

Experimental evidence for the structure of the Hungarian VP

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The problem

Arguments in the Hungarian VP show syntactic symmetries as well as asymmetries.

Data used in mapping the VP did not come from methodologically well grounded experiments.

Goal: To provide such data and to see the effects this bears on theories of the VP.

- Introduction
- Phenomena showing symmetries between argument NPs
- Phenomena showing asymmetries between argument NPs
- Results of an acceptability judgement based experiment
- Discussion and conclusion

Introduction

The Hungarian clause can be divided into two distinct domains

- preverbal
- postverbal

Preverbal domain

- Pre-verbally: highly structured; where constituents move to satisfy information structure related roles such as Topic and Focus.

(1) Mari_{TOP} a levest_{FOC} ette meg
Mary the soup.ACC ate PRT
'As for Mary it was the soup that she ate.'

(2) A levest_{TOP} Mari_{FOC} ette meg
the soup.ACC Mary ate PRT
'As for the soup it was Mary who ate it.'

- asymmetries in scope taking
- C-command = linear precedence

Postverbal domain

Free constituent order

- (3) a. Tegnap látta Marit János.
yesterday saw Mary.ACC John.NOM
- b. Tegnap látta János Marit.
yesterday saw John.NOM Mary.ACC
'It was Yesterday that John saw Mary'
- (4) a. Tegnap adtam Julinak egy almát.
Yesterday gave.1SG.PAST Julie.DAT an apple.ACC
- b. Tegnap adtam egy almát Julinak.
Yesterday gave.1SG.PAST an apple.ACC Julie.DAT
'It was yesterday that I gave an apple to Julie.'

Postverbal domain

- c-command \neq linear precedence
- structural asymmetries
- but also: apparent structural symmetries

Postverbal symmetries

Condition C violation (É. Kiss 1987) (examples from É. Kiss 2002)

- (5) a. *Felhívta [őket_i] [a fiúk_i anyja]
called.PASS.3SG they.ACC the boys mother.POSS.NOM
'The boys' mother called them'
- b. *Felhívták ([ők_i]) [a fiúk_i anyját]
called.PASS.3PL (they.NOM) the boys mother.ACC
'The boys called their mother.'

Postverbal symmetries

Lack of Weak Crossover effects (WCO) in local *wh*/focus-movement. (É. Kiss 1987) (examples from (Surányi 2006))

- (6) a. **Ki_i** hívott fel [az *pro_i* anyja] **t_i**
who.ACC called.3SG.PAST up the (his) mother.POSS.3SG(NOM)
'*Who_i did his_i mother call up?'
- b. **Ki_i** hívta fel **t_i** [az *pro_i* anyját]
who.NOM called.3SG.PAST up the (his) mother.POSS.3SG(ACC)
'Who_i called up his_i mother?'

Postverbal: asymmetries

Condition A violation (É. Kiss 1991) (examples taken from É. Kiss 2008)

- (7) a. Megkérdeztem a fiúkat egymásról
PRT.ask.PASS.1SG the boys.ACC eachother-about
'I asked the boys about each other'
- b. *Megkérdeztem a fiúkról egymást
PRT.ask.PASS.1SG the boys-about each other.ACC
'I asked each other about the boys.'

Postverbal: asymmetries

The scope taking possibilities of monotone decreasing quantifiers differ from other quantifiers (Szabolcsi 1997); Surányi (2006) used this property to highlight a subject-object asymmetry in inverse scope-taking

(8) Tavaly végzett el ...
last year complete.PASS.3SG PRT

a. **minden diák** **kevés kurzust** (S > O, *O > S)
every student.NOM few course.ACC

'It was last year that every student did few courses.'

b. **minden kurzust** **kevés diák** (S > O, O > S)
every course.ACC few student.NOM

'It was last year that each course was completed by few students.'

'It was last year that every student did few courses.'

Theories

- Non-configurational theories: É.Kiss (1987a,b; 1991, 1994, 2002).
 - Thematic hierarchy; linear precedence, Behaghel's law
- Configurational theories: Horváth (1986), Maráczi (1989), Kenesei (1989)
 - Surányi (2006a,b): scrambling movement
- É.Kiss (2008): hybrid theory: hierarchical structure; phasal flattening.

Experiment: Introduction

There is a need to more quantifiably test the phenomena that have been used in the debate over the Hungarian VP.

The results of Szalontai (2012) indicate that there is a complex effect of syntactic and non-syntactic factors in the results of acceptability judgements: this needs to be verified by a more extended study.

Experiment presented: tests some of the phenomena used in the debate in nominative-accusative and accusative-dative constructions.

