Periphrastic constructions and inflection internal to derivation

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The perennial challenge of Hungarian Preverb Verb (PV V) constructions

- The largest and most productive source of Hungarian predicate formation consists of the combination of a categorially heterogenous set of categories with a verb stem.
- The set of so-called preverbs (PVs) resemble other lexical items such as bare nominal verb modifiers, both in terms of distribution and semantics. (= VERBAL MODIFIERS - VM)
- Analytic challenge has been to reconcile the syntactic behaviors and lexical properties of these constructions (Brassai 1885; Simonyi 1902; Soltész 1957)

The profusion of Hungarian VM constructions

PV	Gloss	Types	Tokens	
el	‘away’	5 321	3 748 134	established preverbs:
meg	‘perfective’	5 149	5 734 400	high type and token frequencies
le	‘down’	4 528	1 096 673	
ki	‘out’	4 418	2 521 026	
…				
hozzá	‘towards’	525	347 442	debated preverb-status:
agyon	‘over, to death’	438	11 207	medium type frequency,
körül	‘around’	410	23 180	varied token frequencies
haza	‘(to) home’	401	79 725	
…				
egyet	*egyet-ért* ‘agree’	1	72 765	preverb-like lexical items:
utol	*utol-ér* ‘catch up’	1	5 215	co-occurring with a single verb,
cserben	*cserben-hagy* ‘let sy down’	1	1 202	varied token frequencies
nyilván	*nyilván-tart* ‘keep track of st’	1	997	
…				

based on the Hungarian Gigaword Corpus (Oravecz et al. 2014)

Puzzling properties

- Kiefer (2007: 226–227) suggests the syntactic behavior of all VMs is largely identical:
  - Syntactic properties: Tmesis - VM-(INFL)...VERB-INFL or VERB-INFL...VM-(INFL)
    - VM is separable from V under specifiable clausal conditions
    - separability maintained in certain lexical derivations, when functioning predicatively in certain syntactic constructions.
  - Lexical properties: Univerbation - [VM-(INFL) VERB-INFL]
    - Particular combinatorial patterns associated with effects on valence, case government patterns, and
    - semantic effects ranging from idiosyncratic to delineable lexical semantic classes, to fully transparent compositionality.
    - Participate in families of lexical derivations and ordinary inflection.
    - Verbal head-marking encodes pronominal arguments, given inflectable VMs.

Strange convergence

- Generative tree-theoretic approaches (Bruening 2018) and Construction-theoretic approaches (Goldberg 1995, 2009; Booij 2010, 2012 and others) both argue for a single component approach, but with different hypotheses concerning the single supervening component - (Mueller 2019 for recent defense of lexicalist two component architecture)
- What is the single component?
  - If there is no distinctive lexical component, then it follows that all grammar is explicable in terms of (familiar) phrasal syntactic principles of organization - many different ways to conceptualize this. Generative approaches: (É. Kiss 2002 and 2006, Surányi 2009, Hegedűs 2013, Lipták & Saab 2019, among others)
  - If there is no distinctive lexical component, then all grammar is explicable in terms of construction-theoretic principles of organization - many different ways to conceptualize this. Construction theoretic paradigm-based approaches: (Ackerman and Webelhuth 1998, Laczkó 2022, Kálmán 2016, Kalivoda 2021)

Construction theoretic hypothesis: VM as a distributional category

- The category of VM is defined by distributions distilled from participation in a largely mutual implicational network of syntactic and lexical constructions, i.e., if you know (the behavior of a lexeme in) one construction, you know it's participation in many constructions. (following Kalivoda 2021)
- Builds upon implicational organization literature for inflection (Wurzel 1987; Matthew 1991; Ackerman et. al. 2009, Blevins 2016) and derivation (Hathout and Namer 2018, 2022; Bonami & Strnadová 2019) and extends it to syntactic constructions (see construction theoretic proposal coming from the direction of syntactic constructions (Diewald and Politt 2022; Leino 2022))
- Explains native speaker competence to recognize and generate novel forms of known lexemes.

