

The aspectual structure of creation/consumption predicates

Introduction: It has recently been noticed that the aspectual structure of dynamic predicates is determined by the referential properties of not one but two incremental themes (Beavers 2012). The examples in (1) illustrate this, where a telic reading arises just in case the figure (i.e. the participant undergoing some kind of change) and the path have specific semantic properties:

- (1) a. The child ran to the playground in 10 minutes/?for 10 minutes.
(quantized figure and bounded path → telic predicate)
- b. Children ran to the playground for 10 minutes/??in 10 minutes.
(non-quantized figure and bounded path → atelic predicate)
- c. The child ran for 10 minutes/??in 10 minutes.
(quantized figure and unbounded path → atelic predicate)
- d. Children ran for 10 minutes/??in 10 minutes.
(non-quantized figure and unbounded path → atelic predicate)

While in certain domains multiple incrementality effects are easy to demonstrate (cf. (1)), it is less obvious what the path is in the case of creation/consumption predicates and how exactly it determines the quantization properties of the predicate. In this talk I would like to provide a possible answer to these questions while examining the aspectual structure of Hungarian creation/consumption predicates like *evett egy almát* 'ate an apple', which are also referred to as weak accomplishments by Piñón (2008). Regarding their aspectual structure, these predicates contrast with degree achievements like *(fel)melegített egy tányért* '(PRT)-warmed a plate' whose telicity is dependent on the presence of a telic marker (e.g. a verbal particle), which constrains the referential properties of the figure and the boundedness of the path (Kardos 2012), an issue that will not be addressed here.

Background: I couch my analysis in a mereological aspectual model, which takes events and objects to be basic entities such that they are associated with a part-whole structure modelled as complete join semilattices (Bach 1986). Furthermore, following Beavers (2012), who took the impetus from Krifka's (1998) work, I assume that predicates of change are associated with mutually conaining, ternary homomorphic relations, which obtain between the part structures of the event argument, the figure, and the path and that telicity obtains on the condition that the figure has quantized reference and the path, also referred to as the scale, is bounded (cf. (1a)).

In addition, in line with Szabolcsi (1986), I take creation predicates, to be treated on a par with consumption predicates, to share the meaning components BECOME, EXIST, and PARTICULAR FASHION. Such predicates all assert the creation or coming-into-being of a previously non-existent entity, a property that is argued to be at the root of why the theme argument of such predicates must be non-specific (*ibid.*).

The analysis: After motivating multiple incrementality in the class of creation/consumption predicates and the idea that the part structure of the figure specifically determines the part structure of the scale, the latter being a unique property of these predicates, I propose the set of creation/consumption scales \mathcal{S}_{cons} be defined as in (2), where atomic subparts of a scale $\mathcal{s} \in \mathcal{S}_{cons}$ are states such that they correspond to the consumption/creation of arbitrary units, to be illustrated here with the notion of bites that have been consumed in a consumption event:

- (2) a. Atomic elements in \mathcal{S}_{cons} are \mathcal{s}_i , where $i \geq 0$.
- b. For any $\mathcal{s}, \mathcal{s}_i, \mathcal{s}_j \in \mathcal{S}_{cons}$, where \mathcal{s}_i and \mathcal{s}_j are atomic, if \mathcal{s}_i and \mathcal{s}_j are proper parts of \mathcal{s} , $\mathcal{s}_i \ll \mathcal{s}_j$ (i.e. \mathcal{s}_i , the state of having consumed as many bites as i is ordered before \mathcal{s}_j , the state of having consumed j bites) iff $i < j$.

The definition above is intended to capture the idea that any consumption event traverses a consumption scale in a way that it commences at the source point, i.e. \mathcal{s}_0 , which corresponds to a state of affairs where no bite has been consumed and then progresses towards $\mathcal{s}_1, \mathcal{s}_2$ and ultimately to \mathcal{s}_n , which is where all the theme has been consumed. The predicate is interpreted

telically just in case the goal point (i.e. s_n) can be specifically determined. I suggest this be achieved through function f' , which serves to pick out the final subpart of the scale given that it is known how much of the figure participates in the event. The definition of this function is provided in (3).

