EXHAUSTIVITY, FOCUS AND INCORPORATION IN HUNGARIAN [1]

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There are two influential assumptions about Hungarian focus interpretation: i) in Hungarian two types of focus (information and identificational focus) are distinguished and ii) the pre-verbal focus in Hungarian has a strictly exhaustive reading encoded in a covert operator. In this paper I will sketch an alternative analysis of the Hungarian data showing that neither of the two assumptions needs to be maintained. I will argue that the particularities of "Hungarian focus" can be best accounted for by assuming presuppositional effects related to word order at the level of the verbal predicate.

1. Introduction

In Hungarian focussed expressions may occur in immediate pre-verbal position as shown in (1) or in a post-verbal position as shown in (2).

(1) *Péter* [*Marit*]$_{F}$ *csókolta* *meg*.
Peter Mary.ACC kissed VM.
'Peter kissed MARY'

(2) *Péter* *meg-* *csókolta* [*Marit*]$_{F}$.
Peter VM kissed Mary.ACC
'Peter kissed MARY.'

Syntactically the essential difference between pre- and post-verbal focus is that verbal prefixes acting as verbal modifiers (glossed: VM) must appear in post-verbal position if the focus is pre-verbal. Semantically the essential difference is that pre-verbal focus is assumed to be strictly exhaustive while post-verbal focus need not have an exhaustive interpretation. In view of examples like (3), it has been argued that the exhaustive interpretation of pre-verbal focus must be semantically encoded in form of a covert operator as shown in (4) which can interact with negation (cf. Szabolcsi 1981).

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(3) *Nem* [*Péter*]$_F$ *aludt a padlón, hanem* [*Péter és Pál*]$_F$ (*aludt a padlón*).
Not Peter slept the floor-on but Peter and Paul slept the floor-on
'It isn't Peter who slept on the floor; it's Peter and Paul who slept on the floor.'

(4) $\lambda P\, \lambda x\, (P(x) \wedge \forall y\, P(y) \rightarrow y = x)$

While Kenesei (1998), É.Kiss (1998, 2002) and others defend this solution (with minor modifications) and Wedgwood (2005) argues against it, Horvath (2005) claims that such an operator is needed independently of focus. In this paper I will argue that in order to account for the clearly distinct semantic and pragmatic effects related to the pre- or post-verbal focus in Hungarian neither the assumption that identificational focus (i.e. the pre-verbal focus) is associated with a covert operator nor the assumption that the Hungarian focus position bears an exhaustivity operator are necessary. My claim is that the particularity of Hungarian is that in case of a VM-V word order the event introduced by the verb must be asserted and cannot be interpreted anaphorically. Given this assumption, the specific focus effects discussed in the literature can be derived by standard Alternative Semantics and pragmatic reasoning.

2. Verbal modifiers, incorporation and event anaphora in Hungarian

VM are immediately pre-verbal in Hungarian, except in *wh*-questions, after negation or in the presence of pre-verbal focus. But there is reason to believe that if the event must be interpreted anaphorically VM-V word order is excluded as shown in the contrast between (5), in which the question must be interpreted as referring to the event introduced before, and (6) in which the question cannot refer to the same event:

(5) *Péter meg- sebesült. A tegnap sebesült meg Péter?* $e_1 = e_2$
Peter VM hurt the yesterday hurt VM Peter
'Peter got hurt. Did Peter get hurt yesterday?'

(6) *Péter meg- sebesült. A tegnap meg- sebesült Péter?* $e_1 \neq e_2$
Peter VM hurt the yesterday VM hurt Peter
'Peter got hurt. Did Peter get hurt yesterday (too)?'

Based on these observations I conclude that if the word order is V-VM the verb introduces its event referent as part of the presupposition and if the word order is VM-V the verb introduces an event that may not be part of the presupposition. This can be modelled by assuming that the verb moves to some PresP if its event is presupposed. But of course, if there is no VM in the sentence, there is no overt difference in the structure.

