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THE SEMANTICS OF OLD HUNGARIAN FLOATING *Mind* ‘ALL’

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proud to have been affiliated with the HUNGARIAN ACADEMY OF
SCIENCES

1 Introduction

Two quotes from Zeno Vendler (Vendler (1962), p. 145.):

The theory of quantification is supposed to provide us with a clear model of the logical import of such particles of language as “all”, “every”, “each”, “any” and “some”.

The fact that the theory succeeded in clarifying some logically important points does not show that all the remaining points are of a mere stylistic but not logical interest.

Long-term project (<http://omagyarkorpusz.nyud.hu/en-intro.html>): Generative diachronic analysis of Old and Middle Hungarian. Lately: extended to modern Uralic languages. Part of the project: the expression of quantification in Old and Middle Hungarian. Main research questions:

- Where do today’s Hungarian quantifiers come from?
- Given a logic framework (Generalised Quantifier Theory), how are/were its quantifiers expressed during the history of Hungarian?
- How do Old and Middle Hungarian data contribute to ongoing debates? (Free Choice Items, plurals, epistemic indefinites, . . .)

In this talk:

1. Present main data on Old Hungarian *mind* ‘all’ (often in tandem with *minden* ‘every’).
2. Semantic analysis: what Old Hungarian data contribute to a proper analysis of *all*-type quantifiers/operators → knowledge concerning the varieties of universal-looking expressions (Vendler: *Each* and *Every*, *Any* and *All*) → Views on the natural language – logic interface.

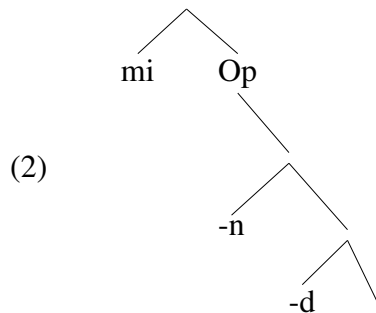
2 Data on Old Hungarian *mind* ‘all’

Composition: the indeterminate pronoun *mi* ‘what’, plus the adverbial suffixes *-n*, *-d*. *-n*: manner / cardinality / group forming. (Chief source: Historical-Etymological Dictionary of Hungarian.)

The suffix *-n*: so-called modal-essive.

- (1) Hárm-an voltunk testvérek
 Three-N be-PAST-1PL siblings
 ‘There were three of us siblings’ (MH)

Proposal in the vein of Kratzer–Shimoyama: *mi* is a free variable ranging over alternative non-atomic entities. *-nd* is a function that returns the sum corresponding to that entity.



The Oldest Data

FSP — Funeral Sermon and Prayer (end of the 12th century): the only expression with a universal construal: *mend*.

Floating, no overt ‘associate’:

- (3) **mend** ozchuz iarov vogmuc
 all that-TO walk-GER be-1PL
 ‘All of us are to walk there (to our graves)’
 ‘We are all to walk there’

Preceding the pronominal (Nominative) possessor:

- (4) bulsassa **mend w** bunet
 forgive-SUBJ.3SF all he sin-POSS.3SG-acc
 ‘May He forgive all his sins’

3. *Mind* could be adjoined to the *DP* (or to a *PP*). Test: position relative to the (Nominative) pronominal possessor.
4. *Mind* was not inflected for case (unlike *minden*).
5. *Mind* triggered definiteness agreement on the verb (when it/its — covert or anaphoric — associate was a direct object).
6. *Mind* could not form compounds, could not be affixed (unlike *minden*).

▷ OH Data: Definiteness Agreement

- (9) a. El iō eǵ dongo léǵ es **mind** el zagatt'a
 Away come-3SG one buzz-GER fly and all away tear+DEF.3SG
 [a pókhálóť]
- ‘And then comes a blowfly and tears it(=the spider’s web) all to pieces’
 (Bod Codex 4v)
- b. ember, ez velagi morhat ey nappa
 man, this world-ADJ.SFX riches-ACC night day-TRANSL
 keresi, el iō az halál, es **mind** el
 seek-3SG, away come-3.SG the death, and all away
 vezi oťole :—
 take-+def.3sg from-him
 ‘man pursues worldly riches night and day, but up comes death and
 takes them all away from him’ (Bod C. 4v)

Def-ness Agreement

- (10) Es hasonlatos a test a kőuer lohoz, ..., fel zőkuen
 And similar the body the fat horse-to, ..., up jump-PART,
 rugwan, **mind** az földhőz veri
 kick-PART, all the earth-to hit-+DEF.3SG
 ‘The body is like a fat horse, ... prancing, kicking, it throws (its rider-s-)
 all to the ground’ (Bod C. 5v)

The associate of *mind*:

1. Covert.
2. In preceding discourse.
3. Special case of anaphora: *mind* + demonstratives. (*Mind ez/az* ‘all this/that’).
4. Relative clauses.

