TIBOR LACZKÓ, University of Debrecen (laczko.tibor@arts.unideb.hu)
HUNGARIAN PARTICLE VERBS REVISITED:
REPRESENTATIONAL, DERIVATIONAL AND IMPLEMENTATIONAL ISSUES FROM AN LFG PERSPECTIVE

1. Introduction

Hungarian particle verb constructions [**PVC**s] have been investigated from various perspectives in generative grammar. For a brief critical overview of the literature relevant for the talk, see Laczkó & Rákosi (2011) In the talk, we will use Forst, King & Laczkó's (2010) [**FKL**'s] programmatic LFG-XLE (theoretical-implementational) framework. In addition, we will rely on Laczkó & Rákosi (2011) [**LR**], who also adopt this framework in their analysis of certain Hungarian spatial PVCs. The talk has two main objectives. (A) It will propose a plausible way of augmenting this treatment of PVCs so as to also capture their derivational (and inflectional) behaviour in a principled manner. (B) It will extend the analysis of spatial PVCs to other major productive types of Hungarian PVCs in order to develop a more comprehensive LFG analysis of Hungarian PVCs.

2. Two previous accounts: FKL and LR

FKL concentrate on PVCs in English, German and Hungarian. They develop a programmatic LFG approach which is claimed to be implementationally both feasible and efficient after preliminary testing on the XLE platform. The most important aspects of this approach are as follows.

(A) The particle and the verb have distinct lexical entries (and the particle has a syntactic category of its own: PRT).

(B) When the PVC is compositional and productive, the two elements are combined in the syntax. The relationship between them can have the following major types. **(a)** The particle is a predicate, and it takes the verb as one of its arguments and it typically has an additional argument. **(b)** The particle is an argument of the verb: either it can have a resultative (secondary predicate) use: XCOMP, or it can have the OBL function. **(c)** The particle is an adjunct of the verb. **(d)** The particle contributes an aspectual feature.

(C) When the PVC is non-compositional, the two elements still have two distinct lexical entries, their joint (non-compositional) argument structure is represented in the lexical form of the verb, and LFG-XLE style annotations (special cross-referencing) in both entries ensure that in the intended meaning exactly these two elements have to occur (separately) in syntax.

We show the most important technical details of this approach when we discuss LR's analysis below. Of the four types in the productive dimension (Ba-d), it is (Ba) that raises theoretical challenges in an LFG framework, given that, as we will show below, in this case complex predicate formation and argument structure composition are assumed to take place (which, according to the classical principles of LFG, should only happen in the lexicon). However, FKL argue that such a move, under well-definable (empirical) circumstances, is not at all unprecedented or unmotivated in the LFG literature. In the other three cases (Bb-d), there is an ordinary syntactic relationship between the verb and the particle (Bd is somewhat special in that the particle has no PRED feature and it only contributes an aspectual feature).

LR analyze the following Hungarian spatial PVC type in the spirit of FKL. (1) and (2) are their examples, and, in accordance with their analysis, they write the particle and the verb as separate words even when the former immediately precedes the latter, contrary to the customary orthographical convention.

(1) A   rák   ki   mászott   a   folyó-ból.
     the   crab.NOM   out   crawled   the   river-out.of
     'The crab crawled out of the river.'

(2) Az   elnök   ki   mászott   a   kellemetlen   helyzet-ből.
     the   president.NOM   out   crawled   the   unpleasant   situation-out.of
     'The president got himself out of the unpleasant situation.'

(1) is a compositional example, and (2) is non-compositional. LR analyze the former along the lines of FKL's (Ba), and the latter along the lines of FKL's (C). For the analysis of (1), they assume the following lexical forms of the particle and the verb in their XLE representation.

