The three faces of EVEN

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Abstract

In this paper, I argue for a polarity analysis for the English focus particle even. Evidence is given for three distinct meanings of even, realized as distinct lexical items in Greek the distribution of which is regulated by polarity. We concentrate on the contrast between positive and negative polarity even, and show that the limited distribution of the respective Greek items follows from their lexical specification, and need not be stipulated composition externally. This is a significant advantage over earlier analyses, and in the spirit of much recent work which links limited distribution in polarity to lexical semantics/pragmatics (Israel 1996, Giannakidou 1998, 2001, Lahiri 1998).

Keywords: even, focus particles, positive and negative polarity, presupposition, negative concord, ambiguity, semantics-pragmatics

1. Introduction: The problem of English even

Even appears to have distinct presuppositions in positive and negative sentences (Horn 1972, Karttunen and Peters 1979). Consider first a positive sentence:

(1) The Dean invited even Bill

The sentence asserts that the Dean invited Bill. As a focus particle, even additionally contributes a set of focus alternatives, and a scalar presupposition: that the value of even, i.e. the value indicated by the even phrase, is the least likely alternative, i.e. it is the bottom element of a likelihood scale (see also Wilkinson 1996, Lahiri 1998). We can think of the alternatives and scalarity as the conjunctive presupposition of even:
(2) $\exists x \ [x \neq \text{Bill} \land C(x) \land \text{invited (Dean, x)}] \land \forall x \ [x \neq \text{Bill} \rightarrow \text{likelihood (Dean inviting x)} > \text{likelihood (Dean inviting Bill)}]$

The alternatives here are variables of type $e$ because the focus of even is the NP, but even can also target other constituents, e.g. adjectives, cardinality predicates, or verbs, generating in each case alternatives of the appropriate type (Rooth 1985).

If we insert negation we predict the following presupposition:

(3) The Dean didn't invite even Bill

(4) $\exists x \ [x \neq \text{Bill} \land C(x) \land \text{invited (Dean, x)}] \land \forall x \ [x \neq \text{Bill} \rightarrow \text{likelihood (Dean inviting x)} > \text{likelihood (Dean inviting Bill)}]$

Negation is a hole for presuppositions, we therefore expect the presupposition of even to be preserved. But this is, obviously, not correct: rather than presupposing alternative individuals that the Dean invited, (3) requires us to think of alternative individuals that the Dean did not invite; and instead of Bill being the least likely person in the Dean's list, Bill seems to be the most likely one. (3), then, cannot be simply the negation of a positive sentence (see also Horn 1989). Notice that we can not invoke metalinguistic negation here, which is known to block presuppositions; the instance of negation in (3) is clearly truth-conditional.

Rooth (1985) solved the impasse by arguing that even in (3) is not identical to the one in (1), but a distinct NPI-even, with the presupposition I just mentioned:

(5a) $\exists p \ [C(p) \land \text{not ('}p\text{')} \land p \neq \text{a}]$, where a = assertion

(5b) $\forall p \ [\ [C(p) \land p \neq \text{a}] \rightarrow \text{likelihood ('}a\text{')} > \text{likelihood (p)}]$

(the even-associate is now the most likely alternative)

In this analysis, sentence (3) has the following presupposition:

(6) $\exists x \ [x \neq \text{Bill} \land C(x) \land \neg \ (\text{Dean invited x})] \land \forall x \ [x \neq \text{Bill} \rightarrow \text{likelihood (Dean inviting Bill)} > \text{likelihood (Dean inviting x)}]$

NPI-even is thus licensed in the scope of negation, just like other NPIs, and it yields a general negative statement. Regarding scalarity, Rooth's proposal capitalizes on negation: as an order reversing operator, negation reverses the likelihood scale, and the bottom element now becomes the top element. The presupposition of NPI-even captures successfully the meaning of even under negation. It does so, however, at the expense of positing lexical ambiguity for what appears to be a single lexical item even.