Note that the reason for verb-movement is the fact that it refers to a presupposed event and not the presence of focus. Crucially, however, if the focus marks an answer to a question, then the verb is interpreted anaphorically as referring to the event in question and in this case movement is necessary. This does not apply for other foci.

This analysis assumes verb movement and contrasts with the mainstream view that VM are generated post-verbally and prevented by focus to move to a pre-verbal position. The major advantage of this analysis has nothing to do with focus but with incorporation. Incorporated bare nouns syntactically behave like VM. Farkas & de Swart (2003) argue that incorporation of bare singulars in Hungarian happens in the pre-verbal position, since here a special compositional rule (unification) applies. If we assume VM-movement that would be blocked by pre-verbal focus, incorporation would be ruled out in the presence of pre-verbal focus. But incorporated bare singulars are possible in a post-verbal position even with pre-verbal focus. Under the V-movement analysis proposed here, however, bare nouns or VM stay at the same position regardless of focus and incorporation is hence predicted to be possible independently of focus.

3. Focus interpretation

I assume Alternative Semantics as the focus interpretation mechanism. As shown by Rooth (1992) focus generates a set of alternatives and introduces a presupposition on a set-variable ~C at the level at which focus gets interpreted. This presupposed variable must be satisfied by the context. One typical case is the question-answer paradigm:

(7) Q: Who did John marry? $= \varphi_1$
A: John married $[\text{Mary}]_F$. $= \varphi_2$
$\|\varphi_1\|^O$ = {John married Mary, John married Anne, John married Jeanette …}
$\|\varphi_2\|^O$= John married Mary
$\|\varphi_2\|^A$= {John married x|x$\in D_e$}
~ C: C$\subseteq\|\varphi_2\|^A$, $\|\varphi_2\|^O\in$ C, $\exists p[p\neq\|\varphi_2\|^O\wedge p\in C]$ - the presupposed variable.
$\|\varphi_1\|^O$ satisfies the conditions on C, it is an available discourse antecedent.

The focus-presupposition may arise at different syntactic positions:

{M, A} {λx married(x,M), λx married(x,A)} {married (J,M), married(J,A)}

4. Pre-verbal and post-verbal focus in Hungarian

As often claimed in the literature, pre-verbal (identificational) focus is exhaustive while post-verbal (information) focus needn't be exhaustive in Hungarian. While I accept this descriptive observation I will argue that this does not justify the distinc-

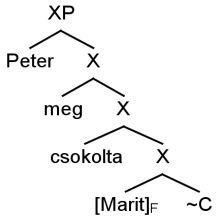
tion between two types of foci. My claim is that only the level at which focus is interpreted differs. The crucial observation is that post-verbal focus cannot be interpreted as an answer to a question but rather needs some lower level contrast:

(8) ?*Kit csókolt meg Péter? Péter meg- csókolta* [*Marit*]$_F$.
Who kissed VM Peter Peter VM kissed Mary.ACC
'Who did Peter kiss? Peter kissed MARRY.'

According to the assumed focus interpretation mechanism this means that post-verbal focus in Hungarian is interpreted at a lower level because if focus were interpreted at the sentence level it would presuppose a set of propositions, and thus would be a good answer to a question. On the one hand, this is not surprising, since the sentence contains an asserted verbal predicate and hence the event of the sentence must differ from the event under question. However this is not the proper explanation of the observation, since otherwise post-verbal focus should be possible with V-VM word order, which is not the case. Therefore I assume that in Hungarian focus-presupposition may not be projected over any verbal predicate. The observation that an asserted verbal predicate is incompatible with an answer to a *wh*-question, on the other hand, rules out pre-verbal focus with VM-V word order.

The clear difference between information (post-verbal) focus and identificational (pre-verbal) focus can be hence easily explained without assuming different kinds of mechanisms for focus interpretation. In (9) we present the case of post-verbal focus.

