

Exhaustivity, Focus (and Incorporation) in Hungarian

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0. Introduction

The general question: to what extent do we need specific semantic rules to account for different phenomena such as focus sensitivity, identificational vs. non-identificational focus etc.?

For this discussion Hungarian data are specifically interesting, because it has been widely (and very influentially) argued that Hungarian pre-verbal focus has an intrinsic semantic exhaustive interpretation, while post-verbal focus completely lacks such an interpretation. This is the main motivation for the classic distinction between information and identificational focus (É. Kiss 1998).

I would like to show that such a distinction may not be necessary, since both “types of focus” can be modeled assuming the very same semantic mechanism of focus interpretation.

1. Hungarian focus and exhaustivity

The major semantic point about Hungarian pre-verbal focus is that it triggers truth conditional differences even without any overt focus sensitive particles, as shown in (1) from Szabolcsi (1981):

- (1) *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.'

The standard way of dealing with this peculiarity is to assume some covert exhaustivity operator (such as a covert “only” (formally shown in (2))). This point is common to nearly all approaches to the semantics of Hungarian focus, even if they differ in details:

- (2) $\lambda P \lambda x P(x) \wedge \forall y P(y) \rightarrow y = x$

The exhaustivity operator arguably prevents the focused expression of being negated and hence allows for a continuation as in (1).

The necessity of the stipulation of such an operator has been discussed widely in the literature, pro: Szabolcsi (1981), Farkas (1986), Kenesei (1998), É.Kiss (1998, 2002, 2007 etc.), Horváth (2000, 2005 etc.) and contra: Szendrői (2001, 2003) and Wedgwood (2005). One specifically interesting argument from this discussion will be discussed later.

2. The key Hungarian data

In this section I discuss the most important data on Hungarian focus.

Pre-verbal focus in Hungarian is immediately to the left of the finite verb:

- (3) *(Tegnap) Péter [Marinak]_F (*tegnap) adott (tegnap) egy könyvet.*
(yesterday) Peter Mary.DAT yesterday gave (yesterday) a book.ACC
'Peter gave Mary a book (yesterday).'

Verbal modifiers (glossed as VM) (aspectual, local etc.) and incorporated bare nouns (cf. Farkas & de Swart 2003, 2004) are usually pre-verbal, but there are exceptions from this rule.

- (4) *(*Oda) Tegnap (*oda) Péter Marinak (oda)adott (*oda) egy könyvet (*oda).*
VM yesterday VM Peter Mary.DAT VM-gave VM a book.ACC VM
'Peter gave (successfully) a book to Mary yesterday.'

If there is a pre-verbal focus, verbal modifiers are post verbal:

- (5) *Péter [Marinak]_F (*oda)adott (oda) egy könyvet.*
 Peter Mary.DAT VM-gave VM a book.ACC
 ‘It’s Mary Peter gave the book to (successfully).’

In *Wh*-questions (or exclamations) verbal modifiers are post-verbal:

- (6) *Ki (*oda)adott (oda) Marinak egy könyvet?*
 WHO VM-gave VM MARY.DAT a book.ACC
 ‘Who gave Mary a book (successfully)?’

In negative environments verbal modifiers are post-verbal:

- (7) *Péter nem (*oda)adott (oda) Marinak egy könyvet.*
 Peter not VM-gave VM Mary.DAT a book.ACC
 ‘Peter did not give Mary a book (successfully).’

Post verbal focus is also available in Hungarian, but it will not get an exhaustive interpretation:

- (8) *Péter meg- csókolta [Marit]_F.*
 Peter VM kissed Mary.ACC
 ‘Peter kissed Mary.’

Note that in this case the verbal modifier is pre-verbal and cannot be post-verbal, except for cases in which post-verbal position is triggered by independent reasons:

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

3. Asserted and non-asserted verbal predicates

In this section I will introduce the main semantic hypothesis of this paper:

H1: In Hungarian different compositional rules apply if the verb is in front of a verbal modifier or after a verbal modifier. In the second case the verb introduces an event referent as non-presupposed material; in the first case the verb introduces an event referent as part of the presupposition (i.e. anaphorically takes an event argument).