(3) a. *ki,* PRT XLE ($\uparrow$PRED)= 'OUT <%ARG1, ($\uparrow$OBL)>'   b. *mászik,* V XLE ($\uparrow$PRED)= 'CRAWL <($\uparrow$SUBJ) ($\uparrow$OBL)>'

The particle's first argument is the verb with its own argument structure, and the particle has an additional OBLsource argument. A special type of predicate composition (and, hence, syntactic argument structure formation) takes place: the XLE way of implementing this is the use of the restriction operator in the functional annotations associated with the the V node in c-structure: (4). (For details and explanations, see LR.)

(4)
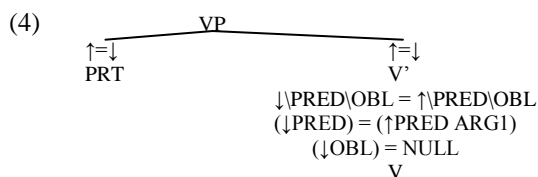
For the analysis of (2), LR assume the following two alternative lexical forms for the particle and the verb.

(5) a. *ki,* PRT XLE   ($\uparrow$PRT-FORM) = ki   b. *mászik,* V XLE ($\uparrow$PRED)= '%FN <($\uparrow$SUBJ) ($\uparrow$OBL)>'
                        ($\uparrow$CHECK_PRT-VERB) =c +.   ($\uparrow$CHECK_PRT-VERB) = +
                                                                         ($\uparrow$PRT-FORM) =c ki
                                                                         @(CONCAT ($\uparrow$PRT-FORM) # mászik %FN).

The PRED feature of the entire PVC (including its argument structure) is coded in the verb's entry, the particle has no PRED feature (only a FORM feature), and a pair of XLE style CHECK features guarantees that the two elements will co-occur in the syntax as functional co-heads.

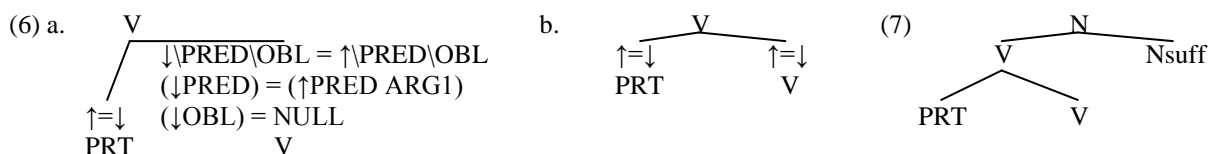## 3. Augmenting FKL's and LR's approach

It is a very important property of PVCs that despite the syntactic separability of the particle and the verb, both the compositional and the non-compositional types can productively undergo (category-changing) derivation, most notably: event nominalization. Given that our approach employs two distinct lexical forms for both PVC types, what is more: in the productive type even argument structure composition takes place in the syntax, it is not a trivial task to capture this derivational phenomenon in this approach. Both FKL and LR leave this to future research, and in the talk we will develop an account in this dimension. The crucial ingredients of the proposal are as follows. In this abstract we can only concentrate on a salient (and extremely productive) derivational process: event nominalization (V → N).

(A) Just like in the case of compounding (or derivation or inflection), it is possible to combine the two elements in the lexicon to create a new lexical item by the help of a lexical redundancy rule.

(B) This new lexical item has its own morphological structure (sublexical structure).

(C) The nodes in this sublexical structure can have the same kinds of functional annotations as nodes in syntactic structure. (For independent motivation, see Simpson (1991), for instance.)

(D) The structure of this compound-like entry is shown in (6). It is compound-like for at least the following two reasons: (i) the two elements can occur as independent syntactic atoms (i.e. words); (ii) the rules of vowel harmony work in the same way as in the case of genuine compounds: it is solely the vowel inventory of the second element that regulates vowel harmony. As (6a) and (6b) demonstrate, the PRT and the (lower) V can get exactly the same two (alternative) annotations as they get in ordinary syntactic structure (compositional PVC: (6a); non-compositional PVC: (6b)). Either of them can serve as input to event nominalization, see (7).