To avoid this cost, Karttunen and Peters (1979) and Wilkinson (1996)
proposed that the ambiguity is scopal: even in (3) is not in the scope of negation, but above it. In this analysis, the presuppositions look as follows:

(7) \( \exists x \ [x = \text{Bill} \land \neg \text{invited (Dean, } x) \land \forall x \ [x \neq \text{Bill} \rightarrow \text{likelihood (D. not inviting } x) \times 0 \text{ likelihood (D. not inviting Bill))} \]

This gets a reading equivalent to that of NPI-even. But there is a cost here too: we posit movement of even above negation. The movement is extraordinary because it doesn’t happen overtly, and also because, in order to get the facts right, it violates what we have come to think of as standard constraints on movement, i.e. even is argued to move out of a factive island (as in Wilkinson’s case below; to be revisited in section 5):

(8) I regret that I even opened the book

There seems to be no independent evidence for covert movement here—and in current minimalist theorizing, where the status of covert movement is dubious, positing a movement rule for even is undesirable, especially given that we don’t need such rules for other focus sensitive operators (e.g. only; see Rullmann 1997). Given also that overt movement of even is prohibited, opting for movement of even does not really prove a conceptually more attractive option than positing lexical ambiguity. Heim and Lahiri (2002) in fact go as far as to suggest that the various implementations of the scope theory cannot really eliminate the polarity component in even (they show that we would still need to posit that the trace of moved even is an NPI, a lexical stipulation whose status in a minimalist theory of movement is unclear at best).

Given this choice between two equally ‘costly’ options, it will be helpful to look at languages other than English in order to decide which theory is more plausible. If, in a given language, there is a lexical distinction between a positive and an NPI-even meaning (henceforth EVEN stands for the even-meanings crosslinguistically), then Rooth’s NPI-even is supported. If not, we may use this result as an argument in favor of the scope hypothesis.

2. Three EVENs in Greek

Greek provides the kind of evidence needed for Rooth’s hypothesis, along with German and Dutch, and possibly other languages (see Rullmann 1997, Hoeksema and Rullmann 2001, and von Stechow 1991). In Greek there are not just two, but three expressions that translate as even; of these only one is fully acceptable in a positive sentence:
(9a) I Maria efaje akomi ke to pagoto (positive EVEN)
    the Maria ate even the ice cream
(9b) *I Maria efaje oute (kan) to pagoto (NPI-EVEN)
    the Maria ate even the ice cream
(9c) ??I Maria efaje esto (ke) to pagoto (concessive EVEN)
    the Maria ate even the ice cream

Akomi ke is fine in a positive sentence, but oute (kan) and esto (ke) exhibit
the limited distribution typical of polarity items (PIs). Esto (ke) has concessive
meaning, as observed in Kalokerinos (1997), hence the label ‘concessive PI’. Of
the two, only the former improves with negation. Esto (ke) remains bad,
whereas akomi ke becomes bad:
(10a) I Maria dhen efaje oute (kan) to pagoto
    Mary didn’t eat even the ice-cream
(10b) ??I Maria dhen efaje esto ke to pagoto
(10c) ??I Maria dhen efaje akomi ke to pagoto
    the Maria didn’t eat even the ice cream

The obvious conclusion is that oute (kan) is an NPI, since it improves with
negation, but esto (ke) is not, since it remains bad; rather, esto (ke) appears to
be a ‘weird’ PIs which is incompatible with both negation and affirmation (for a
detailed account of why this is so see Giannakidou, to appear). Akomi ke, on the
other hand, behaves like a positive polarity item (PPI), and creates oddity with
negation. It is also important to note that in the cases of akomi ke and esto (ke)
the ill-formedness has a weaker flavor, as indicated here with the marking ‘??’
rather than ‘*’. The reasons for this, and the contrast with oute (kan), which is
a robust case of (un)grammaticality, will become clear later on (for additional
discussion, see Giannakidou, to appear). Here we can conclude that the
distribution of the three EVENs in Greek is regulated by polarity, a result that
can only be captured in a perspective which allows polarity to play a role.

