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EVEN AND FREE CHOICE *ANY* IN HUNGARIAN[1]

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Abstract

This paper presents an analysis of the Hungarian free-choice indefinite *akárki* 'anyone'. It is observed that *akárki* is composed of a special type of focus particle *akár* 'even' which itself, in its focus-particle existence has a free-choice-like distribution, and of a *wh*-indefinite. To account for the special properties of *akár* 'even', it is argued that *akár* is composed of *even* plus an Exhaustive Operator (*O*). As the additive presupposition of *even* and the lexical meaning of the Exhaustive Operator are contradictory, this combination results in ungrammaticality, unless a suitable operator (e.g. an existential modal or a DE operator) intervenes. In the second part of the paper it is shown that the core distribution of free choice indefinites in Hungarian simply follows from the meaning of the incorporated *akár*. The universal-like meaning of free choice items arises as an inference from the combination of the standard existential additive presupposition and the universal scalar presupposition.

1 Introduction

A number of elegant approaches to free choice items originate from observing the fact that in many languages these items seem to be composed of a scalar element plus an indefinite (cf. Lee and Horn 1994, Krifka 1995, Lahiri 1998 as well as Kadmon and Landman 1993). Apart from the compelling morphological motivation [Lahiri (1998) e.g. shows that the free choice item *ek bhii* 'one even' in Hindi is composed from the focus particle *bhii* 'even' plus an indefinite], this idea had the additional sex appeal of being able to explain, rather than simply state, the formal licensing conditions on free choice items (and NPI's). Thus it no longer had to be simply stipulated why the property of Downward Entailingness (in the case of NPI's; cf. Ladusaw and subsequent literature) appears to license polarity items. Instead, these descriptive facts were argued to follow from the internal make-up of polarity items. To stick to our example, Lahiri (1998) e.g. derives the distribution of free choice items from a clash between the scalar presupposition of *even* and the meaning of the cardinal indefinite.

However a second aspect of the above approaches has turned out to be more problematic. Common to these proposals is that they explain the universal flavor of free choice items as a result of the incorporated indefinite being treated as a Heimian indefinite, acquiring a universal-like meaning in generic contexts. This point has turned out to be the Achilles' heel of the scalar approaches, which therefore came under severe attack, most notably by Dayal (1998, 2005) and Menéndez-Benito (2005). These authors argue convincingly that free choice *any* does not behave like a proper generic indefinite would be expected to behave. Instead of the generic approach then, it is claimed that free choice items introduce universal quantification of some form. Giannakidou (2001) counters some of these arguments for

[1] I would like to thank Danny Fox, Irene Heim, Paula Menéndez-Benito, Kai von Fintel, Emmanuel Chemla, Elena Guerzoni, Gennaro Chierchia, David Pesetsky, Valentine Hacquard, and the audiences of *Sinn und Bedeutung 11* and SNEWS for helpful discussions. Special thanks to Danny Fox for numerous comments and criticisms.

universality[2], but does not endorse a generic indefinite approach either. Both under the universal approach and Giannakidou's approach however the appealing insight about the role of scalar particles or scalar reasoning diminishes.

At the same time, Menéndez-Benito (2005) shows convincingly that to derive the proper truth conditions for free choice items we need to invoke exclusive alternatives. Furthermore, she argues, it is the incompatibility of universal quantification over propositional alternatives and the fact that the alternatives must be exclusive that explains the peculiar distribution of free choice items. Elegant though this approach may be, the nature of the universal quantification over propositional alternatives that Menéndez-Benito (2005) invokes remain still somewhat unclear (cf. also Aloni (2006) on this point)

This paper proposes that we can have our cake and eat it too: while the above approaches seem incompatible with each other at first blush, I argue that Hungarian provides us with a hint to combine the insight gained from the scalar approaches with Menéndez-Benito's (2005) observation of the role of exclusivity in deriving the proper meaning for free choice items. In particular, this paper argues that in Hungarian free choice items are composed from a focus particle meaning 'even' *plus* an Exhaustive operator (cf. Zeevat 1994, Fox 2006, Chierchia 2006) *plus* an indefinite. I argue that this approach permits to retain the strengths, but not the weaknesses of the various approaches mentioned above.

The paper proceeds as follows: The first part of the paper presents the puzzle of Hungarian "strong even" *akár*, which, unlike its "weak" counterpart even *még*, shows a FC-like distribution. Drawing inspiration from Guerzoni (2003)'s treatment of the German *auch nur,* I argue that the explanation of the distribution of *akár* follows from assuming the simultaneous presence of *even* and a covert Exhaustive Operator (O). This is because there is a clash between the additive presupposition of *even* and the truth conditional import of the exhaustive operator. However, the clash can be resolved by an intervening operator of the right type. In the second part of the paper I show that Free choice items in Hungarian are formed by "strong even" *akár* plus a wh-indefinite. Based on this fact, a new account of FC is proposed. The universal-like meaning of free choice indefinites I argue is the result of the universal inference that can be drawn from *akár*.