Experiment: Methods

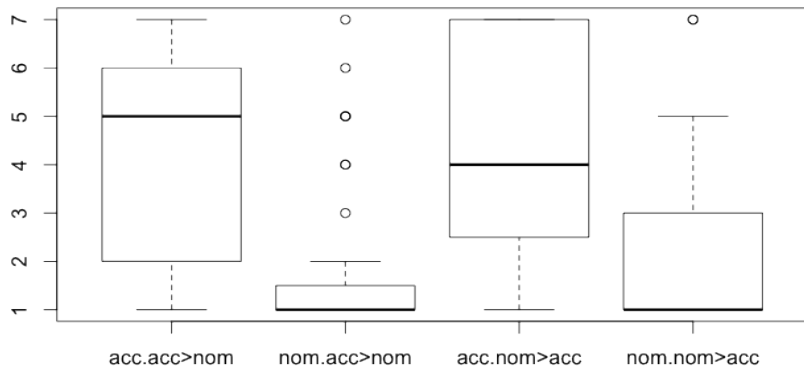
- phenomena: Condition A, Condition C, WCO
- subjects: 148, volunteered through an add on a social media site.
- Millisecond Inquisit v. 3.0.6.0
- Stimuli: individually randomized order; presented with contexts that clarified binding/scope relations.
- Verb used: *bemutat* to introduce'
- Task: judge grammaticality on a 7 point Likert scale
- Results: analyzed with repeated measures analysis of variance (ANOVA)

Condition A

- (9) Bemutatta [egymást] [Éva és Laci] a
introduce.PASS.3PL each other.ACC Eva.NOM and Laci.NOM the
csapatépítésen...
team building
'Eva and Laci introduced each other at the team building (exercise)'
- (10) Az értekezleten bemutattam [egymást]
the meeting PRT.introduce.PASS.1SG each other.ACC
[Kissnek és Simonyinak]....
Kiss.DAT and Simonyi.DAT
'It was at the meeting that I introduce Kiss and Simonyi to each other.'

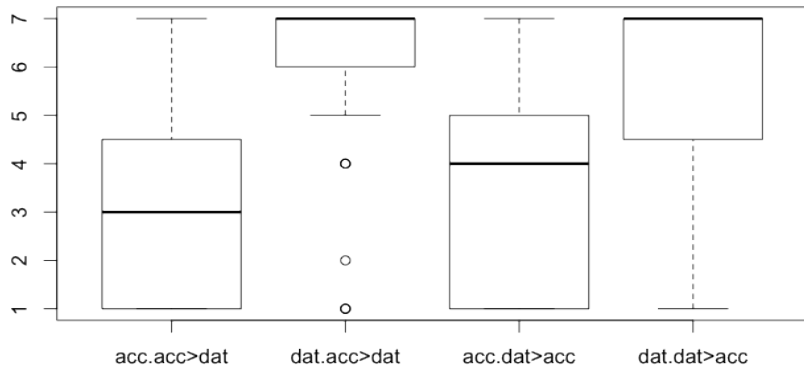
Condition A results: Nominative-Accusative

P-values: case < 0.00001; word order = 0.27; case + word order = 0.951
case of anaphor . word order



Condition A results: Accusative-Dative

P-values: case < 0.0000001; word order = 0.79; case+wordorder = 0.24
case of anaphor . word order



Discussion: Condition A

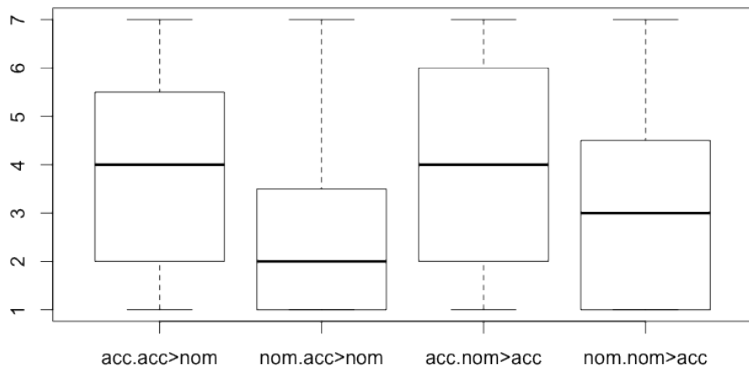
- Condition A points to clear asymmetries between constituents.
- $NOM > ACC$
- $ACC > DAT$
- Asymmetries correlate with case: linear precedence ruled out.

Condition C

- (11) A debreceni vonaton bemutatta [a Zolival;
the debracen train PRT.introduce.PASS.1SG the Zoli.with
egy kupéban ülő lányt] [ő_i] Istvánnak.
one cabin siting girl.ACC he.NOM Steven.DAT
'On the train to Debrecen, he introduced the girl sitting in one
cabin with Zoli to Steven.'
- (12) Kedden bemutattam a [Danival;
tuesday PRT.introduce.PASS.1SG the Dani.with one office
ülő munkatársnak] [őt_i].
siting colleague.DAT he.ACC.
'On tuesday I introduced him to the colleague sitting in the same
office as Dani.'

