Judit Farkas[1] – Gábor Alberti[2] – Veronika Szabó[2]:
Information-structurally (un)ambiguous deverbal nominals in Hungarian[1]

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1. Introduction
- our aim is to show that several types of Hungarian deverbal nouns can be interpreted either as complex-event denoting or as event-type denoting → the difference between them manifests itself in their scopal interpretation → complex-event denoting variants inherit the information structure from the input verb.
- Hungarian DPs have an even finer structure than has been assumed so far

2. Theoretical background: complex and simple event denoting deverbal nouns
- In many languages there are systematically homophonous pairs of deverbal nouns

→ **English:** Grimshaw (1990, 2011):
- complex event nouns: event reading; the "existence of an internal semantic analysis of the event provided by the event structures" (Grimshaw 1990: 59) → inherit the argument structure from the input verb (presence of an obligatory argument!), and license aspectual modifiers and adverbs like *frequent* in (1a). They cannot be pluralized.
- simple event nouns: event-reading→ lack an argument structure, adverbial modification is impossible (1b), they can be pluralized.

TYPES OF DEVERBAL NOUNS		EVENT READING	ARGUMENT STRUCTURE	ADVERBIAL MODIFICATION
Complex event	(1a) The frequent *examination* (*of patients) leads to better diagnosis.	✓	✓	✓
Simple event	(1b) The *frequent *examination* took place at 6pm.	✓	-	-

Table 1: Complex and simple event denoting deverbal nouns in English (based on Grimshaw 2011)

→ **German:** Klemann-Krämer (2009: 28): complex-event denoting –*ung* nouns can be modified by the adverb *erneut* 'once more' (2b), while simple event denoting nouns cannot (2b).

(2) a. Die erneute   *Befragung* des Kanzlers wurde   unterbrochen.
         the once_more questioning the chancellor become.Past interrupted
         'The *questioning* of the chancellor got interrupted.'
     b. Die (*erneute) *Befragung* wurde   unterbrochen.
         the   once_more questioning become.Past interrupted
         'The *questioning* got interrupted.'

→ **Dutch**: the 'bare infinitival nominal' *eten* (cca. 'to eat') is less nominal than the 'noun preceded by a determiner' (cca. 'eating'), see (3). Even though: "[a]ll INF-nominalizations (…) refer to the event or situation denoted by the verb from which they derive" (Broekhuis *et al.* 2012: 54-56).

(3) a. Fruit *eten* is gezond
        fruit eat   is healthy
        'To *eat* fruit is healthy.'

     b. Het *eten* van fruit is gezond.
        the eat of   fruit is healthy
        'The *eating* of fruit is healthy.'

	PROPERTIES	BARE-INF	DET-INF
NOMINAL	adjectival modification	?	yes
	theme with genitive case	no	no?
	theme/recipient realized as postnominal PP	no	yes
	definiteness	—	yes
	indefiniteness	—	no
	quantification	no	no
	pluralization	no	no

Table 2: The main differences between INF-nominalizations in Dutch (Broekhuis et al. 2012: 61).

3. Deverbal nouns in Hungarian

- Complex-event denoting ÁS-nouns (4a) can be distinguished from the less verbal group (4b) of SED (simple-event denoting nouns) by means of the [postposition+*való*] test (Laczkó 2000: 316–318).
- In (4a) the *előtt való* 'before be.Part' postpositional construction evokes the complex-event reading → the possessor is obligatorily interpreted as the Theme argument. ←→ In (4b) the possessor does not necessarily correspond to a certain (or any) argument of the input verb → can be interpreted either as the Agent or as the Theme of the input transitive verb.

(4) a. *Az oroszlán evés előtt való simogat-ás-a*   mindenkit   megdöbbentett.
        the lion   eating before be.Part caress-ÁS-Poss.3Sg everyone.Acc shock.Past.3Sg
        '*Caressing the lion before eating* shocked everyone.'

     b. *Az oroszlán evés előtti simogat-ás-a*   mindenkit   megdöbbentett.
        the lion   eating before.Attr caress-ÁS- Poss.3Sg everyone.Acc shock.Past.3Sg
        '*The caress of the lion before eating* shocked everyone.'

(4a,b)   (4b)

	PROPERTIES	ÁS-NOUN	SED-NOUN
VERBAL	*separability of preverb / verbal modifier*	??	*?
	presence / obligatoriness of arguments	✓	?
	adverbial modification	*?	*?
NOMINAL	pluralization	*	✓
	definiteness and other degrees of referentiality	??	(?)
	quantification (and determination)	*?	(?)