Esto (ke) improves in polarity environments that are not negative but non-
veridical in the sense of Giannakidou (1998, 1999); the choice to use ke or not
is a parameter that I ignore here (see Kalokerinos 1997 for some comments).
We note below that NPI-even is uniformly unacceptable without negation:
(11a) Efajes esto to pagoto? (questions)
    Did you eat at least the ice-cream?
(11b) *Efajes oute kan to pagoto?
    Did you eat even the ice-cream?
(12a) Fae esto to pagoto (imperatives)
Eat at least the ice-cream

(12b) *Fae oute kan to pagoto
   Eat even the ice-cream

(13a) An diavasis esto ke mia selida ap’ afto to vlivio, kati tha mathis
   If you read even one page from this book, you will learn something

(13b) *An diavasis oute kan mia selida ap’ afto to vlivio, kati tha mathis

(14a) Esto ke ena atomo bori na sikosi afto to trapezi (modal verb)
   Even one person can lift this table

(14b) *Oute kan ena atomo bori na sikosi afto to trapezi

Furthermore, mere DE does not license either PI; both are bad with DE quantifiers:

(15) *To poli pende fitites efagan{oute (kan)/esto} to pagoto
       *At most five students ate {NPI-even/esto} the ice-cream

I do not discuss esto (ke) further in this paper – but see Giannakidou (to appear) for details. In the next sections I concentrate on the contrast between PPI akomi ke and NPI oute (kan). The analysis to be proposed should be embedded in a context of potential presuppositions for EVEN like the one below (Giannakidou 2004):

Potential existential presuppositions for EVEN

(a) $\exists y \ [y \neq x \land P(y)]$ (positive existential)
(b) $\exists y \ [y \neq x \land \neg P(y)]$ (negative existential)

Potential scalar presuppositions for EVEN

(a) $\forall y \ [y \neq x \rightarrow$ likelihood ($P(y)$) $>$ likelihood ($P(x)$)] (bottom-of-scale)
(b) $\forall y \ [y \neq x \rightarrow$ likelihood ($P(x)$) $>$ likelihood ($P(y)$)] (top-of-scale)

The idea is that EVEN meanings can be composed by pairing presuppositions from this repertoire of four propositions: these propositions can combine in four distinct ways in order to produce presuppositions for EVEN expressions deriving also possibly distinct lexical items crosslinguistically, as we see in Table 1. In Greek, I suggest, all four options are lexically realized. Positive akomi ke combines the positive and the bottom-of-the-scale conditions; NPI oute kan combines the negative existential and the top-of-scale one. Concessive esto combines the negative existential and bottom-of-scale conditions, and bare kan realizes the remaining option of the positive existential with the top-of-scale presupposition.
Table 1. Combinatorics of presuppositions as realized in Greek

<table>
<thead>
<tr>
<th>Scalar</th>
<th>Existential</th>
<th>positive</th>
<th>negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>bottom-of-scale</td>
<td>akomi ke</td>
<td>esto</td>
<td></td>
</tr>
<tr>
<td>top-of-scale</td>
<td>kan</td>
<td>oute (kan)</td>
<td></td>
</tr>
</tbody>
</table>

The distinct combinations yield different distributions. This explains the empirical differences between the four items, an issue that we cannot consider here in full detail for reasons of space.

3. Positive EVEN

In a positive sentence, Greek uses *akomi* (or *akoma*) *ke* lit. ‘still/yet and’, for even:

(16) Ο pritanis proskalese akomi ke tin katharistria
    The dean invited even the cleaning lady

The conjunction particle *ke* is obligatory with *akomi*; this use of conjunction is common with focus particles crosslinguistically, e.g. Dutch *ook ‘also*’ in *ook maar*, and German *auch* in *auch nur*. *Akomi ke* attaches to various constituents, e.g. NPs, PPs and other adverbial phrases, (nominalized) clauses, and occasionally to verbs. I focus here on NPs, though there may be significant variations in the contrast between NP and non-NP modification that I am glossing over. The sentence above has presuppositions that are in all respects equivalent to those of the English sentence in (1). For example, (16) asserts that the Dean invited the cleaning lady; it presupposes that there were other people that the Dean invited, and that the cleaning lady was the least likely person to be invited by the Dean.