2 The puzzle of *akár*

Not all *evens* are created equal, and even less so in Hungarian. But while most of the discussion in this area (Guerzoni 2003, Giannakidou 2005, Rullmann 1996 etc.) is centered around the ambiguity of wide/narrow scope (PPI/NPI) *even*, in Hungarian the landscape is cut differently: The first type is what we might call "weak even*" még* with a free distribution*;* the second type is "strong even" *akár*, whose distribution is similar to FC items. The "weak even" *még* can appear in episodic affirmative sentences, in which case it introduces a 'hard' scalar presupposition. When the same item, *még* appears in negative contexts, it introduces an 'easy' (evenNPI-like) presupposition. "Strong even" *akár* on the other hand cannot appear in episodic contexts, nor in the immediate scope of negation. It can be found in those modal contexts that license FCany, in which case it triggers a 'hard' (least likely) presupposition. When *akár* combines with *csak* 'only', it can appear in DE contexts other than clausemate negation, and in questions. In this case it triggers NPI-like 'easy' (most likely) presuppositions.

While the fact that both "weak" and "strong" *evens* can have 'easy' and 'hard' presuppositions as well can be explained by the scope theory (Karttunen & Peters 1979 and others), the difference between *még* and *akár* in non-DE contexts is more interesting. I argue that while *még* can be viewed as analogous to English *even*, *akár* is composed of *even* plus a

[2] Giannakidou (2001), in turn, bases many of her arguments on arguments made in various papers by Horn, see Horn (2005) for a recent summary.

covert *Exhaustive Operator* (**O**). As the additive presupposition of *even* and the exclusive meaning of the exhaustive operator are contradictory, the combination of *even* +O will yield a contradiction, unless a suitable operator (e.g. an existential modal, or a DE operator) intervenes.

2.1 *Még*: similar to English *even*

This section briefly introduces the main facts about the regular even *még* 'even' without striving for completeness, mainly to serve as a background to the focus particle *akár 'even'*, with which the first part of this paper is concerned. Observe first that *még* can appear in episodic, affirmative sentences (1). In this case, it introduces 'hard' (least likely) scalar presupposition:

(1)	Péter még Marit is üdvözölte Peter even Mari too greeted 'Peter even greeted Mari'	<u>*Scalar presupposition*</u>: Mary was the LEAST likely person to be greeted by Peter

Még can also appear in negative contexts, including clausemate negation, in which case it introduces an 'easy' ($even_{NPI}$-like) presupposition[3]:

(2)	Péter nem üdvözölte még Marit sem Peter not greeted even Mari either 'Peter did not greet even Mari'	<u>*Scalar presupposition*</u>: Mary was the MOST likely person to be greeted by Peter

To account for this behavior of *még* we can assume a Karttunen and Peters (1979)-style scope analysis[4]. In this analysis, *even* always introduces the presupposition that the prejacent (p) is the least likely proposition among a contextually relevant set of alternatives (C):

(3) $||even||^{w}(C)(p)$ *is defined iff* $\forall q \in C[q \neq p \rightarrow q >_{likely} p] \;\&\; \exists q \in C[q \neq p \wedge q(w)=1]$

The apparent reversal of the likelihood scale in contexts like (2) is the result of movement of *even* out of the negative clause and adjoining to a high syntactic position: When *even* combines with a prejacent *not p,* it presupposes that *not p* is the least likely proposition among a set of alternatives, and hence, that *p* is the most likely proposition. Thus the apparent scale reversal is a by-product of the movement of *even*.

2.2 *Akár*: FC-like distribution

The focus particle *akár* has an unusual distribution, inasmuch as it appears in those contexts which also license free choice elements. Thus e.g. *akár* is not licensed in episodic contexts, or in the company of universal modals, while it is allowed in existential modal constructions. Cf. first the example in (4) which illustrates that episodic contexts do not license *akár*:

(4) (Tegnap délután) *akár János is eljött
yesterday afternoon even János too came
'(Yesterday afternoon) even John came'

On the other hand *akár* appears in existential modal constructions. The example in (5) illustrates a deontic modal of permission, (6) shows an ability modal while (7) is an example of a future modal. Note that in these modal contexts, *akár* triggers a 'hard' (least likely)

[3] *csak* 'only' is also possible with *még* 'even' when it introduces an 'easy' presupposition, though not always very natural.
[4] For defense and a summary of arguments pro and contra for a scope theory of *even* cf. Guerzoni (2003)

presupposition. Observe however that in universal modal contexts *akár* is not allowed: (8) illustrates an ungrammatical example involving a deontic modal:

(5) Meghívhatod akàr Marit is
Invite-can.2SG even Mari too
'You can even invite Mari'

(6) Meg tudod nyerni akár a marathont is
PRT can.2SG win even the marathon too
'You're able to win even the marathon'

(7) Meg fogod kapni akàr a BMW-t is
PRT will.2SG get even the BMW too
'You will get even the BMW'

(8) *Muszàj meghívnod akàr Bèlàt is.
Have-to invite.2SG even Béla too
'You have to invite even Béla'

