#### An Epistemic Determiner in Hungarian: Its Construals and Its Evolution Tamás Halm and Ágnes Bende-Farkas halm.tamas/agnesbf @gmail.com Hungarian Academy of Sciences

#### 1 Introducing va-j-egy and its construals

Va-j-egy (vagy + egy lit. 'or one') is an approximator and an epistemic determiner found with Hungarian speakers in Romania (Transylvania and the so-called csángó or ceangău region).

(1) Ha létezik **vaegy** update le fogod tudni tölteni If exists V1 update down FUT-2SG can-INF fill-INF 'If there is some update or other you'll be able to donwload it'

Va-j-egy is freely used in colloquial Transylvanian Hungarian, however, it is unattested in other variants of Hungarian. While certain functions of vaegy have already been described by traditional grammarians in the second half of the 19th century (Czuczor and Fogarasi (1874), Kriza (1926)), it has until now escaped the attention of theoretical (generative, ...) linguists.

Observations, Claims:<sup>1</sup>

- Va-j-egy has several related but distinct construals. It can be
  - a 'plain' indefinite determiner ('some'), or
  - an epistemic indefinite determiner ('some or other'), or
  - an approximator ('approximately', 'some').
- Va-j-egy has diachronically developed from the reinterpretation of a vagy egy (lit. 'or one) compound.
- The Romanian epistemic indefinite *vreun* (Farkas (2002a), Farkas (2002b), Fălăuş (2014), among many others) played a role in aiding this reinterpretation through analogy.

 $<sup>^{1}</sup>$ Data from the Internet, narratives of old villagers mingled with notes from young(er) people. Also: Generated by ÁBF herself.

#### 1.1 Main data

As has been noted already in Kriza (1926) and Czuczor and Fogarasi (1874), va-j-egy can be used interchangeably with  $n\acute{e}h\acute{a}ny$  'some, 'a few' in Transylvanian (and specifically, in Szekler) dialects:<sup>2</sup>

(2) Tehetünk bele **vaegy** szem kását is. Put-Poss.1PL into-3sG some grain:CL porridge-ACC too. 'We may also add some grains of porridge (kasha) to it'

The above-mentioned authors note only this construal of *va-j-egy*. In addition to the 'some', 'a few' construal, however, *va-j-egy* is also used as an epistemic indefinite determiner:

(3) Ha létezik **vaegy** update le fogod tudni tölteni If exists V1 update down FUT-2SG can-INF fill-INF 'If there is some update or other you'll be able to donwload it'

Va-j-egy can also be used as an approximator modifying a numeral (approximately n pieces of something), similarly to Romanian vreun/vreo:

(4) A tenyeremen van **vaegy** öt vérhólyag
The palm-POSS.1SG-ON is V1 five blood.blister
'There are about five blood blisters on the palm of my hand'
Romanian: 'Am **vreo** cinci bășici cu sânge pe palmă'

Va-j-egy can also be used as an approximator modifying a measure expression (approximately n units of x). Interestingly, however, in the case n=1, the numeral is obligatorily suppressed, cf. (6).

- (5) Még fennebb sétáltunk vaegy fél kilométernyit a
  Yet higher.up walk-sc past.1pl V1 half kilometre-WORTH-ACC the
  Borzia mentén
  Borzia along
  'Higher up, we walked for about half a kilometre along the Borzia creek'.
- (6) Hoztunk ehejt **vajegy** zsák pityókát magának.
  Bring-PAST-1PL here V1 sack potatoes-ACC you(HON)-DAT
  'Here, we've brought you a sack or two of potatoes' (Clear from context: =1 sack.)

(Aside: HT: vaegy zsák: approximately one sack(ful). ÁBF: vaegy zsák: A sack or two.  $(n \ge 1)$ , and the difference between n and 1 is not large, it can be said to be minimal.)

(7) Van **vaegy** gyufád?
Is V1 match-Poss.2sg
'Do you have a match?'
Rom.: 'Ai vreun chibrit?')

 $<sup>^2\</sup>mathrm{Data}$ : collected by H.T. from the Internet, in addition to the data from the 19th century dictionaries.

This sets *vaegy* apart from other approximators, where a numeral is obligatory in front of the measure expression:

- (8) a. \*körülbelül zsák(nyi) krumpli about sack(ful) potato 'about one sack(ful) of potatoes
  - b. **körülbelül egy** zsák(nyi) krumpli about one sack(ful) potato — same —
- (9) a. **vaegy** zsák(nyi) krumpli V1 sack(ful) potato 'about one sack(ful) of potatoes'
  - b. \*vaegy egy zsák(nyi) krumpli V1 one sack(ful) potato same-

Va-j-egy some and va-j-egy approximately do not impose semantic restrictions on the environments where they can appear.