Semantic rule 1: **VM-V:**

The verb and the VM are predicates over an asserted event introduced by the verb.

$$\|VM V_{trans}\| = \lambda y \lambda x \exists e V(e) \wedge VM(e) \wedge Agent(e, x) \wedge Patient(e, y)$$

Semantic rule 2: **V-VM:**

VM and verb are predicates over a presupposed event. The verb functions rather as an anaphor. *< > marks presupposed material*

$$\|VM V_{trans}\| = \lambda y \lambda x \langle \exists e V(e) \wedge VM(e) \rangle Patient(e, y) \wedge Agens(e, x)$$

An example with a transitive verb will elucidate the semantic rules.

Note however, that example (11) is ungrammatical without focus on “Peter”. At this point we do not have a focus interpretation mechanism, hence I only show how the V-VM rule would work if the sentence were grammatical.

(10) *Péter meg -ette az almát.*
 Peter VM eat the apple.ACC
 ‘Peter ate the apple.’
 $\langle \exists x \exists y x=Peter \wedge apple(y) \rangle \exists e \text{ meg-eat}(e) \wedge \text{Theme}(e,y) \wedge \text{Agent}(e,x)$

(11) # *Péter ette meg az almát.*
 Peter eat VM the apple.ACC
 ‘Peter ate the apple.’
 $\langle \exists e \exists y \exists x \text{ eat}(e) \text{ meg}(e) \wedge \text{apple}(y) \wedge x=Peter \rangle \text{Theme}(e,y) \wedge \text{Agent}(e,x)$

The only difference between the two sentences is supposed to be that in (10) an event is introduced, but in (11) no new event is introduced.

The syntactic mechanism related to the two postulated semantic rules is that the verb moves into a certain syntactic position (say BackgroundP) in which it simply can only introduce an event variable as part of the presupposition, whereas the VM occupies another syntactic position, which also blocks the introduction of a discourse referent. The syntactic details are not to be discussed here.

4. Focus interpretation mechanism

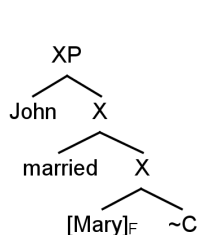
I make a few more or less standard assumptions about focus interpretation:

- as assumed by Alternative Semantics (Rooth 1992) focus generates focal alternatives.
- at the level at which focus is interpreted a presupposition arises requiring some subset of the set determined by the focus semantic value of the expression. ($\sim C$)
- This presupposition must be satisfied by a question or some contrast.

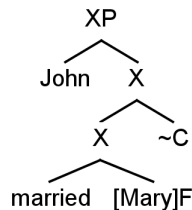
Example

(12) Q: Who did John marry? = φ_1
 A: John married [Mary]_F. = φ_2
 $\|\varphi_1\|^O = \{\text{John married Mary, John married Anne, John married Jeanette ...}\}$
 $\|\varphi_2\|^O = \text{John married Mary}$
 $\|\varphi_2\|^A = \{\text{John married } x|x \in D_e\}$
 $\sim C: C \subseteq \|\varphi_2\|^A, \|\varphi_2\|^O \in C, \exists p[p \neq \|\varphi_2\|^O \wedge p \in C]$ the presupposed variable
 $\|\varphi_1\|^O$ satisfies the conditions on C, it is an available discourse antecedent.

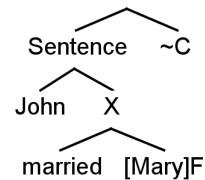
- The focus-presupposition may arise at different syntactic positions and hence differs significantly depending on the level of focus interpretation (this is something distinct from focus projection):



{Mary, Anna, Jane}



{married Mary, married Anna, married Jane}



{John married Mary, John married Anna...}

- I assume that focus (if interpreted at the sentence level) generally signals that the utterance is an answer to some question.
- Moreover I assume the theory of focus sensitivity of Beaver & Clark (2008), with modifications non-relevant for this paper. The basic claim is that only discourse particles are really focus sensitive.