The focus particle *akàr* seems to be a PPI: it cannot appear in a minimal sentence with negation, as shown in (9). However it can appear in DE contexts other than clausemate negation, and in questions. In these contexts *akár* triggers an 'easy' (most likely) presupposition. In all of the examples below, but not in any of the contexts mentioned above, an overt focus particle *csak* 'only' can optionally appear with *akár*.[5]

(9) *Péter nem üdvözölheti akàr Marit sem
Peter not greet-can even Mari either
'Peter may not even greet Mari'

The example in (10) shows that *akár* is allowed if the negation is extraclausal, while (11) - (13) illustrate other typical DE contexts:

(10) Nem igaz, hogy Péter akár (csak) egy példát is megoldott.
Not true, that peter even (only) one exercise too solved
'it is not true that Peter solved even one exercise'

(11) Ha akàr(csak) egy ember is megszólal, kiüríttetem a termet.
If even (only) one person too speaks, empty-1sg the room
'If even a single person says a word, I will empty the room'

(12) Sajnálom, hogy Pèter akàr(csak) egy szót is szólt.
Regret-1sg, that Peter even (only) one word too said.
'I regret that Peter said as much as one word'

(13) Mindenki, aki akàr(csak) egy szót is szól, ki lesz dobva.
Everyone, who even (only) one word too says, out be.fut thrown.
'everyone, who says as much as a word, will be thrown out'

As shown below, questions also license *akár*. In questions, *akár* has to appear with a noun that can be thought of as denoting a minimal element on a scale. The presence of *akár* obligatorily triggers negative bias. (cf. Guerzoni 2003 for an analysis of negative bias in questions that seems well applicable to the present case)

(14) Adott neked Péter akár(csak) egy cigit is? [negative bias]
Give you-dat Pèter even (only) a cigarette too
'Did Peter give you even a cigarette?'

[5] For some reason, *akár* in DE contexts is, for the most part, best with explicit minimizers.

This section has shown that the focus particle *akár* has an interesting distribution inasmuch it appears in roughly the same contexts that free choice items do. The next section proceeds to provide a proposal that might explain this curious property.

2.3 Proposal for *AKÁR*

Inspired by ideas of Guerzoni (2003) for the treatment of German *auch nur* and Menéndez-Benito's (2005) analysis of the Spanish free choice item *qualqiera*, this section proposes that *akár* has a complex meaning: It spells out a Karttunen and Peters (1979)-style *even* combined with an Exhaustive Operator (O) (cf. Chierchia (2004), Fox (2006) and references therein). The focus particle e*ven* has two presuppositions: One is its scalar presupposition which requires that the proposition with which the particle combines (also called the prejacent) be the least likely among a contextually relevant set of alternatives (C). The second presupposition of *even* is its additive presupposition, which requires that there be at least one other true proposition among the set of alternatives in C. The Exhaustive Operator (O) on the other hand has the truth- conditional import that the prejacent p is true, and that every true alternative to the prejacent p is already entailed by p. In other words, there are no alternatives to p that are not entailed by p and are true.

(15) *akár* spells out 'even' plus a silent *exhaustive operator* (O):

1. $||even||^w$ *(C)(p) is defined iff* $\forall q \in C[q \neq p \rightarrow q >_{likely} p] \;\&\; \exists q \in C[q \neq p \wedge q(w)=1]$

2. $|| O ||^w (C)(p) = p(w) \;\&\; \forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$

As we can see, the additive presupposition of *even* and the exclusive import of the Exhastive Operator impose conflicting demands on the truth of the alternatives: While *even* requires an alternative proposition in the context set to be true, the Exhaustive Operator demands quite the opposite, that there be no true alternatives to the prejacent. Thus the lexical meaning for *akár* has, as it were, two souls contending. It is precisely this contradiction buried inside that the present analysis seeks to exploit. It is shown that *akár* is ungrammatical, unless a suitable operator intervenes between the two operators that akár is composed of.[6] (For morphological assumptions cf. the Appendix) However, once an operator that is of the right kind intervenes, the internal contradiction can be resolved. I show that this is the reason why *akár* is acceptable in contexts involving an episodic modal.

2.3.1 Episodic contexts Recall that in episodic contexts, that is in contexts that talk about a single, not iterated event, *akár* is ungrammatical (cf. (4), repeated as 16 below):

(16) (Tegnap délután) *akár János is eljött
yesterday afternoon even János too came
'(Yesterday afternoon) even John came'

Let us see how this is explained under the proposed lexical meaning for *akár*. Suppose that in the above sentence the focus bearing element is *John.* The exhaustive operator combines with the prejacent *that John came* and with the set of alternative propositions (C_1) that were formed by plugging in alternative values for the focussed constituent, in our case *John*. After combing with the Exhaustive Operator, the sentence asserts that *John came and nobody else did*. Now, the particle *even* combines with this already exhaustified proposition, and a set of