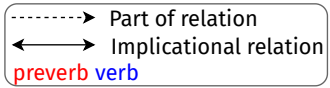
Construction theoretic approaches

- Share some basic assumptions (Traugott & Trousdale 2013):
  - Constructions, conventionalized form-meaning pairs, are the basic unit of grammatical description
  - Meaning and form are mapped to each other directly, without derivations or intermediate representations
  - Language structure is shaped by language use
  - Constructions are structured and connected to each other via a network of relations of various types

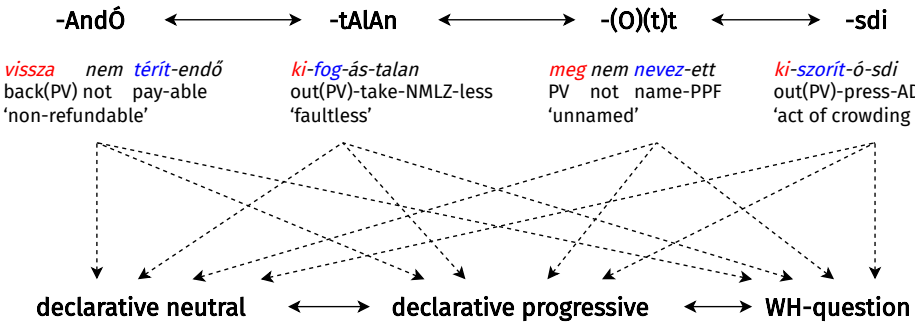
Construction theoretic approaches

- Standard types of vertical relations:
  - Inheritance ('is-a') relations
  - Sub parts
  - Instances
- Increasing recognition (paralleling paradigm-based morphology) that the space of possible relations needs to be augmented to include the organization among construction types:
- Paradigmatic relations, horizontal links, meta-constructions (Van de Velde 2014; Diewald 2020; Diewald and Politt 2022; Leino 2022), i.e. systemic horizontal organization of networks of constructions

Network of paradigmatic relations for VM constructions



Lexical constructions in paradigmatic network



Syntactic constructions in paradigmatic network

Subset of PVs inflects for pronominal person/number argument governed by the PV v combination

preverb	1SG	2SG	3SG UNM.	3SG M.	1PL	2PL	3PL	sum	gloss
rá	12,187	4,507	176,586	93	5,360	677	5,352	204,762	‘onto’
hozzá	2,566	1,104	188,523	10	1,454	180	1,875	195,712	‘to, toward’
bele	1,953	890	146,492	95	717	55	1,004	151,206	‘into’
neki	**3,165**	**1,347**	**21,183**	—	**686**	**186**	**1,189**	**27,756**	‘to, against’
rajta	481	401	2,065	—	421	63	368	3,799	‘on’
alá	68	34	43,473	78	27	4	50	43,734	‘under.to’
utána	719	223	8,416	—	304	29	852	10,543	‘after’
mellé	742	162	2,785	368	350	20	398	4,825	‘beside.to’
elé	974	223	144	302	1,304	33	298	3,278	‘before.to’
közé	1	1	145	8	235	36	531	957	‘between.to’
fölé	135	19	23	112	82	5	49	425	‘above.to’

Preverbs above the middle line are formally identical to oblique pronouns, while the ones below the line are homonymous with postpositions in the synchronic system. Only preverbs occurring in direct order preverb – finite verb constructions are counted. **Stems indicate the oblique relation while the person/number suffixes (PNMs) function as pronominals.**

3 Lexical classes with PV *neki*

- PVs organize into classes of lexical constructions: Goal directed – and often incidental – contact (1a), predatory engagement (1b), initiation of action (1c). (Kiefer and Ladányi 2000, Ladányi 2007)

(1) a. *neki ütközik* 'bump against'
neki támaszkodik 'lean against'
neki döccen 'jolt against'
neki támolyodik 'stagger against'
neki passzíroz 'press against'
neki huppan 'thud against'

b. *neki rohan* 'rush at'
neki támad 'attack'
neki ugrik 'fling at'
neki ront 'rush at'
neki esik 'attack'
neki megy 'go at, attack'

c. *neki kezd* 'start sg'
neki lát 'set about to do sg'
neki búsul 'give way to grief'
neki gyürkőzik 'brace oneself to do sg'
neki bátorodik 'take courage'
neki vadul 'be carried away by fury'

Productive participation in a generative network of derivational relations

(1)	a.	*neki ütközik* 'bump against'	*neki támolyodik* 'stagger against'
		neki támaszkodik 'lean against'	*neki passzíroz* 'press against'
		neki döccen 'jolt against'	*neki huppan* 'thud against'
	b.	*neki rohan* 'rush at'	*neki ront* 'rush at'
		neki támad 'attack'	*neki esik* 'attack'
		neki ugrik 'fling at'	*neki megy* 'go at, attack'
	c.	*neki kezd* 'start sg'	*neki gyürkőzik* 'brace oneself to do sg'
		neki lát 'set about to do sg'	*neki bátorodik* 'take courage'
		neki búsul 'give way to grief'	*neki vadul* 'be carried away by fury'

- Class 1a and 1b add an oblique argument, either lexical NP or PRO governed for dative case, and is associated with specific meanings.
- Class 1c only adds an NP argument and associates the verbal lexeme with an incipient action semantics.
- Only members of classes 1a and 1b have inflectable PVs.
- These effects follow from belonging to different, but formally related lexical derivational classes.
- Lexical NP argument in (1c) specifies the initiated activity, precluding a pronominal referent:
- The action can be explicit, e.g. *Nekiláttam a tanulásnak.* 'I started studying.' or implicit, e.g. *Nekiláttam a sörnek.* 'I started [drinking] the beer.' or *Nekiláttam.* 'I started [doing something]'.