(17) \( \exists x \, [x \neq \text{the cleaning lady} \land C(x) \land \text{invited (Dean, x)}] \land \forall x \, [x \neq \text{the cleaning lady} \rightarrow \text{likelihood (D. inviting x) > likelihood (D. inviting the cleaning lady)]} \)

*Akomi ke*, then, associates with the lowest end of a likelihood scale, typically with the bottom element of it. When we insert negation, *akomi ke* becomes odd:

(18) ??O pritanis dhèn proskalese akomi ke tin katharistria
    the dean not invited even the cleaning lady

So *akomi ke* behaves like a PPI and is odd, though not ungrammatical, with negation (cf. the PPI *some* under negation, as in *John didn't see some student*). To the extent this sentence allows an alternative reading, as is common with
PPIs, the reading is a non-scalar one equivalent to also: it is not the case that the Dean also invited the cleaning lady. Lacking the scalar component, this is not an EVEN reading and will be ignored; its presence must be due to the conjunction *ke*, a non-reducible component of *akomi ke*, as I mentioned earlier.

Before closing this section, note two facts. First, it is hard to find evidence that *akomi*, or even move above negation; long distance, at least, this is impossible:

(19)  * [Akoma ke ti Maria] tı o Janis dhen ipe oti o pritanis kalese tı
       * Even Maria John didn’t say that the Dean invited

Locally, however, *akomi ke* NPs can marginally topicalize and appear in preverbal position above negation; that this is an instance of topicalization is indicated by the fact that a clitic pronoun, e.g. *ton*, is allowed (though not required), rendering the structures Clitic Left Disclocations:

(20a) ??Akomi ke tin Maria dhen (tin) proskalese o Janis.
     ??Even Mary John didn’t invite
(20b) ??Kapjon apo tus fitites dhen (ton) sibatho
     ??Some student I don’t like

Such structures are never impeccable, but they are nevertheless not entirely ruled out; again, the parallel with the PPI *some* should be obvious. Crucially, the scalar information of *akomi ke* in this case seems to be that of NPI-EVEN: Mary is now the most likely person to be invited, or the least likely one not to be invited, since the scoping is above negation. Such structures, then, make *akomi ke* a plausible wide scope EVEN; but this characterization is coupled with its PPI status (see Giannakidou 2004 for discussion).

Second, *akomi* is bad when its focus is the cardinality predicate ONE:

(21) ??Akomi ke ENAS fititis irthe
     ??Even ONE student arrived

As we see, the unacceptable extends to English *even one*. These cases are prominent in Lahiri (1998), and I revisit them in Giannakidou (2004); here, we just note that the incompatibility of positive EVEN with *one* persists with negation:

(22a) ??Akomi ke ENAS fititis dhen irthe
     ??Even ONE student didn’t arrive
(22b) Oute kan ENAS fititis (dhen) irthe
     Not even one student arrived
Positive EVEN is thus bad with negation altogether. The only possible
EVEN with negation is NPI-EVEN, as we see above. What causes the problem
here is the low scalar presupposition:

\[ \exists n \ [ n \neq \text{one} \land I \text{ saw } n \text{ students}] \land \forall n \ [n \neq \text{one} \rightarrow \text{likelihood (my seeing}
\[ n \text{ students)} > \text{likelihood (my seeing one student)}] \]

Contrary to what this presupposition requires, it is in fact more likely to see
one student, because seeing one student is true also when you see more than
one. \textit{One} is the weakest positive predicate, hence the most likely one; the low
scalar presupposition will thus rule out \textit{akomi ke ena} from positive and negative
sentences alike. This result, crucially, suggests that Lahiri (1998), which predicts
the low scalar presupposition to improve with negation, cannot be right.