Table 3. Some other differences between complex and simple event denoting -*Ás* nouns

- The four productive derivational suffixes in Hungarian besides *-Ás: -Ó$_\theta$, -T$_{EV}$, -T$_{TH}$* and *–hAtnék*
  → they have both complex event denoting and event-type based variants (except *-T$_{EV}$* nouns).
    - Ó$_\theta$-nouns productively express one of the "active key participants" of the complex or simple event: Agent, Experiencer, Instrument or Location (5a, 6a)
    - T$_{Ev}$-nominalization produces T$_{Ev}$-nouns denoting events (essentially in the same way as Ás-nominalization) (5b), T$_{TH}$-nouns denote the participant of the input complex event which can be taken to have the Theme thematic role (5c and 6b).
    - *-hAtnék* is a very specific, fixed and inseparable suffix denoting a desire or urge (5d, 6c) (Oszoli 2014), see Table 3.

TYPE	SUFFIX	EXAMPLE

COMPLEX EVENT	**-Ó$_\theta$**	(5a) Péter lesz *az ötödik fejezet* **meg-ír-ó- ja?**
		     Péter will_be.3Sg *the fifth chapter perf-write-Ó-Poss.3Sg*
		     'Will Peter be *the writer of the fifth chapter?*'

	-T$_{EV}$	(5b) [?]Amerika **felfedez-t-é- vel** új korszak kezdődött.
		     America *discover-T-Poss.3Sg-Ins* new age begin.Past.3Sg
		     '*With America having been discovered,* a new age has begun.'

	-T$_{TH}$	(5c) Dóri volt Péter **felfedez-ett-je.**
		     Dóri be.Past.3Sg Péter *discover-T- Poss.3Sg*
		     'Dóri was *the one discovered by Péter.*'

	-HATNÉK	(5d) **Sír-hatnék- om** van.
		     cry-HATNÉK-Poss.1Sg be.3Sg
		     '*I* am having *the urge to cry.*'

EVENT TYPE	**-Ó$_\theta$**	(6a) Péter a megyében *a legjobb* **ír-ó**.
		     Péter the county.Ine *the best write-Ó*
		     'Péter is *the best writer* in the country.'

	-T$_{TH}$	(6b) Péter volt az év **vádlo-tt-ja**
		     Péter was the year *accuse-T-Poss.3Sg* .
		     'Péter was the **accused** of the year.'

	-HAT-NÉK	(6c) *Péter állandó* **kocsmáz-hatnék-ja** kiborít.
		     Péter constant go_out_to_pubs-HATNÉK-Poss.3Sg make_angry.3Sg
		     '*Péter's constant urge to go out to pubs* makes me angry.'

Table 4: Productive deverbal nominalizations in Hungarian

## 4. The inheritance of information structure

- We propose that
  - certain deverbal nouns can inherit the information structure from the input verb
  - complex-event denoting constructions, in contrast to event-type based nominalizations are "scopally" ambiguous
  - narrow-scope readings in the (a)-examples are available due to the inheritance of the input verbal information structure to the output deverbal nominal construction.

4.1. The inheritance of information structure in the case of ÁS-nouns and SED-nouns

(7) a. Imit   váratlanul   érte   [*mindkét lánynak*]_{Theme} *a meghív-ás-a   a   koncertre.*
      Imi.Acc unexpectedly caught   *both   girl.Dat*   the invite-ÁS-Poss.3Sg the concert.Sub

wide-scope reading: 'In the case of both girls, it caught Imi unawares that they had been invited to the concert.'
narrow-scope reading: 'It caught Imi unawares that both girls had been invited to the concert.'