5. Ambiguity:

▷ Ambiguity:

- (11) Fordollatoc èn hoziam **مند** tū zūuèteckèl
Turn-IMP-PL I to-1SG all you heart-POSS.2PL-with
‘Turn toward me, all of you, with your hearts’ , or,
‘Turn toward me with all your hearts’ (Vienna Codex 206)

Ambiguity:

- (12) **mynd** el zakadozot vala az ev kentesenek
all away tore be-PERF the she habit-POSS.3SG-DAT
vÿa
sleeve-POSS.3SG
‘the sleeve of her habit became all torn’ (St Margaret’s Legend, 19v)

(The sleeve had tears all over it, or it became completely torn.)

▷ Collective and Reciprocal Readings

- (13) a. ?*Every* student gathered in the hall
b. *All* students gathered in the hall
(14) a. ??*Every* student shook hands with each other
b. *All* students shook hands with each other.

OH (and MH) *mind* and *minden*: like English *all* and *every*. No data in the codices where the Restrictor of *minden* contains a reciprocal or an expression indicative of a collective or reciprocal reading (a verb or the OH equivalent of e.g. *együtt* ‘together’; no reciprocal pronouns, either.

Mind and Collective Readings ▷

- (15) a. Tehat **mind** az zentøk **egetømbe** mondanak: Ez az zyz
Thus all the saint-PL together say-PL3: This the virgin:
‘Thus all the saints said together: This is the virgin’ (Kazinczy C. 9v)
b. Az kòuetkezø nap **mind** az nep **fel gòluen**: ... az
The following day all the people up gather-VÉN:
kørnøl allok: **mind** Codallyak uala:
... the around stand-GER-PL: all admire-PRES.3SG
be-PERF
‘The following day all the people having assembled, all those around it admired it’ (Kazinczy C. 17r)

More collective readings

- (16) Tehat ime az hagot napra es helre **mind ȝue ȝolenek**:
Thus lo the leave-PART day-onto and place-onto all together

gather-IMP-3PL:

‘Thus they all assembled on the appointed day, at the appointed place’

(Kazinczy C. 61r)

▷ *Mind* and Reciprocals

- (17) kyk **mind** eleygben yonek eȝ maasnak es
who(Rel)-PL all before-POSS.3PL come-3PL one other-DAT and
wg tiztȝlyk eȝ maasth
that-way respect-3PL one other-ACC
‘who all come forward to meet each other, and thus honour each other’
(Sándor C. 5v)

⇒ OH *mind* was not inherently distributive!

Ontology of Associate

- Individuals (including collections/groups).

- (18) **mȳnd** az tellȳes conuent bȳzonsagot tevt rola
all the entire convent testimony-ACC placed about-this
‘the entire convent testified (unanimously) on this matter’ (St Margaret’s Legend 11r)

- Abstract entities: the world, emotions, events/facts.

Mind as ‘entire’ — parallel with Romance languages (*tout, toute, tot, toată*):

- (19) **mind** ȝ ereyet ez velagi heusagra
all he force-POSS.3SG-acc this world-DENOM vanity-onto
kȝlti vala
spend-PRES.3SG be-PERF
‘He dissipated all his powers/force on worldly vanities’ (Bod C. 3v)

Abstract entities, events

- (20) Azert ez bineknek miatta **mind** ez velag gonozban
 For this sin-PL-DAT because all this world evil-in
 vettetett
 cast-PASS-PAST
 ‘Thus on account of these sins the entire world has been conceived in
 evil’ (Bod C. 2r)

▷ ‘Summing up’. Scenario: a nun has a long, detailed vision. She relates it
 all/all of it to her fellow nuns.