Va-j-egy 'some.or.other on the other hand is subject to semantic restrictions. These will be listed in 4.2. A hint here: modal (epistemic vs deontic) contexts, intensional verbs, antecedent vs consequent of conditionals, questions, ...

# 2 Va-j-egy as an approximator

Point of departure: vaj-e-gy as a generalised quantifier. Conservative, and provides a unitary 'platform' for all readings of va-j-egy.

(10) 
$$[vajegy_{some}] = \lambda f. \lambda g. [\{x|f(x) = 1\} \cap \{x|g(x) = 1\} \neq \emptyset]$$

That is, va-j-egy as a plain indefinite determiner is an existential quantifier.

Va-j-egy As an approximator, first version (Rothstein (2016), Schvarcz (2017)):

(11) 
$$[vajegy_{apprx-ly}] = \lambda n.\lambda f.\lambda g.[|\{x|f(x)=1\} \cap \{x|g(x)=1\}| \approx n]$$

(12) **vajegy öt** vérhólyag ('some five blisters'): 
$$\lambda g.[|\{x|blister(x) = 1\} \cap \{x|g(x) = 1\}| \approx 5]$$

*Va-j-eqy* with measure phrases:

(13) 
$$[vajegy_{appx.meas}] = \lambda n. \lambda u. \lambda f. \lambda g. [MEAS(\{x|f(x)=1\} \cap \{x|g(x)=1\}) \approx \langle n,u\rangle]$$

(14) **vajegy** fél deci szilvapálinka 'about 0,05 l of slivowitz':  $\lambda g.[\text{MEAS}(\{x|\text{sl}(x)\} \cap \{x|g(x)=1\}) \approx \langle 0,05,litre \rangle]$ 

Second version: why not unify entries for approximating va-j-egy, regardless of what they approximate.

Simplistic attempt: declare approximating va-j-egy to be ambiguous, and that is that.

Not so simplistic attempt: for the 'count' case assume a covert classifier #, meaning (approximately) 'piece', 'head', . . .

(15)  $[vajegy_{appx}] = \lambda n.\lambda u.\lambda f.\lambda g.[MEAS(\{x|f(x)=1\} \cap \{x|g(x)=1\}) = \langle n,u\rangle],$  where  $u \in \{\#, \text{litre}, \text{kilometre}, \text{bunch}, \text{sack}(\text{ful}), \dots\}.$ 

Reducing existential-quantifier-va-j-egy to an approximator:

(16) 
$$[vajegy_{some}] = \lambda f. \lambda g. [MEAS_{card}(\{x|f(x)=1\} \cap \{x|g(x)=1\}) > \langle 0, \# \rangle]$$

# 3 The evolution of va-j-egy

The origins of va-j-egy: from vagy 'or' + egy 'one'.

 $(17) vagy egy \rightarrow vajegy \rightarrow vaegy$ 

NB, the conjunction vagy 'or' on its own is (to this day) often pronounced as vaj in Transylvania. (See also Szigetvári (2008).)

Questions:

- 1. How did 'or one' come to mean 'a few'?
- 2. How did 'or one' come to mean 'approximately'?
- 3. How did 'or one' become an epistemic determiner?

Where it all started (according to us):

Vagy 'or' on its own is also used an approximator (in the entire Hungarian speech community):

(18) Aludtam vagy öt órát Sleep-PAST-1SG some five hour-ACC 'I slept for some five hours'

Buying ONE half:

- (19) a. Vettem egy kiló kenyeret Buy-PAST-1SG one kilo bread-ACC 'I bought one/a kilo of bread'
  - b. Vettem fél kiló kenyeret
    Buy-PAST-1SG half kilo bread-ACC
    'I bought half a kilo of bread'

Rom.: 'Am luat jumătate de kilogram de pâine'

- c. Vettem egy fél kiló kenyeret
  Buy-PAST-1SG one half kilo bread-ACC
  'I bought one half kilo of bread'
  Rom.: 'Am luat un jumătate de kilogram de pâine'
- (20) (Approximating vagy) + egy (numeral)  $\rightarrow vagyegy$  (approximator)

Approximating vagyegy/vajegy: a small number, larger than  $0 \rightarrow$  use extension from quantities to countables, a.k.a. to individuals. (This is our hypothesis concerning the emergence to the construal 'a few'.)