wide-scope reading   *narrow-scope reading*
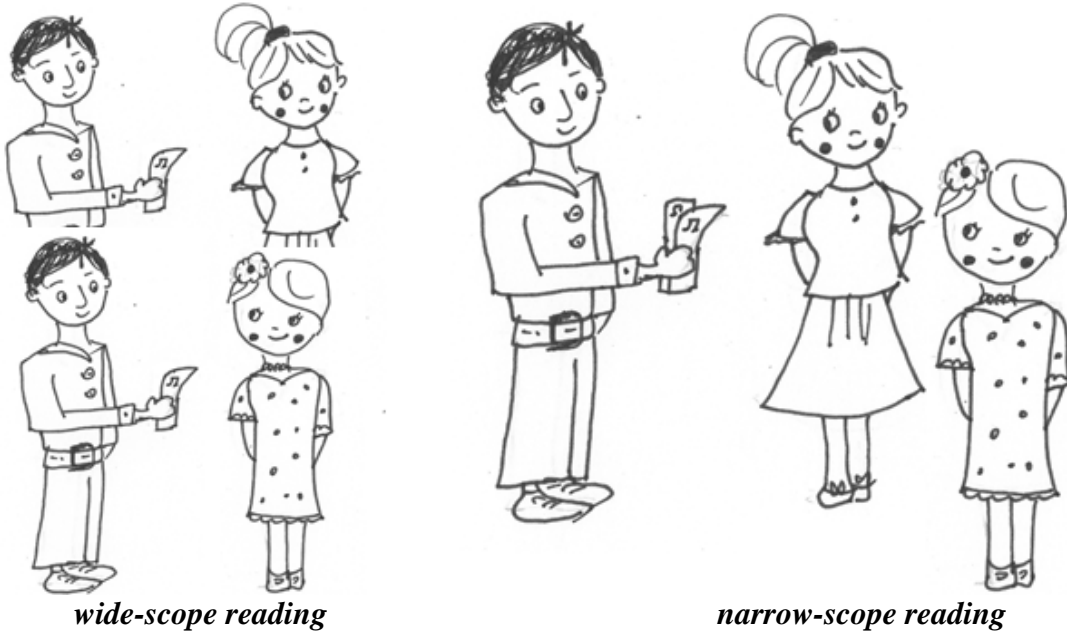
b. Imit   váratlanul   érte   [*mindkét lánynak*]_{Agent} *a   meghív-ás-a a   koncertre.*
   Imi.Acc unexpectedly caught *both   girl.Dat*   the invite-ÁS-Poss.3Sg the   concert.Sub

wide-scope reading: 'In the case of both girls, it caught Imi unawares that they had invited him to the concert.'
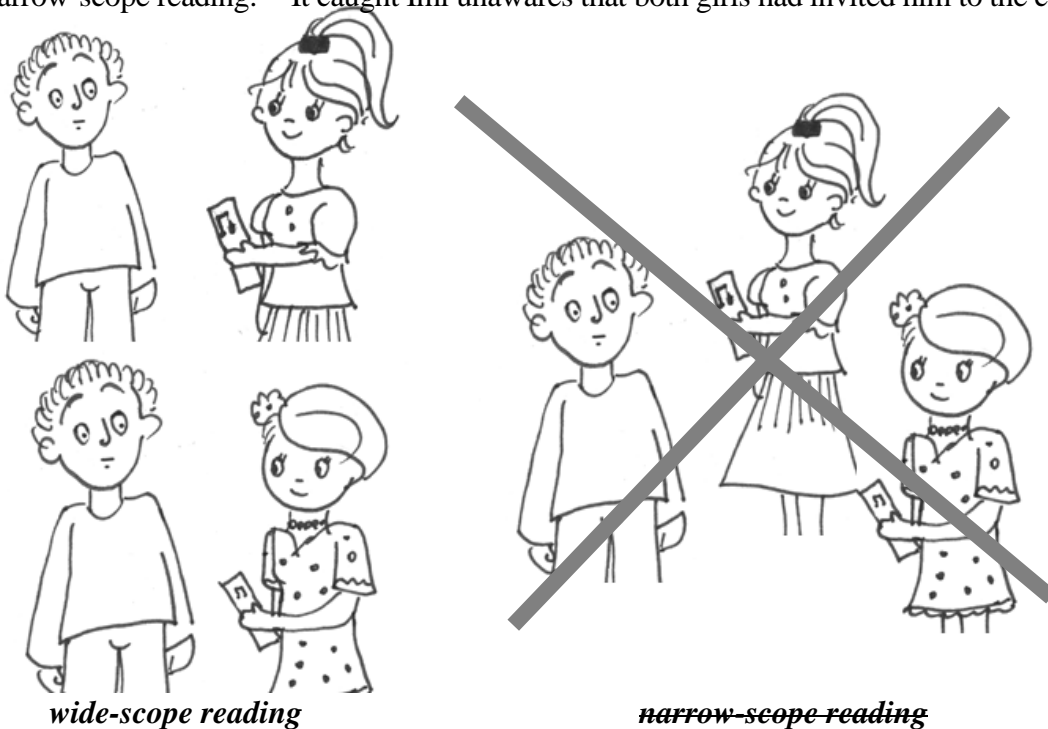~~narrow-scope reading~~: *'It caught Imi unawares that both girls had invited him to the concert.'