- (21) ez beteg soror **mjnd** meg monda az sororoknak ez feljvvl meg
 this ill sister all PRT told the sister-PL-DAT this above PRT
 mondot latast
 told vision-ACC
 ‘This ailing sister recounted fully the aforementioned vision to the other
 sisters’ (St Margaret’s Legend, 63v)

Abstract entities:

- (22) kynek zentseges erdemeuel **mynd** telljes anyja zent egyház nagy
 who-DAT holy merit-with all entire mother holy church great
 evremel tjtztelj
 joy respects
 ‘whose holiness is joyously revered by the entire church’ (St Margaret’s
 Legend, 24r–v)
- (23) Ez meg mondot soror kezde zent margit azzont archel verny az moslek
 vizzel. de ez zent zvy **mjnd** bekesselgel elzenuede
 ‘The aforementioned sister began to hit Lady Saint Margaret in the face
 with the slop water, but this holy virgin endured all this patiently’ (Saint
 Margaret’s Legend, 13r)

Ontology of associates: — continued —

- Time stretches.
- Spatial regions, trajectories. Regions of the body.
- Degrees of change.

▷ Degrees/Paths of change:

- (24) a. Idumea kiralnac tètèmit meg egètte
 Idumea king-POSS.3SG-DAT bone-POSS3.SG-ACC PRT burned
mend hamuiglan
 all ash-till

‘He burned the bones of the king of Idumea all (the way) to ashes’
(Vienna C. 216)

- b. & a. t̄plom **mend** földiglèn
the. temple all earth-till down-break-CAUSE-PASS-PAST
let̄orèt̄tèt̄et

‘the temple was demolished all (the way) to earth’ (Vienna C. 261)

What to Associate with

1. Entire quantity, or
2. smallest/earliest point of the scale;
3. final/latest point of the scale.

End of the scale

- (25) **mēd** ohozia fvtanac a küsdèdt̄ol fogvā **mēd** annaggiçlan
all he-to run-IMPF-3PL the little-from begin-PART all the-big-till
‘they all ran to him, from small children all the way to grownups’ (Vienna
C. 38)
- (26) [hogy megadassék a tartozás] **mind** ment̄ol kisebb fill’eriglen
[that prt-give-PASS the debt] all SUPERL smaller penny-till
‘so that the debt be repaid, entirely, to the last penny’ (Bod C. 17v)

▷ Space, spatial trajectories

- (27) az ev k̄yaltassok **m̄ynd** menyorzagiglan fel hall̄yk
the PRO-3 cry-POSS.3PL all heaven-till up hear-PASS.3SG
vala.
be-IMP
‘their cries could be heard all the way to Heaven’ (St Margaret’s Legend
41v)
- (28) tahat az wtat **m̄ind** be vontat bíboral es barsoníal **m̄ind** azenteghazíglan
(Lobkowicz Codex, 7)
‘Thus the road was all covered in purple and velvet, *all* the way to the
church’

Regions of the body: The entire region:

- (29) az te test̄odet en **mind** el zagattattatom
the you body-POSS.2SG-ACC I all away tear-CAUS-1SG

‘I’ll have your *entire* body torn to pieces’. (Kazincy Codex 15v)
Or: ‘I’ll have your body *all* torn to pieces’

The endpoint:

- (30) Evneky ruhaja nemykoron **mynd** terdig meg
She-DAT gown-POSS.3G at-times all knee-till PRT
sarosvl vala.
muddy-DENOM be-sc perf
‘Her gown would at times become muddied all the way to the knee’ (St Margaret’s legend 26v)

Time

- (31) vyselven **mjnd** az tellyes napot nagy aytatos syralmas
spend-PART all the complete day-ACC big pious tearful
jmadsagban
prayer-in
‘spending the entire day in pious, tearful prayers’ (St Margaret’s Legend 7r)

▷ All the time until:

- (32) ezenkepen al vala **mjnd** ebedyg
this-way-N stand be-PERF all lunch-till
‘and in this manner she would stand all until lunchtime’ (St Margaret, 5v)

▷ Ever since:

- (33) mjnden eztendevben **mynd** attvl fogva. hog zent margit
every year-in all that-from begin-PART that saint margaret
azzonnac yo okossaga volt ...
lady-DAT good cleverness-POSS.3SG was
‘in every year, ever since Lady Saint Margaret was of bright enough’
(she would wash her fellow nuns’ feet at Easter) (St Margaret, 6v)

Time:

- (34) hanuazo zerdatl **mjnd** husvetyk ciliciomot visel vala
Ash Wednesday-from all Easter-till nail-belt-ACC wear be-PERF
‘from Ash Wednesday, all until Easter, she would wear a belt studded
with nails’ (St Margaret, 21r)
(in fact, it was a belt made of porcupine hide, with quills and all)

3 The Semantics of Old Hungarian *mind*

Background, eclectically

- Simplest assumption: $all \cong every$.
 - Refined, generalised: all is a generalised distributivity operator (Roberts (1987)). Why ‘generalised’? Examples that go back to Barbara Partee:

- (35) a. The car was *all* dirty
b. The cars were *all* dirty.