4. Negative polarity EVEN: Semantics and syntax

For EVEN with negation, Greek uses \textit{oute (kan)}, literally \textit{not-and (oute, from
Ancient Greek)}, plus optionally \textit{and-if (ke an)} ‘not even’. Giannakidou (1997)
notes its NPI-status:

\[ \text{O pritanis dhen proskalese \hspace{1cm} oute kan ti Maria}
\text{the dean not invited \hspace{1cm} even the Mary}
\] The Dean did not invite even Mary.

\[ \ast \text{O pritanis proskalese oute kan ti Maria}
\text{The dean invited,3sg \hspace{1cm} even the Mary}
\]

\textit{Oute kan} is licensed only with negation and antiveridical operators, e.g., \textit{xoris}
‘without’, and \textit{prin ‘before’ hence it is a proper NPI; for data illustrating this, see
Giannakidou (1997), and section 1 of this paper. Oute kan} itself contains a
negative element—\textit{oute, ou} being sentential negation in Ancient Greek. \textit{Oute} is
obligatory when an NP or a PP is modified, but it can be dropped in the case of
\textit{V} modification, as we see later. With NPs, it is \textit{kan} that can be dropped:

\[ \text{O pritanis dhen proskalese \hspace{1cm} oute ti Maria}
\text{the dean not invited \hspace{1cm} even the Mary}
\] The Dean didn’t invite even Mary (= The Dean didn’t even invite
Mary)

So Greek supports Rooth’s NPI-even. Apart from the lexical distinction,
evidence that we are dealing with an item that contributes the top-of-the scale
presupposition and not the bottom-of-the-scale one of \textit{akomi ke}, comes from
sentences like (27):
The three faces of even

(27)  # O pritanis dhen pros kalese **oute kan** tin katharistria
       # The Dean did not invite even the cleaning lady

The cleaning lady is not the most likely person for a Dean to invite, so (27) is odd. (Of course, the cleaning lady can be transformed into the most likely person to invite, e.g. the disguised benefactor of the Dean, in which case (27) would be fine; hence the marking with #). In further support of the high scalar value, notice the contrast below:

(28a)  # 1 Maria dhen akouse **oute kan** ton paramikro thorivo
       Maria didn't hear even the faintest sound

(28b)  I Maria dhen akouse **oute kan** ton dinatotero thorivo
       Maria didn't hear even the loudest sound

The superlative designates either the lowest or the highest end in the loudness scale. We see that **oute kan** is odd with the lowest end suggesting that it can only associate with high values. We can assume safely, therefore, that **oute (kan)** has the content that Rooth proposed for NPI-even.

(29)  \[
   \begin{align*}
   \{\text{NOT } \text{oute (kan)} (x) (P) \} &= 1 \text{ iff } \neg P(x) = 1; & \text{(assertion)} \\
   \exists y \ [y \neq x \land C(y) \land \neg P(y)] \land \\
   \forall y \ [y \neq x \rightarrow \text{likelihood} (P(x)) > \text{likelihood} (P(y))] & \text{(presupposition)}
   \end{align*}
\]

Association with the highest element allows the universal negation of every other lower value, which is the typical interpretation of such sentences. Association with the highest element will also make the combination with a cardinality predicate like one (oute kan ena 'not even ONE') possible with negation, since one is the most likely cardinality predicate. **Oute kan ena** should thus be perfect with negation, as is indeed the case (recall (22b)).

Its lexical specification renders **oute kan** impossible in a positive sentence: the negative existential conjunct can never be satisfied in a positive sentence. This proposition proves too strong a presupposition, and in order to be satisfied in a positive sentence it would require massive accommodation. If it is an implicature (as is the case with at least in Bill read at least Heim's article (and nothing else)), no problem arises because the inference can either be falsified or cancelled.