(9) *Péter meg- csókolta* [*Marit*]$_F$.
Peter VM kissed Mary.ACC
'Peter kissed Mary'

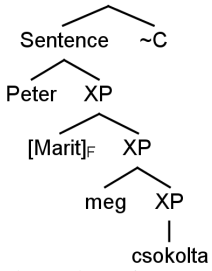


If the focus is post-verbal the verb is asserted. Because the presupposition cannot project over the asserted verb, focus generates a presupposition at the level of the DP and the alternatives are {Anna, Mary, Jane, Diana etc.} In this case, the presupposition cannot be satisfied by a question (or a VP operator) and hence a contrastive element must be introduced at the DP level as shown in (10), which is a very natural continuation of (9).

(10) *Péter meg- csókolta* [*Marit*]$_F$, *és János meg- csókolta* [*Annát*]$_F$.
Peter VM kissed Mary.ACC and John VM kissed Anna.ACC
'Peter kissed MARY and John kissed ANNA.

In the case of pre-verbal focus the situation is completely different as shown in (11):

(11) *Péter* [*Marit*]$_F$ *csókolta meg*.
Peter Mary.ACC kissed VM
'Peter kissed Mary'



Here the focus is interpreted at the sentence level and hence the alternatives are: {Peter kissed Mary, Peter kissed Jane, Peter kissed Anna etc.}. Such a presupposition can be satisfied by a *wh*-question. According to the focus interpretation rules presented above, the verb is not asserted, and hence the event of the verb is presupposed, and is naturally bound by the event under question. Whether this implies an existential presupposition on the participant under question needn't even be decided in order to derive exhaustivity:

The exhaustive reading arises because the pre-verbally focused expression gives an answer to a question and maximal level of informativity is pragmatically assumed. In line with Beaver & Clark (to appear) I assume that a question can be modeled as a set of possible answers, which may contain both partial answers and answers containing groups of individuals e.g.: {Peter kissed Mary, Peter kissed Joan, Peter kissed Mary and Joan, etc.}. Now, the only thing we need to assume is that the speaker wants to give a maximally informative answer and, since "Peter kissed Joan and Mary" is more informative than "Peter kissed Joan", an exhaustivity implicature arises. Here, exhaustivity isn't a semantic issue since uniqueness is not presupposed. But if the exhaustivity is not based on an operator, we still need to explain the strange semantic phenomenon in (3).

5. The problematic example

First, the phenomenon presented in (3) is not general, as e.g. (12), is weird for most speakers, except for some reading in which Peter and Paul got a grade for a joint work:

(12) ??*Nem PÉTER kapott tízest, hanem Péter és PÀL (kapott tizest).*
Not Peter got ten.ACC but Peter and Paul got ten.ACC
'It isn't Peter who got a ten (grade), it's Peter and Paul who got a ten (grade)'

This shows that this kind of negation will only work in cases in which the conjunction delivered in the second clause can be conceived as referring to participants of the same event. Hence (3) can only have the reading according to which Peter and Paul slept both on the floor at the same time. But then the verb in (3) is anaphoric to a previously mentioned event. But if Peter and Paul are the participants of a particular event, the statement that Peter is the participant of the event is false. And indeed, we find this kind of examples in German too, as shown in (13), where a distributive reading is excluded:

(13) *Nicht* [*Peter*]$_F$ *hat das Klavier hochgetragen sondern Peter, Paul und Jonas.*
Not Peter has the piano up-carried but Peter Paul and Jonas
'It isn't Peter who carried the piano up the stairs but Peter, Paul and Jonas.'

The main argument for a covert operator, thus, breaks apart. The operator prevents the proposition that Peter slept on the floor from being negated, but this is not desirable.

Conclusion

In this paper I have sketched an argument for a standard analysis of focus phenomena in Hungarian and I have shown that the distinction between information and identificational focus in Hungarian is not intrinsic to focus but to word-order effects on verbal presuppositions. In addition it has been shown that the assumption of an exhaustivity operator at some functional projection in Hungarian is not necessary. This approach includes a verb-movement syntactic analysis and thus opens the way to a unified treatment of the semantics of VM and incorporated bare nouns, which is subject to further research. However the theoretic expectation is that a detailed analysis of incorporation and verbal modification in Hungarian will come up with a clear explanation why exactly the event expressed in a VM-V word order is asserted and in a V-VM word order the event must be presupposed.

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