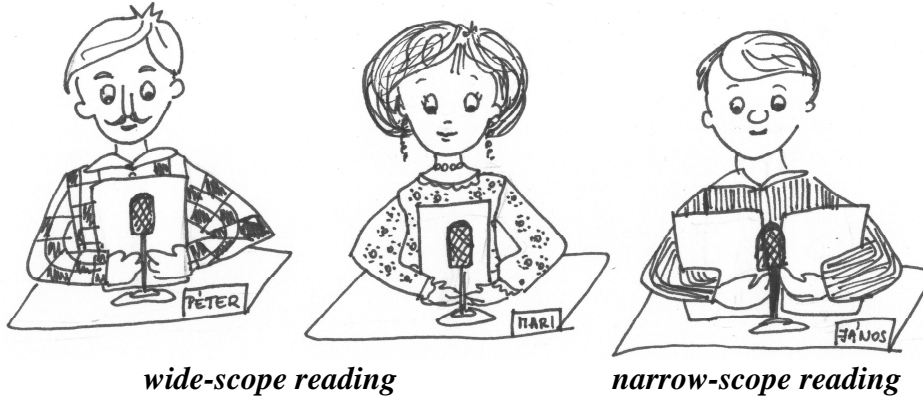*wide-scope reading*   *~~narrow-scope reading~~*

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4.2. The inheritance of information structure in the case of Ó-nouns and typical-participant denoting nouns

(8) a. Letartóztatták   [[*mindkét   hír*]   bemond-ó-i-t].
     arrest.Past.DefObj.3Pl   *both*   news   announce-Ó-Poss.Pl-Acc

  wide-scope: 'In the case of *both pieces of news*, those who announced either of them were arrested.'
 narrow-scope: 'Those who announced *both pieces of news* were arrested.'

wide-scope reading   ***narrow-scope reading***

  b. Letartóztatták   [[*mindkét   csatorna*]   bemond-ó-i-t].
     arrest.Past.DefObj.3Pl *both*   channel   announce-Ó-Poss.Pl-Acc
  wide-scope: 'In the case of *both channels*, those who work for either of them were arrested.'

  ~~narrow-scope reading~~: 'Those who work for *both channels* (at the same time) as announcers were arrested.'

wide-scope reading   ~~***narrow-scope reading***~~
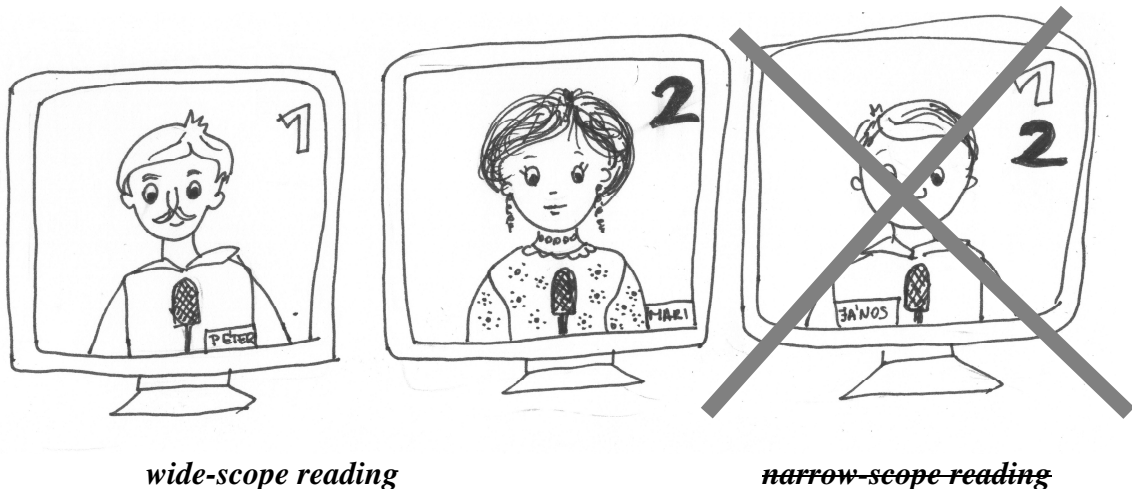
4.3. The inheritance of information structure in the case of T_{EV}-nouns and T_{TH}-nouns

(9) a. [(?)]Új korszak kezdődött [[*mindkét   sziget*] felfedez-t-é-vel].
     new   age   begin.Past.3Sg *both*   island   discover-T-Poss.Pl-Ins

  wide-scope reading: [(?)] 'In the case of *both islands*, a new age began when either of them had been discovered.'
  narrow-scope reading: [?] 'With *both islands* having been discovered, a new age began.'

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b. Megnyerheti   a   versenyt   [[*mindkét mentor*] protezsál-t-ja].
win.Mod.DefObj.3Sg the   competition.Acc *both*   *mentor*   favor-T-Poss.3Sg

wide-scope reading: 'In the case of *both mentors*, the person who has been favored by either of them has a chance to win the competition.'
narrow-scope reading: [??] 'One who is favored by *both mentors* at the same time has a chance to win the competition.'

c. Elítélték   [[*mindkét ügy*] vádl-ott-já-t].
convict.Past.DefObj.3Pl *both*   *case*   accuse-T-Poss.3Sg-Acc

wide-scope reading: 'In the case of *both cases*, the person who was an accused in either of them was convicted.'
~~narrow-scope~~: *'The person who was an accused *in both cases* at the same time was convicted.'