Valency and government effects of non-inflectable PV

- Valence increasing effect

(2) a. *rohan* ‘rush (about) ⟨SUBJ⟩’

b. gyerek-csapat rohan a mező-ről
child-group rush.PRESENT.3SG/INDEF the meadow-DEL
‘the group of children are rushing from the meadow’

(3) a. *ki rohan* ‘rush out of ⟨SUBJ, OBL_{EL}⟩’

b. a tigris ki rohan-t az égő ketrec-ből
the tiger PV rush-PAST.3SG/INDEF the burning cage-ELA
‘The tiger rushed out of the burning cage.’

Pronomimal argument satisfaction

- a tigris ki rohan-t belőle
  the tiger PV rush-PAST.3SG/INDEF it-ELA
  'The tiger rushed out of it.'

- When the preverb cannot inflect, appropriately case-governed independent oblique PRO appears.

Valency and government effects of inflectable PV

- Valence increasing effect

(4) a. *rohan* ‘rush (about) ⟨SUBJ⟩’

b. gyerek-csapat rohan a mező-ről
child-group rush.PRESENT.3SG/INDEF the meadow-DEL
‘the group of children are rushing from the meadow’

(5) a. *neki rohan* ‘rush at ⟨SUBJ, OBL_{DAT}⟩’

b. a tigris neki rohan-t a ketrec rács-á-nak
the tiger PV rush-PAST.3SG/INDEF the cage bar-3SG-DAT
‘The tiger rushed at the bars of the cage.’

Pronominal argument satisfaction

- Cannot be satisfied by appropriately case governed independent pronoun

(6) *a tigris neki rohan-t nekem
the tiger PV rush-PAST.3SG/INDEF PRO.1SG.DAT
'The tiger rushed at me'

- Satisfied by PNM on inflectable PV functioning as PRO, as with ordinary postpositions, e.g. *mellett-em* beside-1SG 'beside me'.

(7) a tigris nek-em rohan-t
the tiger PV-1SG rush-PAST.3SG/INDEF
'The tiger rushed at me.'

- Inflected preverb cannot be the independent pronoun (syntactic haplology - Webelhuth and Bonami 2019), since verb stem itself does not have relevant meaning or govern 2nd argument in the dative.
- Oblique pronominal exponence of verb part consistent with Hungarian verb head-marking PRO strategy, i.e., for SUBJ and OBJ.

Inflecting preverbs occur in -Ás event nominals

- a tigris nek**em**-rohan-**ás**-a az állatkert-ben
  the tiger PV.1SG-rush-NMLZ-3SG the zoo-INE
  ‘the tiger’s rushing at me in the zoo’

Type and token frequencies of inflected preverbs in -Ás nominalizations

PV type	freq	PV token		freq
rá	138	rá-nk	1PL	53
		rá-m	1SG	45
		rá-juk	3PL	27
		rá-d	2SG	12
		rá-tok	2PL	1
hozzá	105	hozzá-m	1SG	48
		hozzá-d	2SG	22
		hozzá-nk	1PL	21
		hozzá-juk	3PL	11
		hozzá-tok	2PL	3
bele	27	belé-m	1SG	11
		belé-nk	1PL	11
		belé-jük	3PL	3
		belé-d	2SG	2
elé	15	elé-nk	1PL	11
		elé-m	1SG	2
		elé-d	2SG	1
		elé-jük	3PL	1
mellé	9	mellé-m	1SG	5
		mellé-jük	3PL	3
		mellé-nk	1PL	1

PV type	freq	PV token		freq
rajta	8	rajt-unk	1PL	5
		rajt-uk	3PL	2
		rajt-atok	2PL	1
vele	7	vele-m	1SG	3
		vele-d	2SG	2
		vel-ünk	1PL	1
		vel-ük	3PL	1
felé	6	felé-m	1SG	3
		felé-d	2SG	3
közé	6	közé-nk	1PL	3
		közé-jük	3PL	3
után(a)	3	után-am	1SG	1
		után-ad	2SG	1
		után-uk	3PL	1
neki	**2**	**nek-em**	**1SG**	**2**
érte	1	ért-ük	3PL	1
alá	1	alá-nk	1PL	1
fölé	1	fölé-nk	1PL	1
mögé	1	mögé-nk	1PL	1

