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A novel LFG approach to spatial dependencies in Hungarian

1. Introduction

In this paper, we propose a novel LFG theoretic analysis of three types of spatial dependencies involving particle verb constructions in Hungarian (cf. 1-4). 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 (a.k.a. preverb + verb combinations) have been analyzed from various perspectives and in a variety of descriptive as well as generative theoretically and implementationally oriented frameworks (cf. Ackerman 1990, 2003, É. Kiss 1992, 1998, 2002, Kiefer—Ladányi 2000, Komlósy 1992, Piñón 1992, Surányi 2009a&b, Forst et al. 2010, and the references in these works).

The major ingredients of our analysis of these three productive types are as follows.

a) The particle and the verb have distinct lexical entries. With the help of appropriate LFG-style lexical specifications, they are combined in the syntax (contra Ackerman 2003).
b) When the particle immediately precedes the verb, we assume that it is in SpecVP (cf., for example, É. Kiss 1992, and contra Komlósy 1992 and Piñón 1992, who both assume that it is adjoined to V^0).
c) As opposed to recent MP proposals (see, especially, Surányi 2009a&b), we do not assume a movement-type dependency. The particle governs the semantic, and often the formal properties of its associate, but it is never a copy of this associate.
d) The differences between the three dependency types derive from the lexical properties of the respective particles involved.

In the paper, we also demonstrate that this analysis provides a general framework for a principled syntactic treatment of non-compositional uses of these particle verbs with appropriate lexical specifications and a different mode of syntactic combination of the particle and the verb (cf. *concatenation*). Finally, we show that the analysis has been successfully implemented on an LFG computational platform called *XLE*.

2. The analysis

In the paper, we offer detailed empirical considerations and theoretical arguments for our proposed account. Below we discuss the most important aspects of our analysis of the three types, by also pointing out the similarities and dissimilarities between them.

2.1. Type (A)

These particles (when they are not part of a particle verb) belong to the class of postpositions (Type A1) and adverbs (Type A2). The only significant difference is that a Type (A1) particle governs the case of its associate, while a Type (A2) particle only determines its semantic type. Here we exemplify the analysis through Type (A2).

In this type it is very often the case that the base verb can take the very same kinds of arguments as the particle verb, compare (2) and (5). However, it can be clearly shown that these particles themselves are capable of contributing the 'directional path' semantic feature to the (complex) predicate (6). We assume that in both cases the particle has an invariant predicate-argument structure: it takes the verb as one of its arguments, and the oblique phrase as the other (cf. our LFG-style representation in 7a). The verb, on the other hand, may or may not have an oblique argument, compare (7b) and (7c). Following Forst et al. (2010), we apply the same *restriction* analysis to both cases in our LFG/XLE implementational framework. The restriction operator combines, through appropriate functional annotations, the two predicates in the syntax by erasing (*restricting out*), among other features, the oblique argument of the base verb if it has one. In the paper, we spell out the technical details of this approach.

2.2.Type (B) and Type (C)

Both dependencies involve an inflecting particle type. We assume that the agreement-marked particle expresses a pronominal oblique argument of the verbal predicate: in our LFG analysis, the inflection, in addition to the relevant agreement features, is also taken to encode an incorporated pronoun (cf. Ackerman 1990 for a similar analysis; see the examples in (8) and the lexical entry in (9a) for the particle in (8a)).

We follow É. Kiss (1998, 2002) - and cf. also Surányi (2009a&b) - in treating Type (B) particles as instantiating a grammaticalized possessive construction. Their dative associate is in fact their complement extracted *qua* a

(grammatical) possessor (cf. (4) and (8b)). We propose that inflected Type (B) particles are stored as PPs in the lexicon with a frozen possessive structure (10). This possessive construction is idiosyncratic in the sense that the PRED feature of the P-OBJ ('the possessum') is provided by the particle itself (see Rákosi 2010 for independent binding theoretic data that motivate the postulation of such a silent PLACE predicate in the lexical entry of inflecting postpositions in Hungarian).

We propose that Type (C) particles have two radically different lexical representations (9a&b). (9a) is a run-of-the-mill spatial PP headed by an inflecting postposition that agrees with its P-OBJ in number and person (which can be pro-dropped). The second entry for Type (C) particles, which we argue to be present in the reduplicating construction (3), is a pronominal that has been historically reanalyzed as a non-predicative agreement marker, which only retains 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, one which lacks even a PERSON feature). One prediction that comes through is that Type (C) reduplicating markers can co-occur only with third, but not with first or second person focussed oblique pronominals (11a vs 11b).

In the examples below, we follow conventional Hungarian orthography that spells a particle + verb sequence as one word, but in our analysis they occupy distinct syntactic positions.

(1) ***Keresztül**-fut-ott-am* *a* *park-**on**.* **TYPE (A/1)**
across-run-PAST-1SG the park-on *particle determines*
'I ran across the park.' *case of associate*

(2) ***Le**-mász-t-am* *a* *padló-**ra**/* *a* *híd* ***alá**.* **TYPE (A/2)**
down-climb-PAST-1SG the floor-onto the bridge to.under *particle only determines*
'I climbed down onto the floor / under the bridge.' *semantic type of associate*

(3) ***Rá**-ugr-ott-am* *az* *asztal-**ra**.* **TYPE (B)**
onto-jump-PAST-1SG the table-onto *reduplication pattern*
'I jumped onto the table.' (*particle* ≈ *case of associate*)

(4) ***Mögé**-ugr-ott-am* *Kati-**nak**.* **TYPE (C)**
to.behind-jump-PAST-1SG Kate-DAT *particle specifies*
'I jumped behind Kate.' *dative case of associate*

(5) ***A*** ***híd*** ***alá*** *mász-t-am.*
the bridge to.under climb-PAST-1SG
'I climbed under the bridge.'

(6) ***Le**-tüsszent-ett-em* *a* *zsebkend-őt* *az* *asztal-**ról**.*
down-sneeze-PAST-1SG the handkerchief-ACC the table-from
'I sneezed the handkerchief off the table.'

(7) a. *le*, PRT (↑ PRED)= 'DOWN <%ARG1, (OBL)>'
b. *mászik*, V (↑ PRED)= 'CLIMB <(SUBJ) (OBL)>'
c. *tüsszent*, V (↑ PRED)= 'SNEEZE <(SUBJ)>'

(8) a. *Én* *rá-ugr-ott-am.*
I onto.3SG-jump-PAST-1SG
'I jumped on her.'

b. *Kati* *mögém* *ugrott.*
Kate to.behind.1SG jumped.
'Kate jumped behind me.'

(9) a. $rá_1$: PP, (↑PRED) = 'ONTO <(↑OBJ)>'
(↑OBJ PRED) = 'pro'
(↑OBJ PERS) = 3
(↑OBJ NUM) = SG

b. $rá_2$: P (↑PRT-FORM) = rá
(↑OBJ PERS) = 3
(↑OBL CASE) = sublative
(↑ASPECT TELIC) = +

(10) *mögé*: PP, (↑PRED) = 'TO-BEHIND <(↑OBJ)>'
(↑OBJ PRED) ='PLACE<(↑POSS)>'
(↑OBJ POSS PRED) = 'pro'
(↑OBJ POSS PERS) = 3

(11) a. *Én* *Ő-RÁ* *ugrottam* *rá.*
I he-onto.3SG jumped.1SG onto
'It is him that I jumped on.'

b. */$^{???}$*János* *TE-RÁD* *ugrott* *rá*(*d*).
John you-onto.2SG jumped.3SG you(.2SG)
'It is you that John jumped on.'