4.4. The inheritance of information structure in the case of HATNÉK-nouns and HATNÉK$_{SED}$-nouns

(10) a. A miniszterelnököt ijedséggel töltötte   el
the prime_minister.Acc   fright.Ins   fill.Past.DefObj.3Sg away
[[*mindkét   koalíciós partner*] alkotmány-módosít-hatnék-ja].
both   *coalition   partner* constitution-modify-HATNÉK-Poss.3Sg

narrow-scope reading: [?] 'It frightened the prime minister that *both coalition partners* had the desire to modify the constitution.'
wide-scope reading: 'In the case of *both coalition partners*, it frightened the prime minister that they had the desire to modify the constitution.'

b. A miniszterelnököt ijedséggel tölti   el
the prime_minister.Acc   fright.Ins   fill.DefObj.3Sg away
[[*mindkét   koalíciós partner*] örökös   alkotmány-módosít-hatnék-ja].
both   *coalition   partner* eternal   constitution-modify-HATNÉK-Poss.3Sg

narrow-scope reading: [?] 'It frightens the prime minister that *both coalition partners* always have a desire to modify the constitution.'
wide-scope reading: 'In the case of *both coalition partners*, it frightens the prime minister that they always have a desire to modify the constitution.'

5. Multiple ambiguity and mixed scopes

- constituency-test: *na…például* "for instance"-test (Alberti-Farkas-Szabó 2015): non-exhaustive type of answer in a contrastive topic position

(11) *Mindkét húgod   mindhárom koncertre való   el-küld-és-é-t*   ellenzem.
both   sister.Poss.2Sg all_the_three   concert.Sub be.Part   away-send-ÁS-Poss.3Sg-Acc oppose.DefObj.1Sg

narrow+ narrow: 'As for both of your sisters' sending to all the three concerts I am against that.'
wide+ narrow: 'In the case of both of your sisters, I am against the sending of each of them to all the three concerts.'
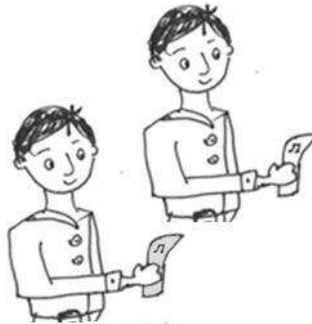wide+ wide: 'In the case of both of your sisters and all the three concerts, I am against the sending of each of them to each of the concerts.'
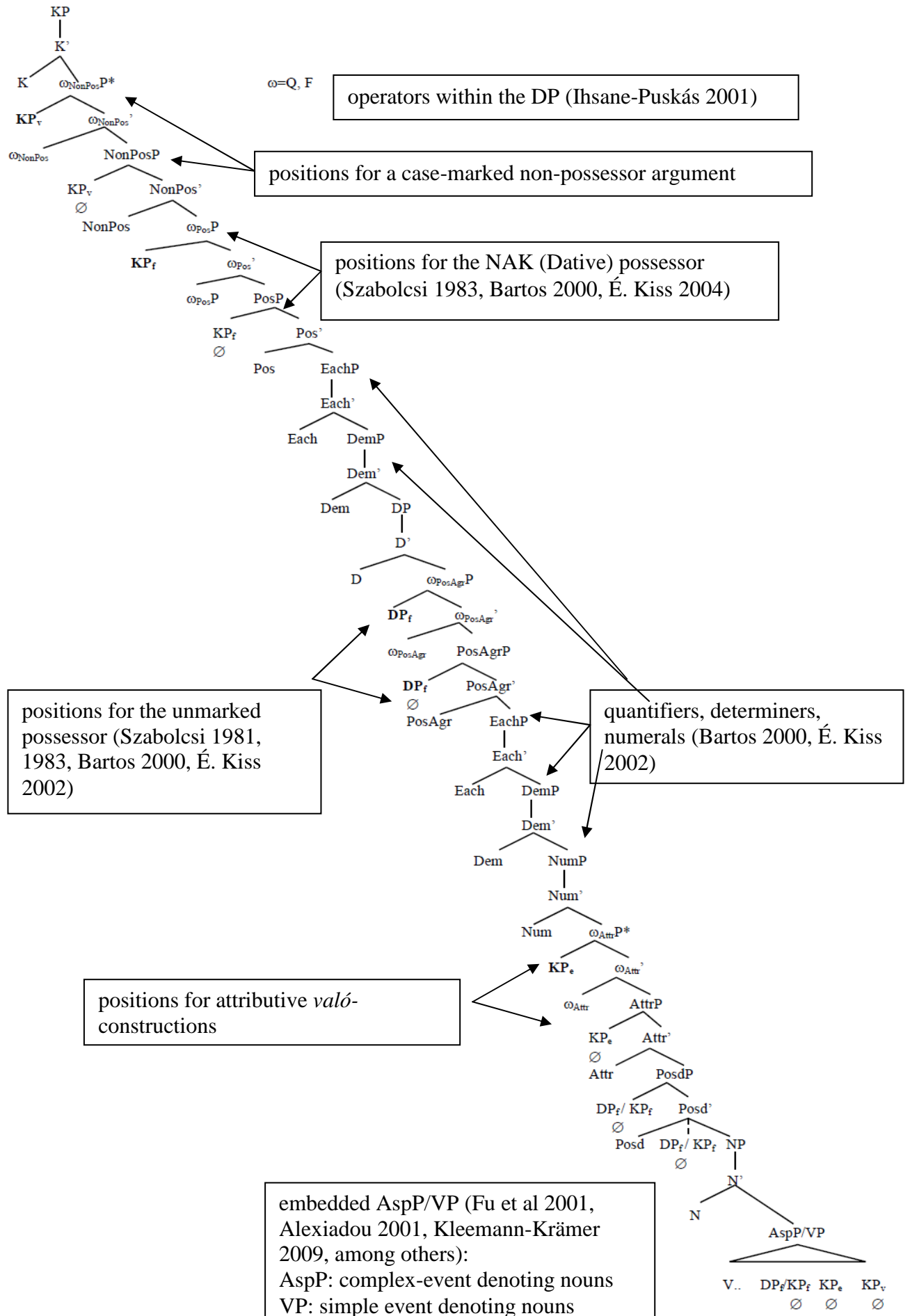
narrow+narrow scope

