# THE SEMANTICS AND PRAGMATICS
# OF SOME SCALAR EXPRESSIONS IN SPANISH

Utpal Lahiri

Universidad del País Vasco/Euskal Herriko Unibertsitatea

**Abstract**

*This article provides a basic description of a variety of scalar additive particles (SAPs) in Spanish that roughly translate into English as even. Following Giannakidou's 2007 description and analysis of similar items in Greek, I call the three classes of expressions the 'positive', the 'negative' and 'concessive' scalar expressions. Positive SAPs in Spanish in-clude* incluso *and* hasta; *negative SAPs include* ni, ni siquiera, siquiera; *though the bare* siquiera *(without the* ni) *can also double as a concessive SAP. The expression* aunque sea *is argued to be the Spanish 'concessive' SAP par excellence. I describe and discuss the dis-tribution of each one of these classes of expressions in the context of two major approaches to the study of these expressions, viz., the scope theory of even and the lexical ambiguity theory of even. I discuss problems with both, noting that lexical ambiguity is not necessar-ily incompatible with these SAPs also being scope taking elements.*

## 1. Introduction: Scalar Additive Particles

Scalar additive particles are particles that associate with focussed elements and contribute scalar and additive presuppositions. The most obvious example is the English word *even*, which has a variety of counterparts in various languages. They are often the building blocs for Negative Polarity Items (NPIs) in various languages, and are also relevant for the understanding of scalar phenomena.

In this article, I provide evidence that some Scalar Additive Particles ("SAP"s, for short) in some languages (e.g., English, Hindi and in one case, Spanish) are scope taking elements, a factor that makes it possible for them to be part of classes of lex-ical items that behave as NPIs. I also refute arguments from the literature arguing that this is not the case by looking at a class of scalar additive particles (with evi-dence drawn from Spanish) called "concessive" SAPs. While concessive SAPs do in-deed have a special semantics, being ambiguous between an "at least" meaning and an "even" meaning (the two being related), the "even" meaning of these particles in Spanish arguably does involve "wide scope" in some sense. This paper first discusses the issue of scope of SAPs by looking at *even* in English, and then provides an in-troduction to the distribution of different SAPs in Spanish. The aim of this paper is largely descriptive, leaving a more detailed semantic analysis to Lahiri (ms.).

## 2. The Meaning of *Even*

According to the standard analysis of *even*, going back (at least) to Karttunen and Peters (1979) (there are antecedents in prior work by Stephen Anderson), *even* is truth-conditionally vacuous but gives rise to a scalar presupposition and an additive presupposition. Thus, the English sentence [1] means [2] but carries the presuppositions [3,4].

[1]   Even John came.
[2]   TCM: John came.
[3]   $\exists x$ [x ≠ john & x came]
[4]   $\forall x$ [x came and x ≠ john → likelihood (x came) > likelihood (John came)]

Something strange happens, however, in the scope of clausemate negation. Given that negation is a hole for presuppositions, one would expect [5], e.g., to have the presuppositions in [3] and [4]. Instead, they have the presuppositions that can be described as [7] and [8], effectively "reversing" the scale in the positive sentence.

[5]   Not even John came.
[6]   TCM: John didn't come
[7]   $\exists x$ [x ≠ john & ¬ x came]
[8]   $\forall x$ [x came and x ≠ john → likelihood (x came) < likelihood (John came)]

To deal with this anomalous behaviour, there are two proposals to account for this: one called the "scope theory" of *even*, and the other, the lexical ambiguity theory.

## 3. Two Theories: Scope Theory (Karttunen and Peters 1979) vs. NPI Theory (Rooth 1985)

### 3.1.  Introduction

On the Scope theory of *even* proposed by Karttunen and Peters (1979), *even* simply has the semantics given below in [9]-[11]. The meaning of sentences containing *even* under the scope of clausemate negation is then explained by assuming that in the scope of clausemate negation, *even* obligatorily scopes over the negation.

 [9]   *Even*: TCM: even(a) = a
[10]   Presupposition: $\exists p$ [C(p) & p is true & p ≠ a]
[11]   $\forall p$ [C(p) & p ≠ a → likelihood (p) > likelihood (a)]
[12]   Account for 5 via wide scope w.r.t. negation.

The reader can easily see that when *even* scopes over negation in [5], the presupposition predicted by [10], is equivalent to [7], and the scalar presupposition predicted by [11] is the presupposition that

[11']  $\forall x$ [x came and x ≠ john → likelihood (¬ x came) > likelihood (¬ John came)],

which is equivalent to [8].