(6) a.
```
            V
         /
        /       ↓\PRED\OBL = ↑\PRED\OBL
        /       (↓PRED) = (↑PRED ARG1)
   ↑=↓      (↓OBL) = NULL
  PRT            V
```
b.
```
         V
      /      \
   ↑=↓      ↑=↓
  PRT       V
```
(7)
```
            N
         /      \
        V        Nsuff
      /   \
   PRT     V
```

(E) In the case of event nominalization the following legitimate question arises. Why can the nominalizing suffix not attach to the verb alone, and why can this nominalized form not combine with the particle in the syntax? Our answer is that the Hungarian DP phrase structure rules simply do not admit the PRT category (which is a constraint that can be naturally associated with PRT: it can only be a co-head of a verb). This has been an LFG-theoretic solution to the derivational problem. It is left to future research to test its implementability. Our prediction is that if passivization can be (at least alternatively) treated by the help of an efficient XLE device (a macro), this could also work in the case of event nominalization.

(F) If the forms in (6a-b) are available in the lexicon for nominalization purposes, then in principle (V → V) suffixes have a choice between attaching to the simplex verb and attaching to the PVC complex in (6). We claim that this is exactly what we need, given the behaviour of various verbal suffixes. In the talk we will show that PVCs combined with the *-ni* infinitival suffix and the *-va/-ve* adverbial participial suffix exhibit dual word order properties: a focussed constituent can immediately occur either before the PRT-V complex or before the verb (in which case the PRT follows the verb). By contrast, (anterior) *-t/-tt*, (simultaneous) *-ó/-ő* and (posterior) *-andó/-endő* participles alway attach to the PRT-V complex. This can be straightforwardly explained: these participial constructions are, as a rule, used attributively in Hungarian DPs, they always precede the noun head and they are strictly head-final. Thus, a PRT has no chance to occur post-participially. Our basic generalization is that it is simpler (less costly) to add suffixes to the simplex verb form – unless another (more powerful) principle overrides this. From this it also follows that finite inflectional suffixes readily attach to the simplex verb.

4. Extending LR's account

In the talk we will argue that LR's analysis of compositional spatial PVCs can be naturally extended to the following additional types of PVCs.

(7) János   újra   festette / tovább festette a   kép-et.
     John.NOM   again painted   further painted   the   picture-ACC
     'John repainted the picture. / cca. John continued painting the picture.'

(8) A   kutya   csóválta a   fark-á-t   / meg   csóválta a   fark-á-t.
     the   dog.NOM   wagged   the   tail-its-ACC   PERF wagged   the   tail-its-ACC
     'The dog was wagging its tail. / The dog wagged its tail (once).'

5. Finally, the talk will offer a critical discussion of some alternative accounts, e.g.: Piñón (1992) and Ackerman (2003).

REFERENCES
Ackerman, F. 2003. Lexeme derivation and multi-word predicates in Hungarian. *Acta Linguistica Hungarica* 50, 7-32. ● Forst, M.; King, T. H. & Laczkó, T. 2010. Particle verbs in computational LFGs: Issues from English, German, and Hungarian. *LFG'10:* 228-248. ● Laczkó, T. – Rákosi, Gy. 2011. On Particularly Predicative Particles in Hungarian. In: Butt, M. & King, T. H. (eds.) *Proceedings of the LFG '11Conference*. Hong Kong: Hong Kong University. On-line publication: CSLI Publications, ISSN 1098-6782, http://cslipublications.stanford.edu/LFG/16/papers/lfg11laczkorakosi.pdf, 299-319. ● Piñón, C. J. 1992. The preverb problem in German and Hungarian. In L. A. Buszard-Welcher et. al. eds. *Proceedings of the Eighteenth Annual Meeting of the Berkeley Linguistic Society*. Berkeley: BLS, 395-408. ● Simpson, J. H. 1991. *Warlpiri Morpho-Syntax: A Lexicalist Approach*. Dordrecht: Kluwer.