Locative particle dependencies in Hungarian

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1. Introduction In this paper, we propose a novel LFG theoretic analysis of three types of spatial dependencies involving particle verb (PV) constructions in Hungarian (1-3), and show how this analysis is implemented on the LFG-based computational platform called XLE (cf. 4-8). We use the term *particle* as a cover term for the separable elements that co-occur with the base verb in the dependencies under discussion, and we use the term *associate* to denote what we argue to be the dependent of the particle. Hungarian particle verbs have been analyzed from various perspectives and in a variety of descriptive as well as theoretically and implementationally oriented frameworks (cf., a.o., Ackerman 1990, É. Kiss 1998, 2002, Piñón 1992, Surányi 2009a&b, Forst et al. 2010, and the references therein). What makes the three constructions under study particularly interesting is that the three different particle types combine with the base verb in non-identical ways, resulting in three non-identical types of government relations between the PV and what we argue to be its oblique associate.

2. The empirical data The three locative PV constructions are illustrated in (1-3). **Type A particles** function elsewhere as postpositions that take a particular locative-case marked complement whose choice is often semantically motivated. For example, *keresztül* 'across' takes a complement marked by superessive case (≈'on'). When *keresztül* functions as a particle (cf. (1)), it licenses an oblique argument that must bear superessive case *even* if its semantics does not specifically match the semantics of the construction (in (1), the relevant path is not *on* but *inside* the park). **Type B particles** are adverbial in nature and they do not require their associate to be of a particular form. They only require their associate to be of a given semantic type: *ki* 'out', for example, licenses either source- or goal-type associates, but not paths (2). **Type C** particles function elsewhere as locative case markers on nouns. When this case marker combines with a pronoun, it realizes agreement morphology and the pronoun itself is regularly *pro*-dropped in accordance with the *pro*-drop nature of Hungarian (cf. (*én*)-*rá-m* I.NOM-onto-1SG 'onto me', (*ő*)-*rá* he-onto.3SG 'onto him', etc.). In the dependency we discuss, this case marker functions as the particle and it reduplicates the locative case of the oblique associate (3). The particle looks like a prima facie pronoun, but note that the pronoun stem itself cannot be spelled out as part of the particle in the reduplicating construction.

3. The LFG analysis and its XLE implementation We analyze **Type A and Type B** particles as higher order predicates that have two arguments: the base verb and an oblique associate. The proposed LFG-style lexical entry for **Type A** particles is in (4), and the analysis works as follows. *Keresztül* 'across' can combine with motion predicates in the syntax on the fly by taking the argument structure of the verb (inserting it into the position marked *ARG1* in its own argument structure), and introducing an oblique argument of its own (which is specified to have superessive case in the second line of (4)). This syntactic complex predicate formation process is modelled by the *restriction* operation of LFG (see Butt et al. 2003), which is introduced as an annotation on the constituent structure of the Hungarian VP (not shown here). Restriction reduces the input verb's locative oblique argument if it has one - thus, in our model, it is always the particle that licenses the locative oblique in both Type A and Type B dependencies. **Type B** particles only differ from **Type A** particles in not constraining the formal coding of their locative oblique arguments. In the paper, we make detailed arguments to show that this kind of locative PV formation is indeed a syntactic complex predicate formation process, where the particles are higher order predicates.

Type C particles are different. We will argue that these particles have a pronominal origin, but they have been historically reanalyzed as non-predicative agreement markers (6), which only retain a third person feature (cf. Coppock & Wechsler 2010, as a source of inspiration, for a similar analysis of definiteness object agreement morphology in Hungarian and contra

Ackerman 1990, who assumes a fully underspecified representation for reduplicating particles, one which lacks even a PERSON feature). We claim that there are reasons to assume that **Type C** dependencies - unlike Type A&B dependencies - are stored directly in the lexicon for each particle+verb combination. This relation is captured in our analysis with the help of the CONCAT implementational device (see Forst, King & Laczkó 2010). The verbal stem of the PV complex has a special lexical entry - (8), and compare it to the regular, non-PV entry in (7) - which is constrained to co-occur with the C-Type particle functioning as an agreement marker (6).

In the paper, we compare our analysis with and defend it against other lexicalist or movement-based approaches. We also show how our analysis extends to non-compositional PVs and how it can handle such facts as the separability of the particle and the general issue of discontinuous particle-verb orthography.

(1) ***Keresztül**-fut-ott-am a park-on / * a park-ban*. **TYPE (A)**
across-run-PAST-1SG the park-on the park-in
'I ran across the park/*in the park.'

(2) ***Ki**-mász-t-am a doboz-ra / doboz-ból / *doboz-on*. **TYPE (B)**
up-climb-PAST-1SG the box-onto box-from box-on
'I climbed out onto/from/*on the box.'

(3) (*__Ő-__)__rá__-ugr-ott-am az asztal-ra.* **TYPE (C)**
he-onto.3SG-jump-PAST-1SG the table-onto
'I jumped onto the table.'

(4) ***keresztül***: PRT (↑PRED) = 'across <%ARG1 (↑OBL)>'
(↑OBL CASE) =c superessive

(5) ***fut*:** V (↑PRED)= 'run <(↑SUBJ)'

(6) ***rá***: PRT (↑PRT-FORM) = rá
(↑OBL PERS) = 3
(↑OBL CASE) = sublative
(↑ASPECT TELIC) = +

(7) ***ugrik*$_1$**: V (↑PRED)= 'jump <(↑SUBJ)(↑OBJ)>'

(8) ***ugrik*$_2$**: V @(CONCAT (↑PRT-FORM) `# %stem %FN)
(↑PRED)='%FN <(↑SUBJ)(↑OBL)>'
(↑CHECK _PRT-VERB)=+
(↑ PRT-FORM) =c rá.

References

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