. cf. Sen-ki sem aludt. non-strict NC
Kati nor aludt and Mari nor slept n-one nor slept
‘Neither Kati (slept), nor Mari slept’ ‘No one 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 Kati slept’  
`No one slept’  

b. **Sem** Kati, **sem** (pedig) Mari nem aludt. cf. **Sen**-ki nem aludt.  
nor Kati nor pedig Mari not slept n-one not slept  
`Neither Kati slept, nor Kati slept’  
`No one 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 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 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) Peti se lát, se hall. R. Petja ni (*ne) el, ni (*ne) pil.  
Peti nor sees nor hears Petja nor not ate nor not drank  
‘Peti neither sees nor hears = ’Petja neither ate nor drank’  
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* attaches to:
(60) Peti sem enni nem evett, sem (pedig) inni 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 not-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] [r [nem ivott sem Kati]]]
   not ate nor Mari not drank nor Kati

b. (*) [NegP nem ... [QP [JP [sem Mari evett] [r [sem Kati ivott]]]]]
   not 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, akár 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)

![Diagram]

The unpronounced semantic negation and the overt, contentless nem morphemes will immediately remind the reader of Zeijlstra’s (2004) proposal for strict negative concord. Following Szabolcsi (2016), I did not adopt Zeijlstra’s analysis and assumed that nem is a full negation; see (54). It remains to be seen if the problem of (60)-(61) eventually necessitates a revision of that stance, and how the solution might extend to the significantly different Russian data.
6. Cross-linguistic significance

6.1 Cross-linguistic questions

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

\[(64)\]
a. dare-mo, dono-kyouju-mo \(\text{‘everyone, every prof’} \quad \text{(Szabolcsi et al. 2014:142)}

b. John-mo Mary-mo \(\text{‘John as well as Mary’} \quad \text{(Szabolcsi et al. 2014:146)}

c. kare-mo \(\text{‘also/even he’} \quad \text{(Szabolcsi et al. 2014:139)}

\[(65)\]
a. aar-um, eppoozh-um \(\text{‘anyone, always’} \quad \text{(Jayaseelan 2001:65)}

b. John-um Bill-um Peter-um \(\text{‘John and Bill and Peter’} \quad \text{(Jayaseelan 2001:64)}

c. oru kúTTi-(y)um \(\text{‘a child also’} \quad \text{(Jayaseelan 2011:281)}

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 \(\text{dare-mo} \quad \text{‘everyone/anyone’}

b. mind A mind B \(\text{A-mo B-mo} \quad \text{‘A as well as B, both A and B’}

A is (és) B is \(\text{‘A as well as B, both A and B’}

c. A is \(\text{A-mo} \quad \text{‘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 suggests that, by transitivity, mind(enki) and is legitimately belong under the same semantic umbrella.” Szabolcsi (2015: 183)

The present paper undertook the investigation of the relation between mind and 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 is and mind has proved to be syntactically significant. Is ‘too’ is analyzed as a head on the clausal spine, which is in line with its distribution displayed in [51]. This converges with the ob-
servations in Szabolcsi (2015). The analysis of mind is novel. Mind ‘all’ is analyzed as a quantifier-internal particle, also in line with its distribution displayed in [51]. But the truth-conditional equivalence of is_is and 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.

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 by a survey of a broader set of languages and data in Section 6.2.

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

(66) a. mind-en-ki ‘everyone’  --  sen-ki ‘n-one’
    b. mind A mind B
       A is B is ‘A as well as B’
       \[A \text{ sem } B \text{ sem}\] ‘neither A nor B’
    c. A is ‘A too’
    d. *mind A *sem A

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

(67) a. mind-en-ki ‘everyone’  --  [har-kas] ‘everyone’
    b. mind A mind B
       A is B is ‘A as well as B’
       \[A \text{ ham } B \text{ ham}\] ‘A as well as B’
    c. A is ‘A too’
    d. *mind A *ham A

(67b,c,d) make it quite plausible that Persian ham plays the syntactic roles of both Hungarian is and Hungarian mind, even though there is a mismatch in (67a): Hungarian mind builds mindenki ‘everyone’ (and also serves as the floating quantifier mind ‘all’), whereas Persian ham does neither.