[6] Let's note here though, that the present analysis would stay the same if we were to assume that *akár* is a special *even* in that it lexically triggers the presence of a silent Exhaustive Operator, instead of spelling out the two operators in one morphological item.

alternative propositions formed on the basis of the exhaustified proposition via replacing the focussed constituent *John* with alternative individuals (C_2). The presupposition of *even* that is relevant for our purposes here is the additive presupposition, i.e. the requirement that that a real alternative proposition in C_2 be true. However, the alternatives in C_2 are all exclusive at this point, therefore it is not the case that the additive presupposition of *even* can be satisfied, once the Exhaustive Operator has already applied. A schematic representation of the above reasoning is summarized below:

LF (16): even C_2 [**O** C_1[$John_F$ came]]

1. Asserts: John came and nobody else did
2. Alternatives (C_1): {that Bill came, that Mary came, etc…}
3. (O) : $\forall q \in C[p \not\supseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that Bill came and nobody else did,
   that Mary came and nobody else did, etc…}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C[q \neq p \rightarrow q >_{likely} p]$

I leave it to the reader to see that the alternative order of *even* and exhaustive operator would also result in a contradiction. However, an LF that has a chance to be good is one in which the two focus-sensitive operators are separated via an intervener. In the next sections I show that certain intervening elements have the meaning that can dispel the contradiction shown above. This is mainly the class of existential modals, and DE operators (for the most part).

2.3.2 Existential modals An existential modal may render the sentence acceptable because the modal might intervene between the two focus particles. When this happens, the modal so to speak distributes the exhaustive propositions across different possible worlds, which allows us to avoid the contradiction that lead us into trouble in the episodic case:

(17) Akár János is eljöhet
even John too may-come
'Even John may come'

Let us first look at the schematic representation of the reasoning (cf. below) which will be very similar to what we have seen above. The only difference is that the existential modal [in our example the possibility modal] finds itself between the two focus particles. This is because our Karttunen and Peters (1979)-style *even* undergoes movement to a wide-scope position. Now the exhaustive operator combines with the sentence as below. However the alternatives for *even* in (C_2) are existential modal propositions, and hence can each be satisfied in a different world of evaluation, provided our modal base is not totally realistic, i.e. contains more than one world. For this reason, when we try to satisfy the additive presupposition of *even*, we do not run into problems any more: the exclusive propositions can all be true, as long as they are evaluated in different possible worlds.

LF(17) even C_2 $\Diamond$ [**O** C_1[$John_F$ came]]

1. Asserts: It is possible that John comes and nobody else does
2. Alternatives (C_1): {that Bill came, that Mary came, etc…}
3. (O) : $\forall q \in C[p \not\supseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that it is possible that Bill comes and nobody else,
   that it is possible that Mary comes and nobody else, etc…}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

It should be noted that the particular flavor of the existential modal (deontic, epistemic, ability, etc) does not matter for the purposes of the calculation above, hence we predict these to be all good contexts for *akár*. This is indeed the case, as it was shown in examples (5)-(7) in Section 2.2 above.

2.3.3 Universal modals Not any modal can serve as a good intervener however. This section shows that a universal modal, though intervening in a similar fashion as the existential, fails to have the same effect: (cf. 18) below:

(18) *Akár Jánosnak is muszáj eljönnie
even János too must come
'Even John must come'

Let us see why. The reason why the existential modals were good interveners was because the exclusive alternative propositions that resulted from the application of the Exhaustive Operator could be true in different possible worlds, hence the additive presupposition of *even* could be satisfied. Universal modals, however, require that the proposition they attach to be true in every accessible world in the domain of quantification of the modal. If this is the case, it is no longer true that more alternative propositions in C_2 below can be satisfied. This is because we cannot require at the same time that in each of the accessible worlds e.g. *only John came and nobody else*, as well as requiring that in each of the accessible worlds *only Bill came and nobody else* be true. The by now familiar summary of our reasoning can be found below (Note that the particular flavor of modality should not matter):

LF(18) even C_2 □ [**O** C_1[John came]]

1. Asserts: it is necessary that John come and nobody else
2. Alternatives (C_1): {that Bill came, that Mary came, etc…}
3. (O) : $\forall q \in C[p \not\supseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that it is neccessary that Bill comes and nobody else,
that it is necessary that Mary comes and nobody else, etc.}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

2.3.4 Negation The above reasoning should extend to negation as well, because negation should also be able to eliminate the pitfall created by the presence of the exhaustive operator. To some extent, this I indeed the case:

(19) Nem igaz, hogy Péter akár (csak) egy példát is megoldott. (=10)
Not true, that Peter even (only) one problem too solved
'it is not true that Peter solved even a single exercise'

As before, the action happens in line 4 in the reasoning displayed below. We see that C_2 contains negated exclusive alternative propositions. Of course there is no obstacle for more of these propositions to be true at the same time in our context. E.g. if Peter did not solve any problems, it is true that he did not solve exactly 2 problems, as well as it is true that he did not solve exactly 3 problems. Therefore, there is nothing that prevents the additive presupposition from being satisfied.