I do not need to assume an existential presupposition generated by focus (or by *wh*-questions), but I do not deny that such an *implicature* exists.

5. Pre-verbal and post-verbal Hungarian focus

The observed difference between pre-verbal and post-verbal focus in Hungarian is that pre-verbal focus can be an (unmarked) answer to a *wh*-question, while post-verbal focus cannot be an (unmarked) answer to a *wh*-question but needs some kind of lower level contrast in order to be compatible with some discourse:

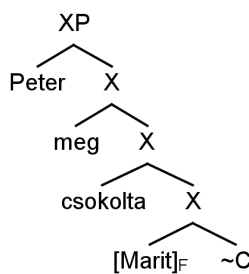
- (13) *Kit csókolt meg Péter? Péter meg-csókolta [Marit]_F.*
 Who kissed VM Peter Peter VM kissed Mary.ACC
 ‘Who did Peter kiss? Peter kissed Mary’

Since according to the assumed focus interpretation mechanisms focus can be an answer to a question if it presupposes an alternative set containing propositions I argue that in Hungarian there must be some blocking effect such that a post-verbal focus cannot generate a presupposition requiring sentence-level alternatives. This is not surprising, since in this case the event is explicitly asserted (and hence is supposed to differ from the event in question, which means that the question could hardly satisfy the focus presupposition).

Hence it may be the case that there is a general principle according to which focus-presupposition may not be projected over asserted material. This hypothesis is subject to further investigation. For the following I will only use the descriptive observation for Hungarian and not this stipulated general principle.

According to our observation the difference between pre-verbal and post-verbal focus in Hungarian can be modelled as follows:

- (14) *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 in Hungarian, focus generates a presupposition at the level of the DP (or NP or N etc.) and the alternatives are e.g. {Anna, Mary, Jane, Diana etc.}

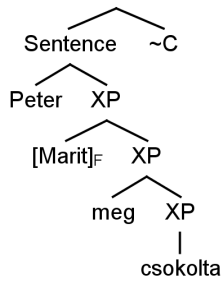
In this case focus presupposition cannot be satisfied by a question, and hence the only way to be satisfied by a contrastive element as shown for example in (15) where Anna is the contrasted element.

- (15) *Péter meg-csókolta [Marit]_F, és János meg-csókolta [Annát]_F.*
 Peter VM kissed Mary.ACC and John VM kissed Anna
 ‘Peter kissed Mary and John kissed Anna.’

Note that (14) is a possible (marked) answer to a *wh*-question as well, but in this case the answer is not necessarily exhaustive and the hearer expects the speaker to say something about some other alternatives as well. This is because the question does not satisfy the presupposition induced by focus and the presupposition must be accommodated. This way the speaker signals, that there is some contrast between Mary and some alternative, which are per default taken from the alternatives in the question.

In the case of pre-verbal focus the situation is completely different:

- (16) *Péter* [Marit]_F *csókolta meg.*
 Peter Mary.ACC kissed VM
 ‘Peter kissed Mary’



Here the focus can be interpreted at the sentence level and hence the alternatives are: {Peter kissed Mary, Peter kissed Jane, Peter kissed Anna...}. Such a presupposition can be satisfied by a question.

According to the rules above, the verb is not asserted, and hence the event of the verb is presupposed (is anaphoric to some event in the context) → existential presupposition on the event itself and on every participant.

The exhaustive reading arises according to this view simply because the pre-verbally focused expression can only identify a presupposed entity and maximal level informativity is assumed. In line with Beaver & Clark (2008) I assume that a question is a set of possible answers possibly also containing groups of individuals {Mary kissed Peter, Mary kissed John, Mary kissed Peter and John, etc.}. Now, the only thing we need to assume is Gricean reasoning: the speaker wants to give a maximally informative answer and since “Mary kissed John and Peter” is more informative than “Mary kissed John”, we can assume, that if the speaker meant “Mary kissed John and Peter”, he would have chosen this option and not “Mary kissed John”.