On the lexical ambiguity theory of *even* proposed by Rooth (1985), on the other hand, there is also a second *even* in English which is an NPI and which appears in the scope of clausemate negation, with the semantics given below:

[13]  *Even(NPI)*: TCM: even(a) = a
[14]  Presupposition: $\exists p$ [C(p) & p is false & p $\neq$ a]
[15]  $\forall p$ [C(p) & p $\neq$ a $\rightarrow$ likelihood (p) < likelihood (a)]
[16]  *Even(NPI)* is supposed to appear in all NPI-licensing environments.

Rooth's original version was an ambiguity plus scope theory, but more recent claims like those of Rullman and Giannakidou seem to assume a simple dichotomy: in any given environment it's either one or the other. Again, one can verify that the semantics given in [13]-[16] gives the right result for *even* in the scope of (clausemate) negation.

There are other issues pertaining to the semantics of *even* that I would briefly like to mention: "likelihood" in [11] and [16] isn't quite right, probably something like "expectedness" (see discussion in Bennett 1982, 2003, Kay 1990, Barker 1991, Lycan 1991, 2000), is the right qualifier. There is also the question of whether the scalar presupposition is truly universal, or simply existential, just stating that the assertion is less likely than some salient alternative — note that this can also be treated as a case of universal quantification, but highly context-dependent.

Note also that whereas sentences with *even* in the scope of a clausemate negation are unambiguous, sentences with a non-clausemate downward entailing (DE) operator are typically ambiguous, as the following pair of sentences shows:

[17]  It is hard for me to believe that Bill understands [$_{DP}$ even [$_{DP}$ SYNTACTIC STRUCTURES]].
[18]  It is hard for me to believe that Bill understands [$_{DP}$ even [$_{DP}$ MOTHER GOOSE]].

On the scope theory, this is simply a scope ambiguity: on the "hard" reading of the sentences above, *even* simply takes scope over the embedded clause only, whereas on the "easy" reading, it takes scope over the entire clause. On the NPI theory, the ambiguity is a result of the fact that whereas *even* takes scope only over the embedded clause, it can either be the positive polarity *even* or the negative polarity *even*. This is possible because PPIs generally are known to be allowed in the scope of non-clausemate DE-operators, being disallowed only by clausemate DE operators (clausemate negation being the most obvious example). The "hard" reading of the sentences above is caused by the PPI *even*, and the "easy" reading results from the NPI *even*, on this account.

Before proceeding ahead, I make a couple of remarks on the side on the nature of the existential presupposition and the scalar presupposition.

## 3.2. Problems with the existential presupposition as stated earlier (cf. Rullmann 1997)

Consider the following two sentences:

[19]  Mary is even an ASSOCIATE Professor.
[20]  Hasiba won even the GOLD medal.

The problem here is that the alternatives are incompatible with the assertion, hence none of them can be true if the assertion is. One possible response to this problem is that the existential presupposition is simply a conversational implicature (this is Rullmann's position). This might mean, for example that given that the scalar presupposition simply says the assertion is the least likely of the alternatives, the hearer is entitled to infer that at least of the alternatives is true, unless there is good reason to believe otherwise as in the cases of [19]-[20]. However, there are examples of sequences that include explicit denials of the existential presupposition that are felt to be contradictory, as in the following examples from Rullmann (1997) himself:

[21] We even invited BILL, although we didn't invite anyone else.

[22] We didn't even invite BILL, but we invited everyone else.

[23] I even assigned SYNTACTIC STRUCTURES to the students, but they didn't have to read anything else.

[24] I didn't even assign S.S. to the students, although they did have to read all other books by Chomsky.

[25] John even drank BEER, but that was the only thing he drank.

[26] John didn't even drink BEER, but that was the only thing he didn't drink.

[19]-[20] seem to, on the other hand, presuppose something weaker: [19] presupposes that Mary did things that would have qualified her for jobs on a lower rank, perhaps, she HAD a lower rank at an earlier time. For [20], similarly, Hasiba must have done things that qualified her for the bronze and silver medals. I propose that the existential presupposition is the weaker [27] rather than K&P's original:

[27] Existential presupposition of *Even* (Revised):
$\exists p$ [C(p) & p is true & p ≠ a] or [C is pointwise exclusive & $\exists p$ [C(p) & if a were not true, p would be true]]. (Choose your favourite theory of counterfactuals to interpret the second disjunct)

A further aside: Krifka and Von Stechow cite the following example:

[28] John even danced only with SUE.

The meanings of *only* and the existential presupposition of *even* should contradict each other, making the sentence contradictory. It is unclear what the English sentence [28] means, though.

In languages like Hindi, moreover, the basic meaning of the particle meaning *even*, viz., *bhii* is "also": the scalar presupposition comes about in situations of focus or emphasis, again strengthening the main point.

[29] raam bhii aayaa.
"Also RAM came", or "Even RAM came"

This would be unexpected if the existential presupposition were simply indirectly derived. In fact, it is somewhat odd in Hindi to use *bhii* for the examples in [19]-[20]. It is much preferable to use another expression, *tak* which basically means "till/up-

til/up to" but can also mean "even". Schwenter (2002) has provided similar examples from Spanish *hasta* which also means "till/upto" but can also mean "even".