Finally, another crucial difference that follows from the distinct presuppositions of **oute kan** and **akomi ke** as described here is illustrated below:

(30)  I logokrisia dhen epetrepse sto Jani na diavasi **oute kan** tis **Sindaktikes Domes**

The censorship committee did not allow John to read even **Syntactic Structures**
(31) I logokrisia dhen epetrepse sto Jani na diavasi akomi ke tis Sindaktikes Domes

The censorship committee did not allow John to read even Syntactic Structures

These examples reproduce a contrast noted originally by Rooth. He observed that NPI-even is good in a context where John didn’t manage to read other books besides Syntactic Structures not because the censorship committee prevented him from doing so, but because the library happened (for some reason or other) to not have these books. This is precisely the context that makes oute kan felicitous. The sentence with akomi ke is infelicitous in this context; instead, it requires one where the censorship committee prevented John from reading Syntactic Structures as well as other books. This empirical contrast confirms further Rooth’s hypothesis.

The distinctive characteristic of oute (kan) is that it must be in a local relation to negation—a feature that it shares with other Greek NPIs (Tsimpili and Roussou 1996; Giannakidou 1997, 2000). It is not licensed long distance, generally, unless it is found in the complement of verbs that are known to be transparent for NPI-licensing (and other long-distance dependencies), e.g. neg-raising verbs:

(32) ?? Dhen ipa oti o Janis diavase oute kan tis Sindaktikes Dhomes

?? I didn’t say that John read even Syntactic Structures

(33a) Dhen tu epetrepsan na diavasi oute kan tis Sindaktikes Dhomes

They didn’t let him read even Syntactic Structures

(33b) Dhen pistevo oti o Janis katalavene oute kan tis Sindaktikes Dhomes

I don’t believe that John understands even Syntactic Structures

The impossibility of long-distance licensing can be taken to indicate a dependency to negation subject to phases (Chomsky 2000), modulo the restructuring effects, however they are to be captured. The in-situ licensing suggests that oute kan remains in the scope of negation, and it is clear from the examples that it does not have to move overtly. If we implement this locality restriction in terms of Chomsky’s (2000) Agree relation, we can posit an uninterpretable negative feature on oute kan: [uNeg]. This feature of NPI-EVEN agrees with the (interpretable) negative feature of sentential negation dhen. Agree can only occur within a phase, hence oute kan cannot be licensed through a second TP boundary. With neg-raising or restructuring verbs no additional TP intervenes (these domains lack tense), hence we remain within the same phase and long-distance licensing is enabled.
Not ... \textit{oute kan}, then, may be treated as a clear case of negative concord, in the sense of agreement between two expressions 'containing' negation resulting in one negation. In a preverbal position, negation can even be dropped (though it does not have to, Giannakidou 1997; in this respect Greek \textit{oute kan} is like Catalan n-words):

(34) \textit{Oute kan ti Maria (dhen) proskalese o pritnas}
Not even Maria did the dean invite

As noted in Tsimpli and Roussou (1996) and Giannakidou (1997, 1998, 2000), Greek does not usually exhibit such preverbal vs. post-verbal differences, typical of Romance; \textit{oute} is, as far as I know, the only such case, again supporting the idea that we are dealing with agreement of negative features.\(^1\) (For the preverbal cases like (34), one would have to adopt the type of explanation given for such cases in Romance).

We can summarize this discussion in the licensing condition below:

(35) Licensing condition of \textit{oute (kan)}
   (i) \textit{Oute (kan)} is grammatical in a sentence $S$ iff it is licensed by an antiveridical operator $\alpha$ in $S$; and
   (ii) Licensing is an Agree relation between the uninterpretable [$u$Neg] feature of \textit{oute kan} and the interpretable [Neg] feature of $\alpha$ in $S$.

Since \textit{oute kan} itself has a negative feature, the need to be licensed by negation is reduced to a feature matching relation between a probe and a goal, which explains why failure of licensing is a clear case of ungrammaticality (rather than a mere oddity). Antiveridicality is equivalent to negation, it thus seems straightforward to assume a negative feature in antiveridical connectives like \textit{without}, which also license \textit{oute (kan)}. The non-extension of licensing to DE or nonveridicality follows: there is no negative feature in those cases. Hence, the licensing of \textit{oute kan} follows fully from its lexical specification.