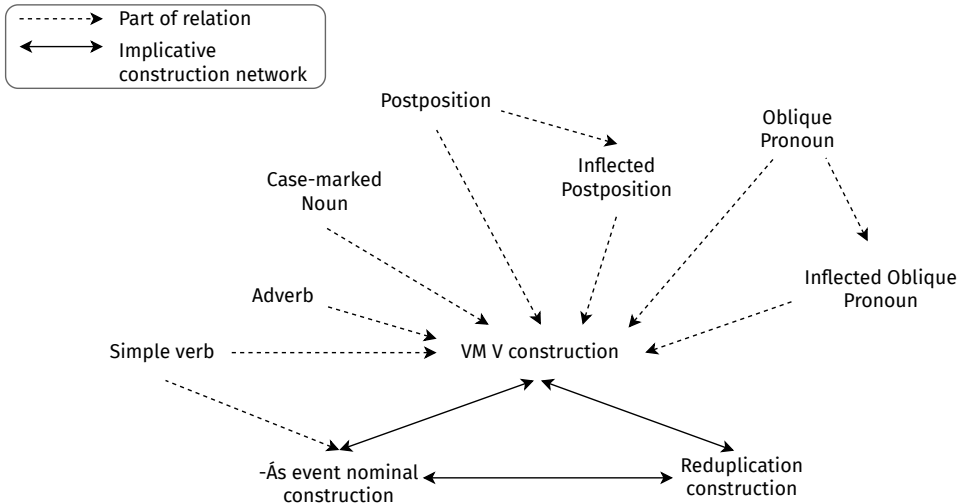
Intermittent Repeated Action (IPA) construction marked by preverb reduplication with v and in -Ás nominalization

- Inflected preverbs also reduplicate in IRA construction.
- a tigris **neki~neki** rohan-t a ketrec rács-á-nak
  the tiger PV~PV rush-3SG.PST the cage bar-3SG-DAT
  ‘the tiger kept rushing at the bars of the cage’
- a tigris **nekem~nekem** rohan-t
  the tiger PV.1SG~PV.1SG rush-3SG.PST
  ‘the tiger kept rushing at me’
- a tigris **nekem~nekem**-rohan-**ás**-a az állatkert-ben
  the tiger PV.1SG~PV.1SG-rush-NMLZ-3SG the zoo-INE
  ‘the tiger’s intermittent rushing at me in the zoo’

Type and token frequencies for reduplicated inflected PVs

PV type	freq	PV token		freq	example
rá	34	rá-m	1SG	26	*rám-rámtör* 'it comes upon me intermittently'
		rá-nk	1PL	5	*ránk-ránk pislant* 'she blinks at us interm.'
		rá-juk	3PL	2	*rájuk-rájuk sziszegnek* 'they hiss at them interm.'
		rá-d	2SG	1	*rád-rád mosolygott* 'she smiled at you interm.'
felé	5	felé-nk	1PL	3	*felénk-felénk nézett* 'she looked towards us interm.'
		felé-m	1SG	2	*felém-felém fordítja* 'she turns (it) towards me interm.'
bele	4	belé-m	1SG	3	*belém-belémnyilallik* 'it makes me twinge interm.'
		belé-nk	1PL	1	*belénk-belénkdöföltek* 'they jabbed us interm.'
neki	**2**	**nek-em**	**1SG**	**1**	*nekem-nekem csap* 'it dashes against me interm.'
		nek-ik	**3PL**	**1**	*nekik-nekikmegy* 'he falls upon them interm.'

Partial lexical constructional network for inflectable PVs with V



Concluding observations

- The interaction of syntactic and lexical constructions straightforwardly accounts for the data and plausibly accounts for speaker competence despite large frequency differences among constructions, i.e., Zipfian distributions.
- The assumption that derivation and inflection can operate in the same system accounts for the possibility of observed interleavings given diachronic development of the construction type (see Ackerman, Kalivoda and Malouf Imperfectability of Morphology Workshop).
- Periphrastic morphological expression is a (common) accompaniment of grammaticalization.
- A single construction-theoretic component accounts directly for all syntactic and lexical effects, permitting stunning cross-linguistic variation, without assuming uniform universal structures and principles or a division into syntactic and lexical components.