LF (19) even C_2 [**not** O C_1[Peter solved [one problem]$_F$]]

1. Asserts: it is not true that Peter solved exactly one problem
2. Alternatives (C_1): {that Peter solved 2 problems,
   that Peter solved 3 problems, etc…}
3. (O): $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that it is not true that Peter solved exactly 2 problems,
   that it is not true that Peter solved exactly 3 problems, etc.}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

This is all very well. Unfortunately though, we run into trouble with the above reasoning. Suppose the fact of the matter was that Peter solved exactly 5 exercises. Given what we have said above, in this scenario, (20) should be assertable. This is because all we are requiring is that the sentence assert that *it is not true that Peter solved exactly one problem* and that it presuppose that at least one other alternative in (C_2) is true, e.g. *that it is not true that Peter solved exactly two problems.* However this on its own says nothing about the truth or falsity of John solving 5 problems, hence we expect (20) to be acceptable in this scenario. Unfortunately, it isn't. The meaning of (20) requires that Peter did not solve any problem.

One possible solution to remedy the problem could be if we assumed that the additive presupposition is stronger than what is proposed by Karttunen and Peters (1979) and much of subsequent work. More precisely, if we assumed that instead of an existential condition, the additive presupposition requires that all propositions in the set of alternatives be true, we would get the desired result. This is because in the above scenario we would exclude all alternative exhaustified propositions, i.e. *that Peter solved exactly 2 problems, exactly 3 problems, exactly 4 problems* and so on. Is it a viable option then to strengthen the meaning of *even* in such a way as to have a universal additive presupposition? Unfortunately the answer, at best, is unclear. While it had been proposed, (e.g. Lycan 2001), that the additive presupposition is universal, there are also famous examples that suggest that even the existential additive presupposition is too strong. Thus while a sentence like *Even the Pope uses contraceptives* one might argue comes with a universal inference, in examples like *Come on Chris eat up—even little Billie has finished his cereal* (cf. Lycan 2001, example due to Horn) we cannot infer that anyone other than little Billie has finished his cereal. The list of the problematic examples for each of the three versions of *even* –existential, universal, no additive presupposition—is long, and the debate is currently unresolved. (cf. Guerzoni 2003 for a recent overview)

Another path could be to assume following Rullmann (1997) that the additive presupposition in fact arises as a pragmatic entailment of the scalar presupposition, combined with the assertion of the sentence. Thus if the speaker of (19) asserts that it is not true that Peter solved exactly one problem, and presupposes that this is the least likely of all the alternative propositions, the hearer will be naturally inclined to conclude that the more likely propositions in the set are also true. Further, Rullmann proposes that a conventional aspect of the meaning of *even* is that the speaker *intends* the hearer to draw the scalar inference. I will assume here that *even* stands with an existential additive presupposition, but the alternatives in C_2 are ruled out based on an inference à la Rullmann.[7]

The reader might at this point recall a fact from the previous discussion that still seems problematic. This is that *akár* is in fact not allowed to co-occur with clausemate negation in

[7] Let's note though that the fact that the alternatives are exhaustive, in this case leads to the somewhat arbitrary conclusion, that we need some pragmatic ordering between alternatives of the form "not exactly one", "not exactly two" etc. Without the exhaustive operator, on the other hand, we could have had a straightforward ordering via entailment, and we could apply a Lahiri 1998/Kadmon and Landman 1993-style reasoning of while the alternatives are ruled out. Coupled with the fact that DE environments strongly prefer minimal elements (one, a finger, a word etc), this observation suggests that the behaviour of *akár* in DE environments should be subject to further scrutiny. (Thanks to Gennaro Chierchia for a discussion on this point)

Hungarian. (cf. (9) above). Why? I claim that this datum is independently motivated by the fact that in Hungarian the focus particle *only* must always outscope negation in a minimal sentence. Thus the sentence in (20) can only receive the interpretation in (20b). To express the meaning characterized in (20a) with negation outscoping *only*, one would have to use a extraclausal negation.

(20) Péter csak Marit nem hívta meg
Peter only Mary not invite prt
"It was only Mary that Peter did not invite"

a. *It is not the case that he invited only Mari *[neg>only]
b. OK: It is only Mari that Peter did not invite [only>neg]

On the basis of the above data it seems reasonable to argue that it is a syntactic fact of Hungarian that only/O has to outscope negation when they are clausemates. Because of this syntactic fact, the only LF that will be available for (9) is the one shown below, in which the Exhaustive Operator outscopes negation. When this is the case though, we again expect that the sentence is ungrammatical. This is because the alternatives in (C_2) again contain alternatives that are mutually incompatible with each other. Hence, the additive presupposition of *even* [which by now is strengthened to a universal] will not be satisfiable. In this fashion we run into contradiction again, predicting, now correctly, that (9) should be ungrammatical.