Going beyond the syntactic duality of ham, it may be noted that the noun hame ‘all’ forms universal quantifiers with count and mass nouns and serves as a floating quantifier (Toosarvandani & Nasser 2017: 666, 683-4, 690). Ham and hame may or may not be related. If ham
and *hame are at least historically related, then the divergence between Hungarian and Persian in (67a) may be due to two factors. One is that Persian, in contrast to Hungarian, does not build quantifier words from particles and wh-pronouns in general. The other is that Hungarian *mind (like *hame) co-occurs with concrete and abstract mass nouns, e.g. *minden viz ‘all (the) water’ and *minden szeretet ‘all (the) love’ (see Csirmaz & Szabolcsi (2012: Section 8.3.1)). In contrast, Persian *har ‘each, every’ is restricted to count terms. Hungarian lacks a universal quantifier particle comparable to *har (the determiner mindegyik ‘each’ incorporates egy ‘one’). These facts complicate the division of labor pertinent to (67a) beyond what we can assess here.

Turkish, in turn, borrows *herkes and *hem A *hem B from Persian (B. Kamali, p.c.), but has *dA for a clausal head (Kamali & Karvovskaya 2013):

(68) a. mind-en-ki ‘everyone’ -- *[her-kes] ‘everyone’
    b. mind A mind B
       A is    B is ‘A as well as B’
       --  A dA  B dA ‘A too’
    c. A is ‘A as well as B’
   --  A dA ‘A too’
   d. *mind A
      -- *hem A

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

If Persian *ham and Turkish *hem A and *dA are unacceptable (in contrast to *A ham and *A dA), it is likely that the *ham/*hem that occur in *ham/*hem A *ham/*hem B are not synonymous with Hungarian *is ‘too’. But given the discrepancies in (67a)-(68a), it would be unwarranted at this point to conclude that they are synonymous with Hungarian *mind ‘all’. This is why the solid parallelisms are qualified as syntactic. The compositional semantics calls for further research.

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) and Telugu (Balusu 2016):

(69) dare-mo ‘anyone, NCI’ or ‘everyone’ (Japanese)
    Akira-mo ‘Akira too/even Akira’
(70) eppuD-uu ‘ever, NCI’ or ‘always’ (Telugu)
    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?

Balusu (2016) 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:

\[(71) \begin{array}{c}
\text{[SemP sen-ki n-who]} \\
\text{[Sem' sem ][...]]}
\end{array} \quad \text{‘non-strict NCI’}
\]

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

\[(72) \begin{array}{c}
\text{[IsP vala-ki some-who]} \\
\text{[Is' is ][...]} \\
\text{[IsP akár-ki whether-who]} \\
\text{[Is' is ][...]} \end{array} \quad \text{‘anyone, NPI’}
\]

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/akárki 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 (2016), 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.\(^\text{16}\) 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 Balusu (2016), Esipova (2016), Jeretič (2017), Kamali

\[^{16}\text{I am grateful for data and discussion to R. Balusu (Telugu), M. Esipova (Russian), P. Jeretič (French, Turkish), B. Kamali (Turkish), J. Kornfilt (Turkish), A. Kahnemuyipour (Persian), H. Li (Mandarin), M. Kobuchi-Philip (Japanese), B. Slade (Sinhala), and D. Veselinović (Bosnian). The survey was not meant to be broad; instead, it hoped to benefit from the related expertise of the sources.}\]
& Karovskaya (2013), Kobuchi-Philip (2009), and Slade (2011). 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 language, 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) “Head on the clausal spine” with TOO_TOO

a. The particle need not be part of a tuple, cf. Mari is alud ‘Mari too slept’ is happy on its own.

b. Where an optional connective is possible in iterations, it can occur between all of the junct (not only before the last junct), and it is typically plain ‘and’.

Consider the following schematic data; comments follow below. Three juncts are displayed to bear out one critical difference between the two types of reiterated constructions. (Underlining indicates a harmonizing vowel.)

