**A mereotopological analysis of the category 'source particle' in Hungarian**

**Theoretical background:** According to Krifka (2001) if we want to analyse motion predicates, topological structures must be assumed, which are richer than the mereological structure used in e.g. Bach (1986). Topological structures make use of the connectedness relation in addition to the mereological part relation. Several other authors also recognised the necessity of adding topological tools to a mereological basis in the semantic analysis of motion events (cf. Galton 2000, Muller 1998, Randell, Cui and Cohn 1992). These mereotopological approaches share the property that they assume a mathematically continuous model of spatial change, and thus, resemble to that of Jackendoff (1996) in that they reject the snapshot view of motion.

**Aims:** The aim of this paper is twofold. First, I will show the existence of the category 'source particle' in Hungarian on the basis of linguistic data. Source particles, as opposed to goal particles, are supposed to perfectivize motion events with the help of some subevent determined by the syntactic argument with source thematic role. Second, I will argue that the asymmetries between goal and source particles (see below) can be accounted for on the basis of the above-mentioned mereotopological approaches. The so-called Region Connection Calculus (cf. Randell, Cui and Cohn 1992) has been supplemented by a theory of dominance relations among successive motion phases by Galton (2000). This modified RCC system together with Kiefer's (2000) analysis of perfectivity, according to which perfective events have at least one punctual subevent, provides a useful tool for the intended analysis.

Tenny (1994) suggests that the boundedness of an event depends on the aspectual role grid of the verb. According to her, PPs are able to participate in aspectual structure just in case the given PP (i) marks the endpoint of a motion event, and (ii) it bears goal thematic role. Furthermore, "any other type of indirect internal argument [i.e. PP] does not affect aspectual structure" (Tenny 1994: 68–9).

É. Kiss's (2004) analysis of Hungarian verbal particles adopts Tenny's idea that motion events consist of two phases: process and endpoint. Furthermore, she argues that in each Hungarian sentence describing a change of location and having a verbal particle in the preverbal position, a so-called terminative particle is to be found (i.e. a particle predicating the resulting location of the theme). She underlines this idea by claiming that the particle *ki* 'out' forms one conceptual unit with the goal argument in a sentence, cf. (1):

(1) *Péter **ki**vette a kulcsot a zsebéből **a kezébe.***
'Péter took **out** his key from his pocket **into his hand.**'

Contrary to Tenny and É. Kiss, I argue that besides terminative (goal) particles, there are **source particles** in Hungarian (and in English), as well. The existence of the category 'source particle' is confirmed by several asymmetries found between goal particles (e.g. spatial *be* 'in(to)' and *oda* 'to') and source particles (e.g. spatial *el* 'away/off' and *ki* 'out') in Hungarian sentences having particles in the immediate preverbal position. In such sentences, there is a predominance of perfective readings.

Here, I refer to only two of the differencies. First, while goal particles require the reconstructability of a goal with specific reference in the absence of an overt syntactic goal argument (cf. (2)), there is no such requirement in the case of source particles (cf. (3)).

(2) *Péter **be**ment.*
'Péter went **in** (to a specific place).'

(3) *János **el**szaladt.*
'János ran **away** (*to a specific place).'

Second, the meaning of sentences with goal particles does not change when omitting the particle and having the goal argument in the preverbal position, cf. (4a) vs. (4b).

(4) (a) *Péter **be**ment a szobába* vs. (b) *Péter a szobába ment*
'Péter went **into** the room' 'Péter went into the room'

However, the cases of analogous sentences with source particles are more problematic. Sentence (5a), as opposed to (5b), is grammatical, and does not entail the reaching of the station. Although (5a) does not mean that János reached the station, it denotes a perfective event (i.e. János left), but this event is determined by the implicit source argument.

(5a) *János **el**ment az állomásra, de útközben visszafordult.*
'János left in order to go to the station, but halfway turned back.'

(5b) **János az állomásra ment, de útközben visszafordult.*
*'János went to the station, but halfway turned back.'

If the (source) particle is omitted, and the goal argument is in the preverbal position (cf. (5b)), the first clause conveys the meaning that János did reach the station, and the whole sentence becomes ungrammatical.

In certain contexts, Hungarian sentences with source particles can express the reaching of the endpoint, as well. This dual behaviour of source particles leads to the ambiguity of sentence (6) which has two distinct perfective readings.

(6) *János **el**ment az állomásra, mert jegyet akart venni.*
(i) 'János left in order to buy a train ticket at the station.'
(ii) 'János reached the station, and he went there in order to buy a train ticket.'

**Conclusion:** It is possible to differentiate two kinds of particles with respect to their perfectivizing capacity in sentences describing motion events in Hungarian. While goal particles can perfectivize only with the help of the goal argument, source particles are able to perfectivize motion events either with the help of the source argument, or – though in special contexts only – with the help of the goal argument. The above-mentioned mereotopological approaches provide a suitable framework to account for the differences between goal and source particles. At the same time, it is possible to maintain the traditional analysis of goal particles according to which they perfectivize motion events with the help of some motion phase determined by the goal argument. Furthermore, this approach can be extended to the whole range of so-called topological prepositions and particles expressing a binary transition from one place to another such as *into*, *out of* (cf. Galton 2000), and may also be supplemented by the differentiation of several degrees of strength of connection (cf. Cohn and Varzi 2003).

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