The emergence of the epistemic, anti-specific construal?

Observation: epistemic determiners can be used as approximators:

- (21) a. **Some** famous scientist had claimed that ...
  - b. Last night I slept **some** five hours.

Anti-specific *va-j-egy* may have emerged from perceived reversibility (a fallacy????): If anti-specific determiners can be used as approximators, then approximators can also be used as anti-specific determiners.

In addition, the trajectory of *vajegy* parallels the much earlier 'evolution' of the numeral *egy* into the indefinite *article*.

- (22) a. egy ('one', 'a'): quantity  $\rightarrow$  conveying existence, introducing a discourse referent;
  - b. vajegy uncertainty concerning a quantity  $\rightarrow$  uncertainty concerning the existence of a witness, uncertainty concerning the identifiability of a witness.

### 4 Va-j-egy as an epistemic determiner

# 4.1 Background: epistemic/modal indefinites

'Epistemic' determiners: interpretation depends on hearer's cognitive state. Non-specific epistemic determiners (usu. called 'epistemic' tout court):

Jayez and Tovena (2006):

- Ignorance;
- indifference;
- existence of witness inferred.

Question (Hans Kamp p.c.): Whose ignorance/indifference/inferences? The speaker's? The hearer's? Attributed to some other cognitive agent?

Alonso-Ovalle and Menéndez-Benito (n.d.): 'Modal' indefinites: sensitivity to modal contexts.

### 4.2 On the distribution of vajegy and vreun

Based on our database and inspired by Farkas (2002a):

- •Under epistemic modals: OK.
- (23) A vaktyúk es találhat **vajegy** gyöngyszemet The blind.hen too find-Poss.3sG V1 pearl-ACC 'Even a blind hen may find some pearl or other'

- (24) János biztos letett **vajegy** vizsgát, attól olyan fáradt John certainly down.put V1 exam-ACC that-from so tired 'John must have taken an exam, that's why he is so tired'
- Deontic modality: ???

  The famous German example from Kratzer and Shimoyama (2002):
- (25) Marinak férjhez kell mennie **valami**/???**vajegy** orvoshoz Mary-DAT husband-to must go-INF-3SG something/???V1 doctor-to 'Mary has to marry some doctor or other' 'Maria muss **irgendeinen** Arzt heiraten
- (26) a???A diplomához le kell még tennie **vajegy** vizsgát

  The degree-to down has.to still put-INF.3SG V1 exam-ACC

  Int.: 'He has one more exam to pass before he can get his degree, I have no idea in what subject'
  - b???A doktori követelmények szerint tartani kell/meg kell tartani The doctoral requirements acc.to hold-INF must/pfx must hold-INF vajegy kurzust

V1 course-ACC

'According to PhD requirements one has to give some course or another'

- Under intensional predicates: NO
- (27) \*# János keres **vajegy** könyvet
  John seeks V1 book-ACC
  Intended: 'John is looking for some book or other'
- Antecedent (and NOT the consequent) of conditionals:
- (28) a. Ha létezik **vaegy** update le fogod tudni tölteni If exists V1 update down FUT-2SG can-INF fill-INF 'If there is some update or other you'll be able to donwload it'
  - b. ?Ha Mari szomorú, bemegy **vaegy** múzeumba If Mary sad, in.goes V1 museum-into 'If Mary is sad, she visits some museum or other'
- Universal quantifiers: In Restrictor, NOT in Nuclear Scope.
- (29) a. Minden gazda, aki elment **vajegy** vásárba, jól érezte magát Every farmer, who away.went V1 fair-into, well felt self-ACC 'Every farmer who went to some fair or other had a good time'
  - b. ?Minden gazda, aki elment Berlinbe, betért **vajegy**Every farmer who away.went Berlin-into, in.stepped V1
    múzeumba
    museum-into
    'Every farmer who travelled to Berlin visited some museum or other'
  - Imperative:
- (30) [az örökségemet] adják **vaegy** esztelneki [the inheritance-POSS.1SG-ACC] give-IMP.3PL V1 Esztelnek-from

rászorulónak person.in.need-DAT 'My inheritance should be given to some person (or other) in need from Esztelnek'

#### • Purpose:

- (31) Ehelyt a ponkhálót verem, nehogy **vajegy** mérges ponk
  Here the spider.web-ACC hit-1sg, lest V1 poisonous spider
  megmássza a lovakot
  climb.up.on the horse-PL-ACC
  'Here I smash the spider's web lest some poisonous spider or other get on the
  horses' (Áron Tamási, novelist)
- (32) Nem tudok falura menni, hogy **vajegy** jó kövér bornyút Not can-1sg village-onto go, so.that V1 good fat calf-ACC hozzak.

  bring-SUBJ-1sg
  'I cannot travel to the country, to bring some nice fatted calf'

#### • Desiderative:

- (33) Bár **vajegyet** nyikkantott volna If.only V1-ACC squeak-PAST-3SG be-PAST-COND 'If only he had squealed but once'
  - Questions:
- (34) Van pasid, vagy tetcik **vajegy** fiu?