(3) $f'(x) = s_{\#(x)}$, where $\#(x)$ equals the total number of bites that the consumed theme x is composed of.

Given how the figure determines the structure of the consumption scale, the source point can always be specifically determined (it is s_0). Therefore, with all the above in mind, I propose the following formal representations for the telic and atelic predicates in (4).

- (4) a. Péter 10 perc alatt evett két körté-t.
 Péter.NOM 10 minute under ate two pear-ACC
 $\exists s \exists x \exists \theta [eat'(peter, x, s, \theta) \wedge SOURCE(s_0, s, \theta) \wedge GOAL(f'(x), s, \theta) \wedge 2pears(x)]$
- b. Péter 10 perc-ig viz-et ivott.
 Péter.NOM 10 minute-for water-ACC drank
 $\exists s \exists x \exists \theta [drink'(peter, x, s, \theta) \wedge SOURCE(s_0, s, \theta) \wedge GOAL(g, s, \theta) \wedge water(x)]$

Some consequences of the analysis: In the second part of the talk, I discuss various facts that fall out of the analysis. For instance, I show that by assuming the scalar structure above we are provided with the tools to calculate the telicity facts of predicates of intellectual ingestion. As for (5), for instance, I argue that since it is known how much of the figure undergoes intellectual ingestion, we can identify the final subpart of the scale, and thus a telic reading becomes available.

- (5) Kati 10 perc alatt olvasott/tanult egy vers-et.
 Kati.NOM 10 minute under read/learned a poem-ACC
 'Kati read/learned a poem in 10 minutes.'

Second, it also follows that once predicates like *melegít* 'warm' are used in such a way that they describe creation events, as in (6), telicity is ensured by the quantized nature of the figure, and a verbal particle like *fel* is not necessary unlike in the case of *felmelegített egy tányért* 'PRT-warmed a plate', which is meant as a non-creation predicate.

- (6) Kati 10 perc alatt melegített egy tányér leves-t (valaki-nek).
 Kati.NOM 10 minute under warmed a plate soup-ACC (someone-for).
 'Kati warmed a plate of soup (for someone).'

Third, I also address the question of why a telic reading does not arise in examples like (7), where the verb contains the diminutive morpheme *-get* and appears with a quantized figure, and suggest that these predicates are inherently associated with a scale whose goal point is existentially bound. This in turn ensures atelicity just like in the case of the English conative *ate at an apple for 10 minutes/* in 10 minutes* (Beavers 2012).

- (7) a. Kati 10 perc-ig/*10 perc alatt eszegetett egy körté-t.
 Kati.NOM 10 minute-for/10 minute under ate.small.bites a pear-ACC
 'Kati ate small bites from a pear for 10 minutes.'

Furthermore, I also discuss predicates like *fel-zabál* 'PRT-devour', which have the peculiar property that they require a verbal particle when interpreted telically, and achievements like *tör egy darab kenyeret* 'break a piece of bread (off of a loaf of bread)' and *eltör egy vázát* 'PRT-break a vase', where the former is a creation predicate that contains only a base verb and a figure argument and the latter is simply a change of state predicate containing the obligatory particle *el* (cf. **tör egy vázát* 'break a vase') and a figure argument.

References: Bach, E. (1986). The algebra of events. *Linguistics and Philosophy*, 9, 5-16. Beavers, J. (2012). Lexical aspect and multiple incremental themes. In V. Demonte & L. McNally (Eds.), *Telicity and change of state in natural language: implications for event structure*. Oxford: Oxford University Press. Kardos, É. (2012). Toward a scalar semantic analysis of telicity in Hungarian. Unpublished doctoral dissertation. Debrecen: University of Debrecen. Krifka, M. (1998). The origins of telicity. In S. Rothstein (Ed.), *Events and grammar*. Dordrecht: Kluwer. Piñón, C. (2008). Weak and strong accomplishments. In É. Kiss (Ed.), *Event structure and the left periphery*. Dordrecht: Springer. Szabolcsi, A. (1986). From the definiteness effect to lexical integrity. In W. Abraham and S. de Meij (Eds.), *Topic, focus, and configurationality*. Amsterdam: John Benjamins.