LF(9) even C_2 [**O** C_1 **not** [John came]]

1. Asserts: only John did not come
2. Alternatives (C_1): {that Bill did not come, that Mary did not come, etc…}
3. (O) : $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that only Bill did not come,
that only Mary did not come, etc…}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C[q \neq p \rightarrow q >_{likely} p]$

2.3.6 The role of too The attentive reader might have noticed by now, that the glosses provided for the sentences containing *akár* include a second particle, *is* 'too'. This section addresses the role of this element.

In the preceeding discussion it was silently assumed that the presence of this second focus particle, *too,* is superfluous. This is because the standard meaning of this particle is in fact a subset of the scalar focus particle *even*: it contributes the additive presupposition of *even*, without the scalar component.

(21) $||too||^w$ *(C)(p) is defined iff* $\exists q \in C[q \neq p \wedge q(w)=1]$
if defined, p(w)=1

Assuming that *too* attaches high in the structure, it would not contribute anything else than what is already contributed by the presence of *even*. There is a second possibility however, namely that *too* could attach low in the structure, before the Exhaustive Operator applies. We will examine this possibility shortly. Before that however, let's note another interesting fact:

It might seem that the meaning we predict for the existential modal construction is in fact too strong[8] (cf. 17 repeated here):

[8] Thanks to Kai von Fintel (pc) for pointing this out.

(17) Akár János is eljöhet
Even John too may-come
'Even John may come'

LF(17) : even C_2 ◊ [**O** C_1[John came]]
Asserts: It is possible that only John comes

Imagine a scenario in which we know that there is a party tonight, and we also know that Bill and Mark will be there for sure. In this situation it seems that it is not possible to assert (22a). However, (22b), which is the equivalent of (17), is assertable in this context.

(22) a. #It is possible that only John comes
b. OK: Akár János is eljöhet (=17)

What went wrong? It seems that the answer to this problem might come from rethinking the role of the additive focus particle *is* 'too'. Suppose for a moment that we combine *too* with the prejacent before the Exhaustive Operator combines with it. In this way the exclusivity requirement will apply to pluralities, which will resolve our problem. Here is how: Let us first define the meaning of the focus particle *too* as in (23) below.

(23) $||too||^w$ *(C)(p) is defined iff* $\exists q \in C[q \neq p \wedge q(w)=1]$
if defined, $p(w)=1$ and $\exists q \in C[q \neq p \wedge q(w)=1]$

This meaning differs from the one shown in (21) in that it both asserts and presupposes it's additive component[9]. It can be shown though that the meaning in (23), from the perspective of presupposition projection, is equivalent to the meaning in (21), in which *too* only presupposes its additive component. The reason is as follows. Suppose a sentence p asserts A, and presupposes B. When we negate this sentence, ~p will assert ~A, and presuppose B. Now suppose instead, that the same sentence asserts A+B, and presupposes B. When we negate this expression, the result will be asserting ~(A+B), and presupposing B. Given the latter presupposition though, ~(A+B) will in effect amount to ~A. It is this equivalence that we are exploiting for our new meaning. The reason of course for this gymnastics is that we want the additive part of the meaning to enter the truth conditions. What the above reasoning has shown was that we can actually do this, without causing any harm.

Secondly, following Kripke's famous observation, I will also assume that the existential presupposition of *too* (and consequently, here, the existential part of the assertion) is a specific one. Now we have everything in place to derive the correct truth conditions for (17). For easier readability, in the LF and sketch of our reasoning below it is already the result of combining *too* with the prejacent that is shown. The truth conditional import of *too* is that the proposition is true of focussed element as well as a specific singular or plural individual X. The Exhaustive Operator applies to this proposition. From this point on, everything applies as previously:

LF(17) even C_2 ◊ [**O** C_1[[John+X] came]]

1. Asserts: It is possible that only John+X comes
2. Alternatives (C_1): {that Bill+X came, that Mary+X came, etc…}
3. (O) : $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that it is possible that only Bill+X comes,
that it is possible that only Mary+X comes, etc…}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

[9] I am indebted to Irene Heim (pc) for suggesting this type of meaning.

As the reader can verify, this representation derives the correct truth conditions for using (18) in the scenario described above. Moreover, we have gained an insight into the role of the extra additive particle that is present in the examples with *akár*.

3 Free Choice items

Having meandered through the paths of Hungarian *even*, we are now in the position to address the problem of free choice items. The punchline is that if the previous proposal about *akár* is correct, we in fact have everything in place by now for deriving the properties of free-choice indefinites.

The above becomes clearer from observing the fact that Hungarian forms its free choice items via prefixing a *wh*-indefinite with *akár*.[10]:

(24) Péter meghívhat akár.kit
Peter invite-can even-who
'Peter can invite anyone'

There are two main properties of free choice items that any analysis has to explain: The first is, the peculiar distribution of these items, which makes them acceptable in contexts with existential modals, but unavailable in universal modal or episodic contexts. The second intriguing property that these items have is their apparent universal reading, despite their indefinite-like appearance. As regards the distribution, we have just seen that the focus particle *akár* itself has the same distribution, due to its internal makeup. Since *akár* is incorporated inside the free choice item, the peculiar free choice distribution follows without much further ado. The apparent universality of free choice items I argue is nothing else than the universal inference drawn on the basis of the scalar presupposition of *akár* 'even'. In the next sections, I first discuss my analysis of the distribution of free choice items, which is then followed by addressing the problem of universal-like meaning.