(74) TOO_TOO

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>no tuple?</th>
<th>plain ‘and’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung.</td>
<td>X is</td>
<td>(és)</td>
<td>Y is</td>
<td>(és)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>X is</td>
<td>(és)</td>
<td>Y is</td>
<td>(és)</td>
<td>✓ X is</td>
</tr>
<tr>
<td>Telugu</td>
<td>X-VV</td>
<td>(mariu/inkaa)</td>
<td>Y-VV</td>
<td>(mariu/inkaa)</td>
<td>✓ X-VV X mariu/inkaa Y</td>
</tr>
<tr>
<td>Japanese</td>
<td>X mo</td>
<td>(? soshite)</td>
<td>Y mo</td>
<td>(soshite)</td>
<td>✓ X mo X soshite Y</td>
</tr>
<tr>
<td>Bosnian</td>
<td>i X</td>
<td>(? a)</td>
<td>i Y</td>
<td>(a)</td>
<td>✓ i X X i Y</td>
</tr>
<tr>
<td>Russian</td>
<td>i X</td>
<td>*</td>
<td>i Y</td>
<td>*</td>
<td>✓ i X X i Y</td>
</tr>
<tr>
<td>Persian</td>
<td>X ham</td>
<td>*</td>
<td>Y ham</td>
<td>*</td>
<td>✓ X ham n/a</td>
</tr>
<tr>
<td>Turkish</td>
<td>X-dA</td>
<td>*</td>
<td>Y-dA</td>
<td>*</td>
<td>✓ X-dA X ve Y</td>
</tr>
<tr>
<td>Sinhala</td>
<td>X-Ay</td>
<td>*</td>
<td>Y-Ay</td>
<td>*</td>
<td>✓ X-Ay n/a</td>
</tr>
<tr>
<td>Mandarin</td>
<td>ye X</td>
<td>*</td>
<td>ye Y</td>
<td>*</td>
<td>✓ ye X X he Y</td>
</tr>
</tbody>
</table>

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 DP1 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.
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 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:

(75) “Quantifier-phrase internal” with 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; comments follow below. The optional connective often
intervenes between the particle and its host, indicated by a caret (^) in the column for junct Z.

(76) 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>Hung.</td>
<td>vagy X akár X</td>
<td>*</td>
<td>vagy Y akár Y</td>
<td>(pedig)</td>
<td>vagy ^ Z akár ^ Z</td>
</tr>
<tr>
<td>Turkish</td>
<td>ya X</td>
<td>*</td>
<td>ya Y</td>
<td>(dA)</td>
<td>ya ^ Z</td>
</tr>
<tr>
<td>Bosnian</td>
<td>ili X</td>
<td>*</td>
<td>ili Y</td>
<td>(pak)</td>
<td>ili ^ Z</td>
</tr>
<tr>
<td>Russian</td>
<td>ili X libo X to li X</td>
<td>*</td>
<td>ili Y libo Y to li Y</td>
<td>(zhe)</td>
<td>ili ^ Z libo ^ Z to li ^ Z</td>
</tr>
<tr>
<td>Persian</td>
<td>ya X</td>
<td>*</td>
<td>ya Y</td>
<td>*</td>
<td>ya Z</td>
</tr>
<tr>
<td>Sinhala</td>
<td>X hari X ḍa</td>
<td>*</td>
<td>Y hari X ḍa</td>
<td>*</td>
<td>Z hari X ḍa kauru-hari kau-ḥa</td>
</tr>
</tbody>
</table>
| Manda-
  rin | huozhe X yaome X | *         | huozhe Y yaome Y | * | huozhe Z yaome Z | - | X huozhe Y * X yaome Y |
Usually, medial `or' is inclusive and reiterated `or_or' is exclusive/exhaustive, but there are
two important 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-pro-
nouns, 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 (74) and as a “contrastive"
connective (76), calling for a semantic or pragmatic unification.

There are two further cases that exemplify the “quantifier-phrase internal” construction, al-
though in fewer languages in my sample. Syntactically, they come from the same mold as the
disjunctions in (76): tuples are necessary; the optional connective is the same “contrastive"
item that occurs in (76) and indicates the completion of the list;\footnote{Russian uses two distinct contrastive “connectives", a vs. zhe (only the latter 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. i_i and negative concord ni_ni are not contrastive, so they are not compatible with either a or zhe.} quantifier-word formation is possible.