- Vendler:

- (36) a. **All** those blocks are yellow \models Every one of those blocks is yellow
b. **All** those blocks are similar $\not\models$ Every one of those blocks is similar
-to what?-
c. **All** those blocks fit together $\not\models$ Every one of those blocks fits together
d. The number of **all** those blocks is 17. $\not\models$ The number of every one of those blocks is 17. (How?)

at least with respect to a given group of individuals, the reference appropriate to “all” is collective, and the reference appropriate to “each” and “every” is distributive. (Vendler (1962): 147)

- Interlude: Doron, recent work on Hebrew *kol*. Also: diachronic work on grammaticalisation of adjectives meaning ‘whole’, ‘full’ (Haspelmath (1995)).

- Dowty and Brodie (1984), Dowty (1987): all restricts the domain of ‘eligible’ associates. If the VP is taken to be a function from generalised quantifiers to truth values, all restricts the domain of this function to principal filters.

- (37) Def. Given $A \subseteq U$, the principal filter generated by A is $\{X \subseteq U \mid A \subseteq X\}$.

- (38) Def. Given a collection \mathbf{Q} of subsets of U ; if there is a subset A of U s.t. $\forall X \in \mathbf{Q}: A \subseteq X$, then \mathbf{Q} is a principal filter, viz. \mathbf{Q} is the principal filter generated by A .

- Hoeksema (1996) on Dowty, Dowty–Brodie and on putting van der Does (1992)’s four operators to work.

Hoeksema on the principal filter criterion: examples where the ‘associate’ of the floating quantifier is an indefinite, and, as such, is not a (pure) principal filter. Discussion: later.

- (39) Buildings, docks, vessels, and details of the Arctic landscape are **all** clearly visible. (Hoeksema's (48a))

van der Does (1992) four abstract operators that mimic floating quantifiers; Y : a possibly collective entity; X : a predicate over entities like Y .

- (40) a. α : = $\lambda X.\lambda Y.[X(Y) \wedge |Y| = 1]$; 'atomic', \approx *alone*;
 b. τ : = $\lambda X.\lambda Y.[X(Y) \wedge |Y| > 1]$; 'collective', \approx *together*;
 c. δ : = $\lambda X.\lambda Y.[AT(Y) \subseteq X]$; 'distributive';
 d. π : = $\lambda X.\lambda Y.[Y \subseteq \bigcup X]$; 'partaking in'.

Hoeksema's variation on Van der Does – X an entity, P a predicate.

- (41) $\delta_H(P)(X)$ iff $\forall x \in X: P(x)$.

Hoeksema's *all*: The count case: disallows distributivity 'all the way down'.

- (42) a. $\llbracket all \rrbracket(P)(X) \cong \forall x \in X: P(x); |X| \geq 2$. (Count.)
 b. $\llbracket all \rrbracket(P)(X) \cong \forall x \ni X: P(x)$. (Mass: \ni is the material-part-of relation.)

- Brisson (2003): 'pragmatic strengthening':

- (43) a. The boys were asleep vs
 b. The boys were **all** asleep.

What does OH reveal?

- *Mind* associated with collections / aggregates / groups (entities that could have other entities as parts). (NB mild coercion at times, from abstract entities to their 'worldly' components, from groups-as-atoms to the sets corresponding to those groups.)
- *Mind* required definiteness (associating with familiar, inferrable or circumscribable collections, aggregates or partially ordered sets).
- \Rightarrow One pragmatic function: marking discourse coherence. (Marking the end of a list, or a complicated list of arguments, e.g.)
- 'Filtering'/Restricting function à la Dowty, Dowty–Brodie: plural discourse referent familiar in the local context of *mind/all*.
- Semantic–pragmatic function: 'pragmatic strengthening' (Brisson).

- (44) a. The boys lifted the piano. (John was in fact sound asleep.)
 b. The boys **all** lifted the piano. (???John was in fact sound asleep.)

- *Mind* was not inherently distributive. \Rightarrow certain semantic analyses of English *all* not applicable. (Link, Algebraic Semantics.)

Ingredients of an analysis:

- OH *mind* was an ontologically unspecified maximality operator.
- It associated with collections/aggregates. (Prediction: overt associate not a quantifying expression. Associate may not contain negation.)