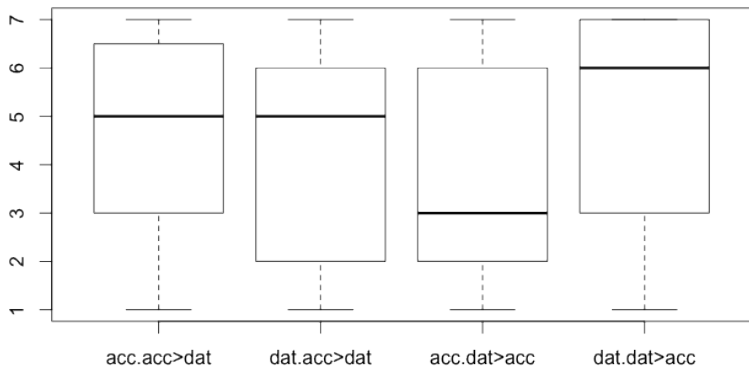
Condition C results: nominative-accusative

P-values: case = 0.938; word order = 0.260; case + word order = 0.203
case of r-expression . word order



Condition C results: accusative-dative

P-values: case = 0.219; word order = 0.819; case + word order = 0.069
case of r-expression . word order



Discussion: Condition C

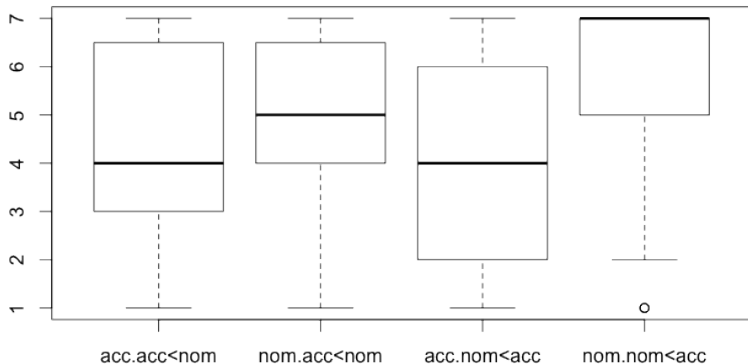
- no significant effect of the factors
- a possible indication of mutual c-command = flat structure
- But: results are not categorically ungrammatical
 - effects of other factors: processing, economy...
 - Reidnhart (2006): reference set computation can result in economy violations; Condition C: has reference set computation, Condition A doesn't
- there is a possible difference between the results of Nom-Acc and Acc-Dat structures: internal-external argument asymmetries.

Weak Crossover

- (13) A mai értekezleten is bemutatott
the today's meeting.on also PRT.introduce.PASS.3SG
[mindenkit_i] [a *pro*_i főnöke] a munkatársaknak
everyone.ACC the bossPOSS.NOM the colleagues.DAT
'At today's meeting as well, everyone was introduced by their boss
to the colleagues'
- (14) A társkereső rendezvényen bemutattam a
the match making event PRTintroduce.PASS.1SG the
[*pro*_i párját] [mindenkinek_i]
partner.poss.ACC everyone.DAT
'At the match making event I introduced everyone to their partner'

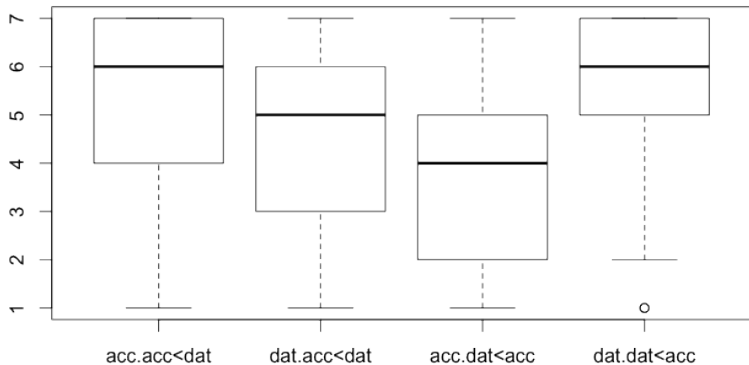
WCO results: nominative-accusative

P-values: case = 0.058; word order = 0.775; case + word order = 0.775
case of quantifier . word order



WCO results: accusative-dative

P-values: case = 0.259; word order = 0.756; case + word order = 0.011
case of quantifier . word order



Discussion: WCO

- NOM-ACC: the effects of case seem to be slightly significant:
NOM>ACC hierarchy
- DAT-ACC: combination of case and word order effect are significant.
 - opposite results to Condition A test
 - WCO: probably more complex in terms of unaccounted effects...
- Difference between external-internal and internal-internal tests:
asymmetry between arguments.

Summary and Conclusion

- Condition A test: evidence for structural hierarchies
- Condition C test: possible evidence for external-internal argument asymmetries; indication of non-syntactic effects in grammaticality judgements
- WCO test: possible evidence for external-internal argument asymmetries; slight indication of structural hierarchies in Nominative-Accusative constructions; possible presence of non-syntactic factors in grammaticality judgements

General conclusion: a comprehensive theory of the Hungarian VP will need to be built on experimental data which can tease apart and account for the different factors involved in the judgement of structure revealing phenomena.

thank you!

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