wide+narrow

wide +wide scope

3. The integrated Hungarian DP structure

- Our new data suggest that the Hungarian DP has an even finer structure than has been assumed so far → Narrow- and wide-scope readings in different deverbal nominal constructions argue for the integration of the carthographic Split-DP Hypothesis (Giusti 1996, Ihsane and Puskás 2001) into the morphology-based Hungarian traditions (Szabolcsi and Laczkó 1992, Bartos 2000, É. Kiss 2002).

  - o The division of the noun phrase into a lexical domain (NP) and a functional domain (DP) with intermediate functional projections was first introduced in Abney (1987)
  - o Szabolcsi's theory: the determination of the positions of numerals and the two kinds of possessors, the NAK possessor and the unmarked possessor relative to the position of the D head (the place of the definite article) (Szabolcsi 1981, 1983). → enriched by the morphology-based model of Bartos (2000)
  - o "Split DP Hypothesis" (see, for instance, Giusti 1996, Ihsane and Puskás 2001, Giusti and Iovino 2014): the left periphery in noun phrases can be split into operator and other functional shells essentially in the same way as the left periphery in clauses (in such cartographic descriptions as Rizzi's (1997) split CP hypothesis)

KP
K'
K   ω_NonPos P*

ω = Q, F

KP_v   ω_NonPos'
ω_NonPos   NonPosP

positions for a case-marked non-possessor argument

operators within the DP (Ihsane-Puskás 2001)

KP_v   NonPos'
∅
NonPos   ω_Pos P

KP_f   ω_Pos'

ω_Pos P   PosP

positions for the NAK (Dative) possessor
(Szabolcsi 1983, Bartos 2000, É. Kiss 2004)

KP_f   Pos'
∅
Pos   EachP

Each'

Each   DemP

Dem'

Dem   DP

D'

D   ω_PosAgr P

DP_f   ω_PosAgr'

ω_PosAgr   PosAgrP

DP_f   PosAgr'
∅
PosAgr   EachP

Each'

Each   DemP

Dem'

Dem   NumP

Num'

Num   ω_Attr P*

KP_e   ω_Attr'

ω_Attr   AttrP

KP_e   Attr'
∅
Attr   PosdP

DP_f / KP_f   Posd'
∅
Posd   DP_f / KP_f   NP
∅

N'

N   AspP/VP

V..   DP_f/KP_f   KP_e   KP_v
∅   ∅   ∅

positions for the unmarked
possessor (Szabolcsi 1981,
1983, Bartos 2000, É. Kiss
2002)

quantifiers, determiners,
numerals (Bartos 2000, É. Kiss
2002)

positions for attributive *való*-
constructions

embedded AspP/VP (Fu et al 2001,
Alexiadou 2001, Kleemann-Krämer
2009, among others):
AspP: complex-event denoting nouns
VP: simple event denoting nouns

Figure 1.