3.1 Distribution of Free Choice Items

Free choice items have a restricted distribution, just like *akár*: they cannot appear in episodic sentences, nor in sentences with universal modals, but are allowed in sentences with existential modals. (cf. Aloni 2002, Dayal 1998, Chierchia 2006, Giannakidou 2001, Kadmon and Landman 1993, Menéndez-Benito 2005; among others) The examples below illustrate these core cases:

A. Episodic sentences

(25) *Akár.ki eljött
even.who come
'Anyone came'

B. Existential modals

(26) Akár.ki eljöhet
even-who come-may
'Anyone may come'

C. Universal modals

(27) *Akár.ki.nek muszáj futnia
even-who.dat must run
'Anyone must run'

How do these data follow from the present proposal? Let us look first at episodic sentences, such as (25). In the LF for (25) below, I assume that the *wh*-word introduces a variable that ranges over singularities and pluralities. This variable is existentially closed at the top level. The assertion that the sentence contributes is an existential statement: *Someone came*. The alternatives in C_1 will be all the propositions that can be formed via substituting all the singularities and pluralities in domain of quantification of the existential quantifier (line 2 below). The alternatives in C_2 contain the exhaustified version of these propositions. Given

[10] There exists a second FC item: *bárki* 'anyone'. In present day Hungarian there is almost no detectable meaning or distributional difference btw. *akárki* 'anyone' and *bárki* 'anyone'.

that these alternatives are all exclusive, the additive presupposition of *even* will not be satisfiable. Hence for episodic sentences the analysis predicts, correctly, that we should run into ungrammaticality.

LF(25) $\exists x$ even C_2 [**O** C_1[x come]]

1. Asserts: $\exists x$. x come
2. Alternatives (C_1): {that Bill come; that Mary+Gordon came, etc…}
3. (O) : $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that Bill came and noone else;
   that Mary+Gordon came and noone else, etc}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

Let us see now what the analysis predicts if the free choice indefinite appears in a context with an existential modal. As in the case of *akár* 'even' before, what will save the free choice item from itself is the fact that the existential modal will intervene between the focus particle and the exhaustive operator. This will embed the exhaustive alternatives in C_2 inside existential modal statement. Once the exhaustive statements are distributed in this way across various possible worlds, there will be no obstacle for satisfying the universal additive presupposition of the *even* (*akár*) incorporated inside the free choice indefinite.:

LF(26) $\exists x$ even (C_2) $(\exists w'_{acc(w,w')}$ [**O** (C_1) (x come in w')])

1. Asserts: $\exists x$. st. it is possible that x comes and noone else
2. Alternatives (C_1): {that Bill come; that Mary+Gordon come, etc…}
3. (O) : $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that $\exists w'_{acc(w,w')}$ that Bill come in w' and noone else,
   that $\exists w'_{acc(w,w')}$ only Mary+Gordon come in w' and noone else, etc}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

A moment of reflection will reveal that the same reasoning leads into trouble once we replace the existential modal with a universal one. This is because in the case of universal modals such as *must* e.g. we require that every world which is in the domain of the universal quantifier over worlds (in the case of (27) e.g. every deontically accessible world from the actual world) be such that every exhaustive alternative in the set of alternatives of *even* (C_2) be satisfied in each world. This is however impossible. It is for this reason that free choice indefinites are excluded from universal modal contexts.

LF(27) $\exists x$ even (C_2) $(\forall w'_{acc(w,w')}$ [**O** (C_1) (x come in w')])

1. Asserts: $\exists x$. st. it is possible that x comes and noone else
2. Alternatives (C_1): {that Bill come; that Mary+Gordon come, etc…}
3. (O) : $\forall q \in C[p \not\subseteq q \rightarrow q(w)=0]$
4. Alternatives (C_2): {that $\forall w'_{acc(w,w')}$ that Bill come in w' and noone else,
   that $\forall w'_{acc(w,w')}$ only Mary+Gordon come in w' and noone else, etc}
5. (even) Presupposes: $\exists q \in C_2[q \neq p \wedge q(w)=1]$ and $\forall q \in C_2[q \neq p \rightarrow q >_{likely} p]$

The above discussion has shown that given the analysis developed in the previous section for the Hungarian 'strong even', *akár*, we have everything in place for deriving the intricate distribution of free choice indefinites. The property of *akár* that has been exploited is the

contradictory import of the scalar focus particle and the exhaustive operator. What has been shown now is that this simple reasoning extends to free choice items.

