

## Hungarian focus is not exhausted

Szabolcsi (*Acta Linguistica Societatis Linguisticae Europaeae*, 1981) argued that in Hungarian a focused argument in immediately preverbal position receives an exhaustive interpretation as part of truth conditional content. É. Kiss, Horváth, Kenesei, and Bende-Farkas have all argued for truth conditional exhaustiveness (tied to focus, or to syntax), and É. Kiss (*Language* 1998) generalizes, claiming that cross-linguistically there is a special exhaustive (or *identificational*) foci. These views are criticised by Wedgwood (Elsevier, 2005), with examples suggesting that exhaustiveness in Hungarian is a pragmatic effect. But the debate is not settled: É. Kiss (U. Stuttgart, 2008) argues again for semantic exhaustiveness of Hungarian focus. In this paper we present strong experimental evidence that exhaustiveness associated with preverbal focus in Hungarian is pragmatic and not truth conditional. Then we present a parallel experiment in German showing that the interpretation of preverbal Hungarian focus position is comparable to German intonational focus.

For a sentence like (1-a), which contains a preverbal focus, there is a tendency to infer that Mary is the only one Peter kissed, but this does not hold for (1-b), in which Mary is prosodically prominent but no longer preverbal.

- (1) a. Péter MARIT csókolta meg. ‘Peter kissed Mary (and noone else).’  
Peter Mary.ACC kissed PRT  
b. Péter meg-csókolta MARIT. ‘Peter kissed Mary (and possibly someone else too).’  
Peter PRT-kissed Mary.ACC

We propose that immediately pre-verbal position in Hungarian is grammatically constrained to be a question-answering constituent and that in Hungarian there is no other unmarked question-answering position. Hence, even isolated from any context, pre-verbal foci in Hungarian will be interpreted as answering an accomodated *wh*-question (c.f. Roberts, OSU, 1996; Beaver and Clark, Blackwell, 2008) . We assume a pragmatic tendency to interpret answers as adequate for the conversational goals at hand, which will often imply the answers are *complete*, and hence exhaustive. In German, prosodic prominence can be triggered by different factors, and being the answering constituent to a question is only one of them. This predicts that in isolation Hungarian preverbal foci are more exhaustive than German foci, but that in German exhaustiveness increases if the sentence is an answer to a *wh*-question, whereas for Hungarian such an effect is not predicted.

We will also present evidence that a standard diagnostic tool for Hungarian, involving preverbal particles, introduces an unfortunate (but theoretically interesting) confound. The particles are perfective and highlight the end state associated with a telic verb, and are standardly analyzed as taking a default unmarked position immediately before the verb, phonologically combining with the verb into a single unit as in (1-b). However, when a focused item is present in a preverbal position, the particle appears post-verbally as in (1-a). For this reason the position of the particle has been used as a diagnostic tool for the presence of an exhaustive focus.

We suggest that the confound arises because when the particle is postverbal (1-b), the completion is deemphasized, and there is a stronger tendency to view the completed action as previously salient than for (1-a). Thus many speakers interpret (1-b) (in isolation) as answering the question: “*Who is the kissee in s (where s is a unique salient situation of Peter kissing someone)?*”, as opposed to the question “*Who is the kissee in any situation of Peter kissing someone?*” Thus (1-b) is seen as answering a very specific question about a salient situation, while comparable sentences lacking a completive particle are less specific, quantifying indefinitely over situations, and are less likely to be interpreted exhaustively. Thus while we analyze all exhaustivity effects in Hungarian pragmatically, aspectual particles can lead to a pragmatic *double whammy*, with two separate

effects leading to increased exhaustivity.

Our experiments build on the following intuition: the degree of exhaustiveness can be measured by the way subjects comment on an assertion when they see pictorial evidence that the assertion is correct except for not being exhaustive. In a first small-scale experiment 19 Hungarian speakers (age 16–70) were confronted with pictorial stimuli and had to choose an answer to a spoken Hungarian stimulus in three conditions: the spoken stimulus **a**) contained a focused ‘only x’ subject, **b**) a preverbally focused subject and **c**) a post-verbally focused subject. In all cases the stimulus expressed nonexhaustive information with regard to the picture: e.g. the subject hears “MARY has a flower” while on the picture both Mary and John have flowers. The task was to choose one of the following answers: “*Yes, and* John has a flower too.”, “*Yes, but* John has a flower too.” or “*No*, John has a flower too.” If exhaustiveness was truth conditional we would expect assertions with *csak* (‘only’) and with preverbal focus to behave similarly. However, we found that subject would contradict the preverbal focus assertion at a significantly lower rate than for ‘only’ ( $\chi^2(2) = 20.17$   $p < 0.01$ ). Nevertheless, pre-verbal focus triggered slightly more exhaustive interpretations than post-verbal focus. For reasons of space we present the results in terms of an average number which we get by considering *Yes, and* answers as 1, *Yes, but* answers as 2 and *No* answers as 3. This number is similar to an acceptability measure: the higher the number the more radically the subject is willing to contradict it.

Experiment/condition	only	pre-verbal focus	post-verbal focus
Hungarian <i>no context</i>	2.7	1.97	1.6

We repeated the same experimental setup in a larger online-experiment (100 participants) where a *wh*-question preceded the stimuli. Hence, the subjects were required to comment on the same stimuli as answers to appropriate *wh*-questions. Again, the results show that preverbal focus is significantly more exhaustive than post-verbal focus ( $\chi^2(2) = 21.32$   $p < 0.01$ ), as people would contradict non-exhaustive answers more often in this case. Note that the exhaustiveness effect is not greater due to the presence of the question, but marginally smaller overall.

Experiment/condition	pre-verbal focus	post-verbal focus
Hungarian <i>with question</i>	1.7	1.38

We then repeated the experimental setup for German using translation equivalents of the stimuli. We compared items with focused subjects and default intonation (main accent on the object) in cases in which the subject expressed non exhaustive information. Both for isolated items and as responses to *wh*-questions the focused examples were more exhaustive, but the difference was smaller than in Hungarian and statistically not significant ( $\chi^2(2) = 5.54$   $p = 0.06$ ). But for German, making the question explicit slightly increases the degree of exhaustiveness.

These first results show that the while Hungarian preverbal foci taken as a group are more exhaustive than German intonational foci, the degree of exhaustiveness is much lower in both languages than would be the case for a truth conditional effect. But as already indicated, the situation in Hungarian is more complicated. We found evidence from our experimental data that if particles are present postverbally, the number of *no* and *yes, but* answers significantly rises. Indeed, with no particles present, Hungarian preverbal foci are comparable to German intonational foci.

In conclusion, our experiments clearly show that the claim that preverbal focus in Hungarian is semantically exhaustive is too strong. The most that might be said is that Hungarian preverbal focus is more constrained in its pragmatic function than simple intonational making (e.g. in German): we suggested this is because Hungarian preverbal focus is dedicated to question answering. We also provided data that verbal particles in Hungarian should not be used as a diagnostic when studying exhaustivity. The data is predicted by an analysis in which the pragmatic status of particles affects whether sentences are taken to refer to specific salient situations.