  Is boyfriend-POSS.2SG, or please-3SG V1 boy?

  'Do you have a boyfriend, or do you fancy some boy or other?' (From our db)
- (35) #Mikor megy vajegy vonat Frankfurtba? When goes V1 train Frankfurt-into? Intended: 'When is there a train to Frankfurt?'

Farkas (2002a) on Romanian vreun in questions: the question must be such that the existence of a witness is called into question.

- Habitual:
- Vajegy virágcserépbe, ócskább csuporba, fazékba tettük.
   V1 flowerpot-into, older jug-into, pot-into put-PAST-1PL
   'We would put it into some flowerpot or other, into an older jug or pot'

Farkas (2002a): In Romanian 'frequentative progressives' license vreun. Hungarian analogue — habituals.

(37) Férfiak nemigen vótak velünk, **vajegy** legény ütötte bé magát.

Men not-yes were INSTR-1PL, V1 lad popped into self-ACC '(Usually) there weren't many men with us, some lad(s) would pop in'

A series of events, the witness for the V1-indefinite may vary with them, and the pairing of events and witnesses can be random.

#### 4.3 Comparing Romanian vreun and Hungarian va-j-egy

Anecdote, which helps distinguish between 2 kinds of epistemic indefinites in Hungarian:

Scenario: visitor to the big city has lost his way. He phones his host.

- (38) a. H: Hol vagy? 'Where are you?'
  - b. G: Valami/#Vaegy szobornál. 'At some statue or other'

NB, *valami* is originally a full DP meaning 'something'. As a determiner it is an epistemic determiner comparable to French *quelque*. Same for Romanian *ceva*.

A bit from Aloni & Port's checklist (Aloni and Port (2010)):

The hide-and-seek scenario (children are hiding in a house)— UNLIKE vreun (Fălăuş (2015)) :

- (39) a. Peti #valami/valamelyik emeleti szobában lehet
  Petey something/some-which storey-ADJ.SFX room-INE be-POSS-3SG
  'Petey may be in one of the rooms upstairs, doesn't matter where'
  - b. Peti ????vaegy emeleti szobában lehet
    Petey V1 storey-ADJ.SFX room-INE be-POSS-3SG
    'Petey may be in some upstairs room or other'

#### **BUT-BUT-BUT:**

(40) Peti **vajegy** eldugott sarokban lehet Petey V1 hidden corner-INE be-POSS-3SG 'Petey may be in some hidden corner or other'

The 'namely'-continuation:

(41) a. Péter találkozhatott **valami** hírességgel, mégpedig Peter meet-POSS-PAST-3SG some(-thing) celebrity-INSTR, namely Jolina Angel-lel.

Jolina Angel-Instr

'Peter may have met some celebrity, namely, Jolina Angel'

B???Péter találkozhatott **vajegy** hírességgel, mégpedig Jolina Peter meet-POSS-PAST-3SG V1 celebrity-INSTR, namely Jolina Angel-lel.

Angel-INSTR

'Peter may have met some celebrity or other, namely, Jolina Angel'

Negation, MON  $\downarrow$  contexts: va-j-egy and vreun behave differently. Vreun IS acceptable in certain negative contexts, AND under  $MON \downarrow$  quantifiers. Vajegy is not acceptable under clausemate negation.<sup>3</sup>

<sup>&</sup>lt;sup>3</sup>Except in deontic contexts, but that is another matter.

(42) a. fără **vreun** dubiu without VR1 doubt

Rom.: 'without any/the smallest doubt'

B???vajegy kétség nélkül

V1 doubt without

H: 'without any doubt'; OK with one FC item or with minden 'every'

(43) a. Puţini studenţi s-au înscris la **vreun** curs Few students SE-PERF-3PL enrol-PARTCPL at VR1 course avansat advanced

Rom.: 'Few students signed up for any advanced courses'

B???Kevés diák vett fel **vajegy** haladó kurzust

Little student took up V1 advanced course-ACC

H: intended meaning the same as in Romanian

- (44) Niciodată n-am ţinut **vreun** talk la Bucureşti Never not-Pf.Aux-1sg held VR1 talk at Bucharest 'I've never given a single talk in Bucharest' (Edward Göbbel, 7.June 2019)
- ⇒ Vreun-DPs are NPIs (Fălăuş).