6. Ambiguous sentences – different readings – different structures

wide scope:

Mindkét lány meg-hívás-á-t ellenzem.
both girl perf-invite -ás-Poss.3Sg-Acc oppose.DefObj.1Sg
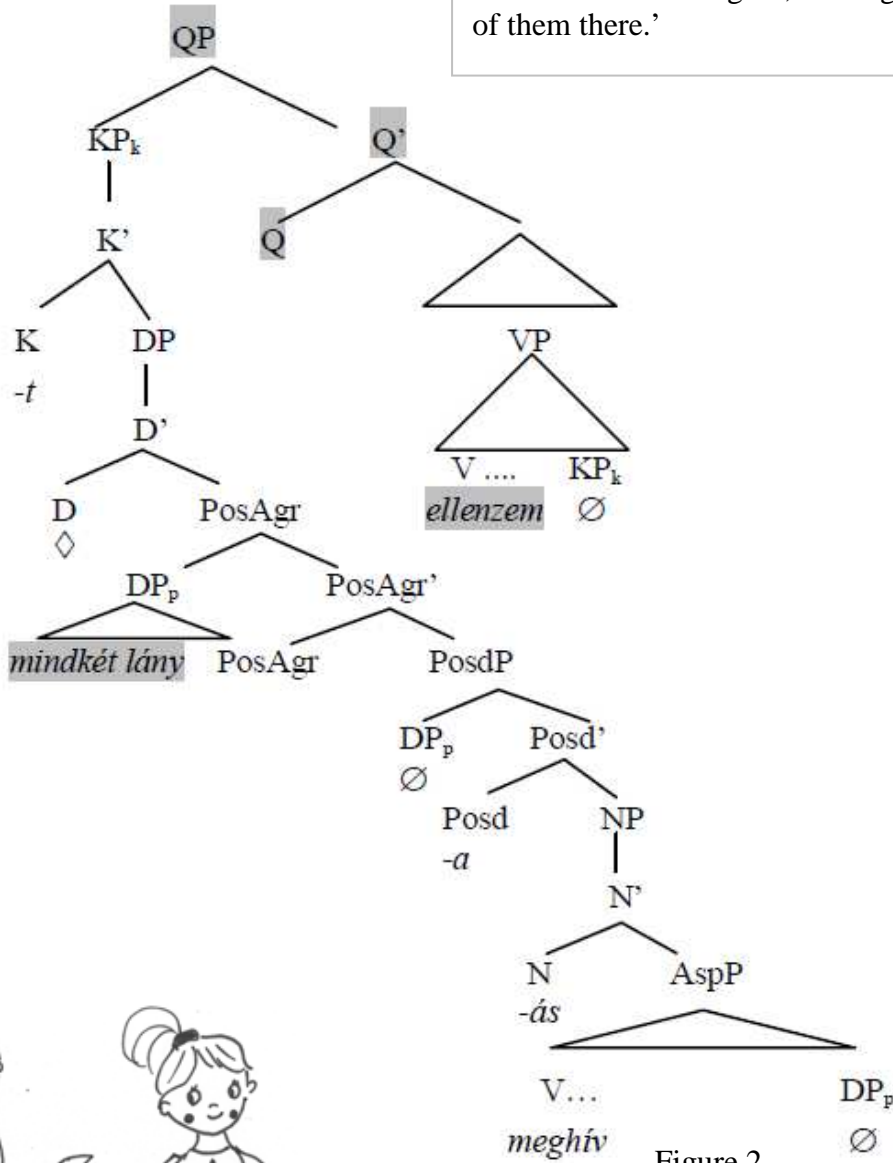'In the case of both girls, I am against the inviting of each of them there.'

Figure 2.

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narrow scope:

Mindkét lány meg-hív-ás-á-t ellenzem.
both girl perf-invite-ÁS-Poss.3Sg-Acc oppose.DefObj.1Sg
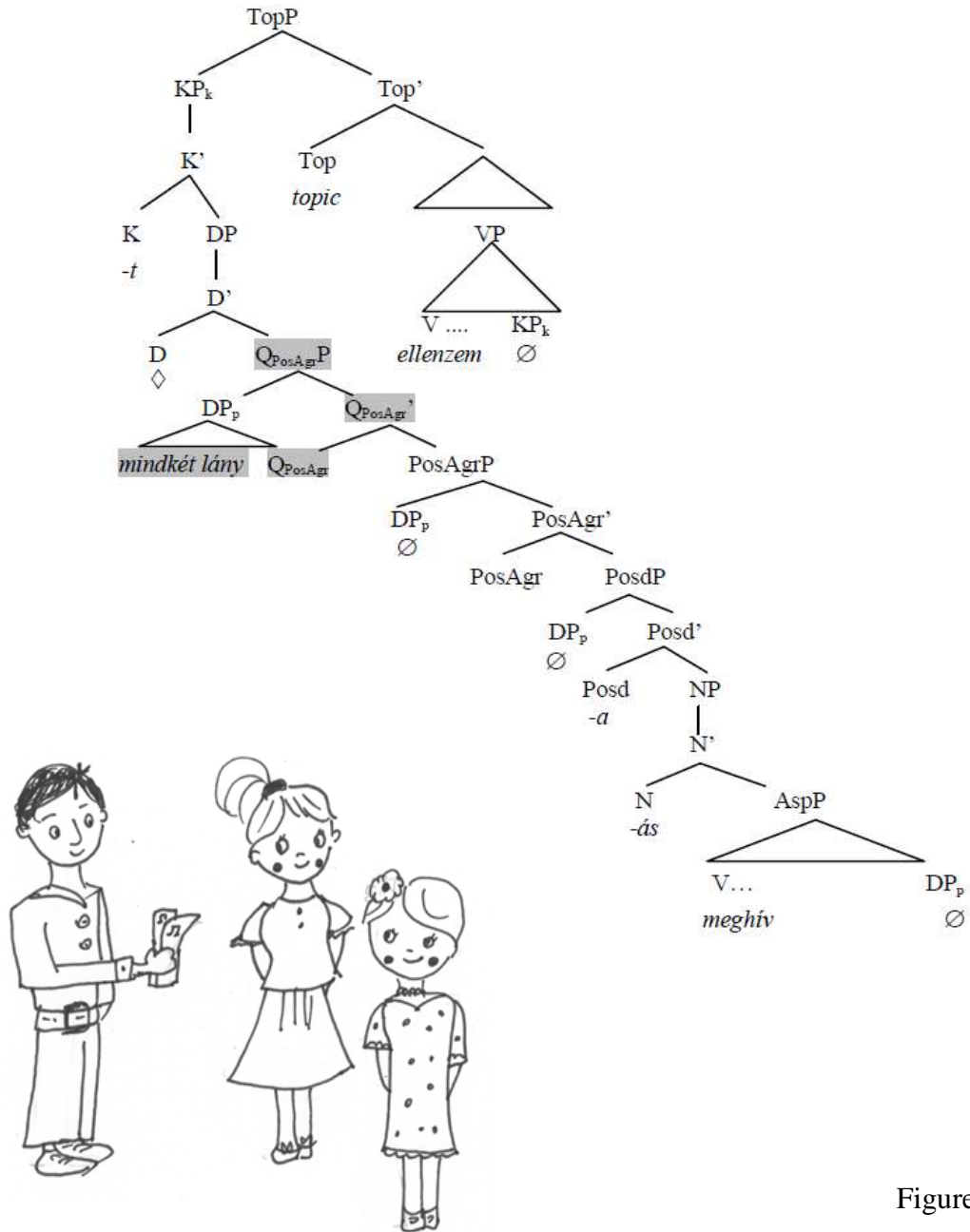'As for both of the girls' inviting, I am against that.'

Figure 3.

8. Further research: non-possessor arguments

- in this paper we investigate only possessor arguments in *mind*-quantifier function, and we establish that the narrow-scope reading is unavailable in event-type denoting constructions
- the behavior of non-possessor arguments shows a different picture:
  - complex-event denoting *-Ás*-nouns containing a non-possessor argument in a postnominal operator: the wide-scope reading is present, but less acceptable (12a)
  - simple event denoting *-Ás* nouns containing a non-possessor argument-like element in a postnominal operator: the narrow-scope reading is also available! (12b)

(12) a. Na például   *Ede fel-bérel-és-e   [mindkét munkára],* az hiba   volt.
           well for_instance *Ede up-hire-ÁS-Poss.3Sg   both work.Sub*   that mistake be.Past.3Sg

     wide-scope reading: [?]'Well for instance, in the case of both jobs, *hiring Ede to each of them,* that was a mistake.'
     narrow scope reading: 'Well for instance, *hiring Ede [to both jobs],* that was a mistake.'

    b. Egy kísérleti egérnek   lehetetlen feladat   a *szökés [mindkét csapdából].*
           an   experimental mouse.Dat impossible mission   *the escape both   trap.Ela*

     wide-scope reading: [(?)] 'For an experimental mouse *an escape [from either of both traps]* is an impossible mission.'
     narrow scope reading: [?]For an experimental mouse *the escape [from both traps]* is an impossible mission.*'

9. Conclusion

- deverbal nouns in Hungarian can have both complex event-based and event-type based variants: one of the main differences between them is their scopal (un)ambiguity
- within a deverbal DP, there are 2x2 operator zones in order to express all possible internal and external scopes, too.

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