Proposal: *mind* presupposed the existence of such a semantic object. ‘Presuppose’: in the sense of presupposition-as-anaphora (van der Sandt (1992), Geurts (1999), Kamp (2001)).

On Hoeksema’s objection to Dowty’s/Dowty et al’s Principal Filter Constraint:

1. Indefinites CAN correspond to relative principal filters. (Algebraic details: Yoad Winter)
2. The discourse referent contributed by the associate: counts as familiar in the LOCAL CONTEXT of *all*.

Proposed operator:

- (45) $(\partial X); P(\Box X)$
 Pres.: there is a collection X ; assertion: the sum of X has the property P supplied by the (logical) predicate. Presupposition as anaphora: BIND the collective discourse referent X to a suitable discourse antecedent.

No claim that *all/mind* is a trigger on a par with *too*, *again*, or definites. The point: context-dependence.

As a matter of fact, the relating *all/mind* to its associate may involve bridging, sum formation (DRT’s abstraction), ... \rightsquigarrow Additional (and possibly later) semantic operations the initial semantic representation obtained as the output of syntax. (Classic DRT fare.)

The point: *mind* was/is not a quantifier.

- Being an operator \Rightarrow it did not introduce a tripartite quantificational structure of the form **Q** (Restrictor) (Nuclear Scope).
- Prediction: no variable binding in the logic textbook sense.
- Prediction: ‘scope’ interactions — do not resemble those of *minden* ‘every’.
- Not predicted but welcome: Found data in codices revealing that *minden* ‘every’ could be employed for “purely logical” reasons. NO DATA WITH *MIND*.

(46) **minden** test ne gyczewlkewgyek **ew**
 every body not glorify(-REFL-)SBJV.3SG he
 lelkeben
 soul-POSS.3SG-INE
 ‘Nobody should glorify his soul’ (Jókai C. 128)
 ‘For everybody it holds that he is not to praise his own soul’

I.e., *nobody* conveyed with *everybody* . . . *not*. Again, *minden* was employed in this way, *mind* was NOT.

ON THE CONTRARY:

(47) **mind** ez vylaag sem foghatta volna meg
 all this world neither catch-POSSIB-PERF.3SG be-COND PRT
 ‘not even the whole wide world could have grasped it’ (Érdy C. 54a)

- Unexpected, welcome: *Minden* ‘every’ was used to form the superlative of adjectives. *Mind* was not. (No data, at least.)

(48) **Mindennél** nagyobb
 Every-than greater
 ‘Greater than everything’ i.e. the greatest.

What about time, space, events, scales?

Time, space, scales:

Full meaning: in tandem with suffixes with a terminative (*-ig* ‘till’) or an inceptive meaning (*-tól fogva* ‘since’).

Association with initial/final element of a scale: similarly to the operators *Since* and *Until* (Kamp). Retrospective *Since*:

$$(49) \quad pSq \cong \exists t.[t < n \wedge q(t) \wedge \forall t'.[t < t' \rightarrow p(t)]]$$

Conjecture: *mind* ...-*ig* ('all ... until') or *mind* ...-*tól fogva* ('ever since') could have a composite semantics, i.e. possible that one need not rely on *mind* alone when computing their meaning.

The difference between *mindenkor* 'at all times', 'on all occasions' and *mind* ...-*ig* ('at all times until'), *mind* ...-*tól fogván* ('ever since'):

The answer is GAPS. More seriously: The domain of *mind* is a given interval, which it has to 'cover'. Not so *minden-kor* ('every' + the temporal suffix -*kor*).

Mindenkor was used in (arbitrary) generalisations (instead of *mind*).

And now the 'gaps':

- (50) Es azért **myndenkoron** predicacio meg vegezuen ewzue
 And for-that every-when sermon pfx finish-PARTCPL together
 gewyty uala **mend** az papokat.
 gather-DEFO.3SG be-PAST all the priest-PL-ACC
 'And so he always had all the priests assemble after the sermon was over'
 (Jókai C. 97)

I.e. Always, when the sermon was over, he assembled all the priests

In Lieu of a Summary

Old Hungarian *mind* was not a quantifier in the first-order logic textbook sense of this term. Nor was it a quantifier in the generative syntax-sense (QR, binding, ...).

Between a maximality operator, a filtering-strengthening device and a rhetorical device. (Ask me about Jaap van der Does!)

- (51) a. First I told you about A
 b. then I told you about B
 c. and about C.
 d. When you have heard **all** these...

THANK YOU!

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