\(^1\) It is important to note that \textit{oute (kan)} differs from other NPIs in Greek, e.g. n-words, which, I assume, do not contain a negative feature (since, unlike \textit{oute kan}, they are not morphologically negative), and which are licensed as quantifiers in a position higher than negation, as I argued in earlier work (Giannakidou 2000). \textit{Oute (kan)}, however, is similar to minimizers, e.g. \textit{dhen ipa leksi}. 'I didn't say (not even) a word' which can be analyzed as containing a covert \textit{oute (kan)}, and which also exhibit the strict sensitivity to negation and antiveridicality in Greek (unlike English; for data illustrating this contrast see Giannakidou 1997, 1999). It is also worth noting that some languages employ overt equivalents to \textit{oute kan/leven} in minimizers, e.g. Spanish \textit{ni}.
5. EVEN attaching to the verb: no argument against NPI-even

I close with a comment on an alleged argument for the scope theory presented in Wilkinson (1996), based on even attaching to the verb. Considering this argument is important because it is the only argument against the NPI-EVEN theory that Wilkinson actually makes.

When we look at Greek, we see that ounê must be dropped when we want to modify a verb:

(36a) *Metaniosa pu aniksa ounê kan to vivlio
(36b) Metaniosa pu aniksa kan to vivlio
I regret that I even opened the book

Here kan follows the verb, and is licensed long-distance in a factive complement, and without higher negation. This is quite surprising, given that absence of negation generally blocks ounê (kan), as we saw in section 1, and other NPIs in Greek:

(37) *Lipame pou ipa leksi.
?I am sorry that I said a word

Clearly, we are not dealing with the NPI-EVEN in (36), since other NPIs, including ounê itself are excluded lacking a licenser in these cases (and they would have to be sanctioned through an additional TP which is impossible). The fact that we are dealing with a distinct item is further supported by the positional restriction: unlike ounê kan, bare kan must follow the category it modifies.

This point is worth emphasizing because it nullifies Wilkinson's assimilation of verb-attaching even to NPI-even and the ensuing argument for the scope theory that is claimed to arise from this assimilation; see Rullmann (1997: 58-61) for additional convincing criticism. Of course, the obvious syntactic problem with this case is that even would have to move out of a tensed clause, which it generally can't do; recall the ungrammaticality of (19). Hence, the acceptability of even in this example actually suggests that it is an instance of even inside the scope of negation, and not outside of it.

Note also that the existential presupposition of bare kan in (36) is as in (36'):

(36') There are other things that I did with the book: read it, photo-copied it

This is consistent with the presupposition of positive even in the English sentence described by Wilkinson, suggesting that bare kan must be consistent with such a presupposition. At the same time, opening the book is the most likely activity I do with the book. Bare kan, then, seems to combine the existential presupposition of positive even with the top-of-the-scale one of NPI-EVEN
(which explains why it is compatible with it). This is the fourth of the combinations I presented earlier in section 1; a plausible analogue for this combination is the PI so much as in English, which is also a V (or VP) modifier:

(38) I regret that I so much as opened the book

Bare kan is not an NPI and can be fine in non-negative contexts, e.g. with negative factive verbs, like in the example under discussion, or in questions:

(39) Anikses kan to vivlio?
    Did you even open the book?
    Did you so much as open the book?

The distribution of kan is more restricted, however, and it is not allowed in many other environments, e.g. in imperatives, generic sentences, modal verbs, and the like, probably because its combination of presuppositions is hard to satisfy, an issue that I will have to leave for further research.

6. Conclusions

The main conclusions of this paper can be summarized as follows. First, we have a novel empirical result: in a given language, there are (at least) three distinct lexical items identifiable as EVEN — a positive, a negative, and a concessive EVEN — the distribution of which is regulated by polarity. This result by itself questions seriously the scope theory of even, and supports a generalization of the polarity hypothesis. Second, we derived the distinct distributions of negative polarity and positive polarity EVEN from their distinct lexical specifications, including their presuppositions. This is an important step forward compared to earlier approaches that stipulated PI-hood as a mysterious composition-external property of polarity items.

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