At least Russian, Turkish, and Hungarian have two “alternation” constructions, whose se-
manics is analyzed in Esipova (2016); see fn. 7 for full-sentential examples. The first case in-
volves particles:

\[(77) \ `\text{Alternately / taking turns'}$ with particles\]

<table>
<thead>
<tr>
<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>
</tr>
<tr>
<td>Turkish</td>
<td>bir X</td>
<td>*</td>
<td>bir Y</td>
</tr>
</tbody>
</table>

The second case 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 no-
tice the same general pattern.

\[(78) \ `\text{Alternately / taking turns'}$ with wh-words\]

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th><code>when', </code>who'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian</td>
<td>kogda/gde X</td>
<td>(a)</td>
<td>kogda/gde Z</td>
</tr>
<tr>
<td></td>
<td>kto vp1</td>
<td>(a)</td>
<td>kto vp3</td>
</tr>
<tr>
<td>Hung.</td>
<td>mikor/hol X</td>
<td>(pedig)</td>
<td>mikor/hol ^ Z</td>
</tr>
<tr>
<td></td>
<td>ki vp1</td>
<td>(pedig)</td>
<td>ki ^ vp3</td>
</tr>
</tbody>
</table>

Also, recall the discussion of Persian \textit{ham_ham} and Turkish \textit{hem_hem} in Section 6.1.

\[(79) \text{ALL_ALL}\]

<table>
<thead>
<tr>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>`everyone'</th>
<th>fl. `all'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung.</td>
<td>mind X</td>
<td>(pedig)</td>
<td>mind ^ Z</td>
<td>* mind X</td>
</tr>
<tr>
<td>Turkish</td>
<td>hem X</td>
<td>(dA)</td>
<td>hem ^ Z</td>
<td>* hem X</td>
</tr>
<tr>
<td>Persian</td>
<td>ham X</td>
<td>*</td>
<td>ham Z</td>
<td>* ham X</td>
</tr>
</tbody>
</table>
French and other Romance languages have reiterating constructions that may represent the two types, but the analysis is not straightforward:

(80) ET_ET `conjunction’ and OU_OU `disjunction’

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

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 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 no classification is attempted at this point.

(81) NOR_NOR `negative concord’

<table>
<thead>
<tr>
<th></th>
<th>X</th>
<th>Y</th>
<th>Z</th>
<th>n-word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hung.</td>
<td>X sem</td>
<td>(és)</td>
<td>Y sem</td>
<td>Z sem</td>
</tr>
<tr>
<td></td>
<td>sem X</td>
<td>(pedig)</td>
<td>sem Y</td>
<td>sem ^ Z</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- senki</td>
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<td></td>
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<td></td>
<td></td>
<td>clausal head</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>QP-internal</td>
</tr>
<tr>
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<td>ni X</td>
<td>*</td>
<td>ni Y</td>
<td>ni Z</td>
</tr>
<tr>
<td></td>
<td>ni X</td>
<td>*</td>
<td>ni Y</td>
<td>niti ^ Z</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>? ni-(t)ko</td>
</tr>
<tr>
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<td>ni X</td>
<td>(? i)</td>
<td>ni Y</td>
<td>(? i)</td>
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<td></td>
<td>ni-kto</td>
</tr>
<tr>
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<td>*</td>
<td>ne Y</td>
<td>ne ^ Z</td>
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<tr>
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<td>*</td>
</tr>
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<td></td>
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<td>ne Z</td>
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<tr>
<td>Sinhala</td>
<td>X vat</td>
<td>*</td>
<td>Y vat</td>
<td>*</td>
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<td></td>
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<td>Z vat</td>
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<td></td>
<td></td>
<td></td>
<td>kauru vat (?)</td>
</tr>
</tbody>
</table>

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 reasonably easy to study in Hungarian; the data and discussion in Section 6 shows that many other languages present 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 these 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.
* Acknowledgements here

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