Contextual effects on the processing of Hungarian pre-verbal focus sentences: an eye-tracking study

The interpretational characteristics of the Hungarian pre-verbal focus (preVf) has been subject to heated debate for a long time in the literature. While the view that preVf tends to have an exhaustive interpretation (exhaustivity henceforth) is generally not questioned, the status of exhaustivity is. The current study investigates the processing related aspects of preVf from the perspective of domain widening and restriction through an eye-tracking study. Based on processing related data we seek to examine the hypothesis that exhaustivity emerges as a result of implicature generation.

An array of investigations revealed that exhaustivity is variable, emerges late in processing and may be context dependent, and thus concluded that exhaustivity has implicature status (Onea & Beaver 2011, Kas & Lukács 2013, Gerőcs et al, 2014). Furthermore, based on eye-tracking data Káldi et al (2016) claims that exhaustivity has the status of \textit{scalar} implicature, where exhaustive reading corresponds to the upper-bounded, whereas non-exhaustive reading to the lower bounded interpretation. However, in the latter study the context-dependence of exhaustivity could only be conjectured indirectly, as it emerged as a result of the manipulation of the experimental task, and not the linguistic context in which preVf sentences had to be interpreted. For the aforementioned studies the question of domain restriction as outlined in Stanley and Szabó (2000) and É. Kiss & Zétényi (to appear) may pose a problem: while performing the experimental tasks respondents may have widened or restricted their domain of interpretation to accommodate a reading natural enough for them. Results regarding the interpretation of the preVf thus may have been confounded.

In order to control for this possible confound, we have conducted a visual-world experiment in which we introduced a direct manipulation of the linguistic context. Each critical trial includes three sentences (see table): the introductory sentence lists the possible referents in the context, the second sentence either restricts the number of choices (restrictive condition) or not (non-restrictive condition), and finally the third, test sentence contains either an only-focus (only-f condition) or a preVf sentence (preVf condition).

\begin{table}[h]
\begin{tabular}{|l|l|}
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Intro. & Az asztalon volt egy tál tele gyümölcsökkel. Volt benne egy csomó alma, körte, barack. \\
& There was a bowl full of fruit on the table. There were a lot of apples, pears, peaches.  \\
\hline
Cont. & Minden vendég rakhatott a tányérjára ezek közül \textit{EGYET/NÉHÁNYAT}. \\
& Every guest could put \textit{ONE/SOME} fruit onto their plates.  \\
\hline
Test & János (csak) egy almát rakott rá a tányérjára. \\
& John put (only) an apple onto his plate.  \\
\hline
\end{tabular}
\end{table}

In each trial participants listen to the three sentences consecutively, and are shown a set of four images in parallel with the last sentence. The set of four images contains an exhaustive target (e.g. an apple), a non-exhaustive target (an apple & a pear), and an exhaustive and a non-exhaustive distractor. The experimental task is to choose the image or images that best correspond to the linguistic stimuli. 20 adult native Hungarians have participated in the experiment. We measure looks to the four images while participants hear the Test sentences. The emphasis of the current study is the processing related differences between the two types of focus construction. We hypothesize that in the case of only-f sentences we will not see a difference in the proportion of looks to the exhaustive target in the two context conditions, as lexically marked focus should be insensitive to such variation. In the case of preVf sentences, however, we expect eye-gaze patterns to
differ between the restrictive and the non-restrictive conditions in the post-verb (approx. 1000ms post focused NP onset) region. Based on Huang & Snedeker (2009) and Káldi et al (2016) divergence in this region can be regarded as a correlate of implicature generation.

Data collection is ongoing. A preliminary analysis of data from 20 participants shows the predicted trends but these trends only approach statistical significance in the critical region.

References
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