Hungarian *vaegy*-DPs are NOT NPIs. Strangely enough, they may even be called PPIs. They are clearly NOT FCIs:

(45) a. Az Isten megbocsát **vajegy** szerzetesnek, aki megbánta bűneit The God pfx.pardons V1 monk-DAT, who pfx.regretted the

sin-Poss.3sg.pl

'God will have mercy on some monk or other, who has repented his sins'

b. Az Isten megbocsát **akármelyik** szerzetesnek, aki megbánta The God pfx.pardons AKÁR-which monk-DAT, who pfx.regretted bűneit

sin-Poss.3sg.pl

'God will have mercy on any monk whatsoever who has repented his sins'

(46) a. János okosabb, mint **akármelyik**/#**vajegy** osztálytársa
John smarter, than AKÁR-which/#V1 classmate-Poss.3sG
'John is smarter than any classmate of his'
'John is smarter than some classmate or other of his' (???)

o. Ion e mai deştept decât **oricare**/#**vreun** coleg de clasă de-al Ion is COMP smart than any(-which)/# Vr1 mate of class lui

de-GEN.ART-MASC.SG he-OBL

'Ion is smarter than any of his classmates'

'Ion is smarter than some classmate of his'(???) (Romanian ex. from Farkas (2002a).)

The next possibility: non-veridicality. Not sufficient, cf. prohibition against *vajegy* under intensional verbs. (Same for *vreun*, Farkas (2002a).)

Neither is *vajegy* simply property-denoting.

(47) \*János **vajegy** régi barátom.

John V1 old friend-Poss.1sG

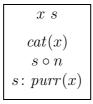
Intended: 'John is an old friend of mine'

Vr1 according to Farkas (2002a):

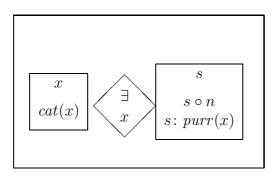
- Romanian *vreun*-DPs may in ctain cases occur under negation → they are not simple NPIs. (But see Fălăuş.) Hungarian *vajegy*-DPs are incompatible with negation.
- Non-veridicality? Insufficient. (Intensional contexts, certain imperatives.)
- Being dependent? No.
- FCIs? No.
- Predicative? No.

What *vreun*--DPs MIGHT be. (And, along with them, *vajegy*-DPs— still following Farkas (2002a).)

- Quodlibetic no distinguished/particular value for witness.  $\rightarrow$  domain homogeneous. This is still insufficient.
- Quantificational force: Romanian *vreun*-DPs are existential <u>quantifiers</u>. In DRT-terms:
  - (48) a. equipmacska dorombol 'a cat is purring'



b. vajegy macska dorombol 'V1 cat is purring'



• Weak existential commitment: "the non-existence of a verifying value remains a live option" ⇒ Re-emerges as Fălăuş's Epistemic Constraint.

The Epistemic Constraint (originally about *vreun*, accepting it to hold for *va-j-egy* as well).

- (49) THE EPISTEMIC CONSTRAINT 1 (Fălăuş (2010)) Context of occurrence: Op[...vreun...] Op p entails that the speakers epistemic alternatives include  $non\ p$ -worlds
- (50) THE EPISTEMIC CONSTRAINT 2 (Fălăuş (2014)) The determiner **vreun** is licensed by obligatorily non-factive epistemic operators.

Our rendering of anti-specific, epistemic *vaegy*: A modalized (modally Skolemized) choice function. (Reinhart (1997), Winter (1997), Kratzer (1998), Chierchia (2002), von Stechow (2000)).

Aside: Why  $\lambda$ -s? Why choice functions?

- Uniform analysis for all three construals.
- 'Weak existential commitment'. Choice functions do convey 'existential commitment'. Making them modally dependent weakens this commitment.

(51) 
$$vaegy_{epst} = \lambda P.\lambda Q.\lambda w.[Q(h(w)(P))]$$

The Epistemic Constraint and (51):

If the function h is composed with the functions denoted by P,Q, the characteristic set of such a function must be a proper subset of the set W of alternatives. ('Alternatives': Worlds accessible to the epistemic agent.)

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