Here exhaustivity has the status of an implicature, i.e. exhaustivity is not a semantic phenomenon in this case, since uniqueness does not need to be presupposed!

Note that Wedgwood (2005) comes to a very similar result, but he attributes the presupposition of the event to narrow focus. This, however is not necessarily the case, since the question under discussion may simply be, who has a certain property, whereby neither a specific state nor an event are presupposed. (Note again that in such cases Hungarian cannot use VM-s).

If however exhaustivity is a simple implicature, how can we account for example (1)? The crucial problem is that in example (1) we seem to need some operator in order to account for the semantic facts.

6. A problematic example

Let us take a closer look at the interpretation of sentence (1) (repeated as (17)), which is perfect in Hungarian.

- (17) *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.’

Wedgwood (2005) provides a counter-example against the exhaustive-operator approach, arguing that if there were such an operator (a covert “only”) the following contrast should not exist:

- (18) *??Tudtam, hogy Péter meg-evett egy pizzát*
 knew that Peter VM-ate a pizza
de nem tudtam, hogy [egy pizzát]F evett meg.
 but not knew that one pizza ate VM
 I knew that Peter ate a Pizza but I just got to know that it was a pizza he ate.

- (19) *Tudtam, hogy Péter meg-evett egy pizzát*
 knew that Peter VM-ate a pizza
de nem tudtam, hogy csak [egy pizzát]_F evett meg.
 but not know that only one pizza ate VM
 I knew that Peter ate a Pizza but I just got to know that it was only a pizza he ate.

Since there is such a contrast, and hence the addition of an overt “only” changes the interpretation, one can conclude that whatever the right way to deal with (1) may be, an operator just cannot be there.

Note that one may argue against this kind of examples, assuming that “only” in Hungarian (just like in English) has a discourse function, which is just not shared with the covert exhaustivity operator. The contrast hence relates rather to the discourse function of “only” than to the existence or non existence of the exhaustivity operator (cf. also É.Kiss 2007). But if there is an exhaustive operator with no discourse function, there seems to be no plausible explanation for the focus sensitivity of this operator (assuming the analysis of Beaver & Clark 2008). And if this operator is not focus sensitive, it is not very clear why it is somehow associated with focus. (Cf. Horváth 2005. She argues that this operator has nothing to do with focus.)

At a closer look however we see that the phenomenon is not completely general, as for instance (20), which is a similar structure, is very strange for most speakers, except for some reading in which Peter and Paul got a grade for a joint work.

- (20) ?? *Nem PÉTER kapott tízest, hanem Péter és PÁL (kapott tízest).*
 Not Peter got ten.ACC but Peter and Paul got ten
 ‘It isn’t Peter who got a ten (grade), it’s Peter and Paul who got a ten (grade)’

(20) shows that this kind of negation will only work in cases in which the conjunction delivered in the second sentence can be conceived as referring to participants of the same event – hence (17) can only have the reading according to which Peter and Paul slept both on the floor at the same time, the reading according to which Peter slept on the floor yesterday and Paul a day before is simply not available.

And even in languages that are not assumed to have such operators this contrast clearly exists under this particular “same event”-reading:

- (21) *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.’

Assuming that in (17), “sleeping on the floor” anaphorically refers to a previously mentioned event, in a situation in which Peter and Paul are the participants of that particular event, any sentence stating that Peter is the participant of the event is simply wrong.

The presupposition that at least someone did sleep on the floor comes for free given the non-asserted form of the verbal predicate. Hence, there is no more reason to assume an exhaustivity operator, and it perfectly suffices to assume a unified semantic contribution of focus, i.e. generating alternatives and presupposing a subset of them.

7. Conclusions

It has been shown that even in cases which are apparently very strong arguments for language specific semantic interpretation mechanisms of focus, there can be alternative explanations only assuming standard focus interpretation rules.

Moreover it could be shown that the striking difference between information and identificational focus motivated by Hungarian data, can be easily traced back to general principles of focus interpretation, while only assuming language specific syntactic and semantic mechanisms that are independent of focus.

8. References

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