3.2 The universal-like meaning of FC indefinites

The second disturbing property that makes free choice indefinites interesting is their apparent universal meaning. There are three approaches in the literature as for where this interpretation might come from. The first one proposes that the universal-like meaning is the result of the indefinite being interpreted as a variable, which then can be quantified over by a generic operator. (cf. Lee and Horn 1994, Krifka 1995, Lahiri 1998 as well as Kadmon and Landman 1993). This approach however has been severely criticized by Dayal (1998, 2005) and Menéndez-Benito (2005), who in turn propose that free choice items are in fact universal quantifiers. The third type of approach maintains that free choice items are indefinites, but their apparent universality is claimed to be a result of a presupposition or an implicature. Giannakidou (2001) argues that free choice items come with a presupposition that requires us to consider alternatives in different worlds, while (Chierchia 2005) proposes that free choice items are indeed indefinites, but their universal meaning is derived from the interaction of domain widening, exhaustivity and implicature computation. In this section I propose an approach that falls in the third camp: i.e. the apparent universal reading is not part of the assertion. I argue that the universal meaning of free choice indefinites is simply the universal inference drawn on the basis of the scalar presupposition of the incorporated *even*.

A number of approaches relate the presence of the universal-like meaning of free choice items to the presence of some alternatives: I-alternatives (Giannakidou 2001), domain alternatives (Chierchia 2005), propositional alternatives (Ménendez Benito 2005) etc. Here I claim that the alternatives are supplied by the presuppositions of even: the universal scalar presupposition and the existential presupposition together result in a universal inference. (cf. Rullmann 1997)

Suppose now that it is indeed the inference from the scalar presupposition that creates the apparent universal meaning. What really happens though is that we have an assertion that is quite weak: a simple existential statement. This statement, by virtue of including *even*, whose sole meaning import is the presupposition it carries, has an implicature that is stronger than the statement itself: a universal statement. In this interesting configuration, practically speaking the inference 'takes over' the assertion of the sentence. A somewhat analogous situation (albeit with presuppositions) might be the following sentence:

(28) John knows that it is common ground that p.

Here too, it might be argued, the meaning of the sentence in the end is nothing but the presupposition of *know*: *that it is common ground that p.* Similarly, any universal meaning of *any* we get, it is just an inference.

4 Conclusion

This paper has argued that looking at Hungarian is very instructive for the general problem of free choice items, because it allowed us to combine two directions of research that are both independently motivated, yet at first blush incompatible:

(a) The presence and role of *even (cf* Lahiri *1998,* Lee and Horn 1994, etc.)
(b) The role of exhaustivity (cf. Menéndez-Benito 2005, Farkas 2005)

This paper argued that in fact it is the interaction of *even* and a covert Exhaustive Operator that is responsible for both the meaning and the distribution of free choice items in Hungarian.

Naturally, many issues remain: most notably the case of generics, imperatives and the problem of subtrigging. As for the latter, lets note here that the present paper seems to square nicely with the proposal in Aloni (in this volume).

Appendix: Morphological assumptions

How do we spell out *akár,* once its components can be separated by intervening elements? I believe this is not a problem in a theory such a Distributed Morphology:

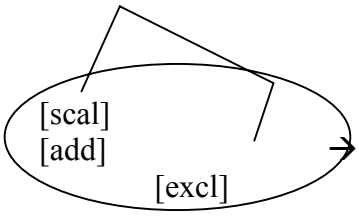
DISTRIBUTED MORPHOLOGY: (Halle and Marantz 1997)

Some relevant properties:

- Late insertion
- Underspecification (+ Subset Principle)
- Syntactic hierarchical structure (+Morphological Merger)

Subset principle: 'The phonological exponent of a Vocabulary item is inserted into a morpheme... if the item matches all or a subset of the grammatical features specified in the terminal morpheme. Insertion does not take place if the Vocabulary item contains features not present in the morpheme. Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen." [Halle 1997]

(i)

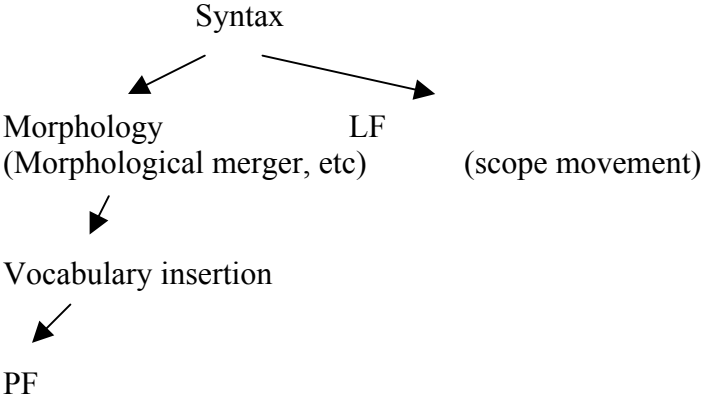


→ Morphological merger: {[add],[scal],[excl]}

(ii) Competing Vocabulary items:

- *Még* 'even' :[add] [scal]
- *Csak* 'only' :[exh]
- *Akár* 'even' :[add],[scal],[exh]
  → *akár* is inserted

Separation: movement for scope does not affect morphological spell-out:



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