In this context, one may also recall the discussions on the status of the prejacent of *only* in recent times. (Roberts 2005-6, Ippolito 2008, van Rooij and Schultz 2005), where again the issue of whether the prejacent is a presupposition or a conversational implicature has occupied the attention of these researchers.

### 3.3.  Problems with the scalar presupposition as stated earlier

The scalar presupposition as stated above says that the assertion is the least likely of the available of alternatives. Cf. [11] cited above:

[11]  $\forall p \ [C(p) \ \& \ p \neq a \rightarrow \text{likelihood (p)} > \text{likelihood (a)}]$

As many authors have noted there are two basic problems with this: the universal quantification aspect, and the "likelihood" aspect. Firstly, the scalar presupposition admits exceptions, as one can find in the discussion in Francescotti (1995), drawing on material from Kay (1990) most importantly, among others.

[30]  Not only did Mary win her first round match, she even made it to the semi-finals. (Rullmann 1997)

[31]  The administration was so bewildered that they even had lieutenant colonels making major policy decisions. (Kay 1990)

Kay (1990) notes that [31] is perfectly felicitous even though "having majors, captains or sergeants making major policy decisions would make for even more extreme statements". One possibility that one may consider here is that of universal quantification with the possibility of context expansion. Some accounts of conditionals (e.g., von Fintel's) work this way. Note that one can make statements with *even* that "climb scales", so to speak:

[32]  Not only did Mary win her first round match, she even made it to the semi-finals, and even to the finals! (Schwenter)

Similar examples are also discussed in Guerzoni (2003), who also suggests an account based on context expansion. Or consider the following passage from a paper by O. Percus (Percus 2000), discussing the sentence *Mary thinks that my brother is Canadian* analyzed in a semantic theory with explicit world variables as part of the semantic values of lexical items, trees, etc.:

[33]  … If the sentence permitted a structure with this indexing, we could take the sentence to be true whenever there is some *actual* Canadian who Mary *thinks* is my brother — even when this person is not my brother in actuality, and *even when Mary mistakenly thinks that he is not Canadian*. For instance, we would take the sentence to be true when Mary thinks that Pierre (the Canadian) is my brother and naturally concludes —since she knows that *I* am American— that Pierre too is American. But in fact we judge the sentence to be *false* in this scenario, and so there must be something that makes the indexing in […] impossible.

Note that in the scale climbing examples, the *even*-statements have to be ascending in their degrees of extremity. Both [32] and [33] would be odd with the *even*-statements in their orders reversed.

There are also problems with "likelihood", as used in the original account of Karttunen and Peters (1979):

[34]  A:  It looks as if Mary is doing well at Consolidated Wiget.
           George [the second vice president] likes her work.
       B:  That's nothing. Even Bill [the president] likes her work. (Kay 1990)

(the above sequence "may be felicitously uttered in a situation in which nothing is assumed or inferred about the relative likelihood of George and Bill liking Mary" (1990: 84)

[35]  Granny was accused of kidnapping, and even murder. (Francescotti 1995, citing an anonymous referee).

(Background for [35]: Kidnappings are in fact, less frequent than murders). Kay's suggestion is to replace degrees of unexpectedness with a vaguer requirement of a contextually determined scale: which may be unexpectedness, or degrees of moral/ legal seriousness, or degrees of work quality, etc. Francescotti's suggestion for these cases is that unexpectedness can cover all cases as long as we also add that the context needs some indication of the source of the unexpectedness (which could be frequency, or moral/legal seriousness, etc.).

To sum up, one can keep a version of K&P's original version of the scalar presupposition, with some provisos.

## 4. Challenges to the Scope (only) Theory I: Rooth 1985 (somewhat simplified discussion)

### 4.1. Some other Problems with the Existential Presupposition

Consider the sentences [17]-[18], again, repeated below:

[36]  It is hard for me to believe that Bill understands [$_{DP}$ even [$_{DP}$ SYNTACTIC STRUCTURES]].

[37]  It is hard for me to believe that Bill understands [$_{DP}$ even [DP MOTHER GOOSE]].

On the scope theory, the two sentences correspond to the following L(ogical) F(orm)s:

[38]  It is hard for me to believe that



even     Bill understands [*Syntactic Structures*]$_F$

[39]
```
              IP
           /      \
  AdvP(?)          IP
     |          /      \
   even   It is hard for me to believe
              that Bill understands [Mother Goose]_F
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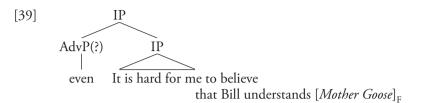Rooth makes the following observations about the two predicted readings on the scope theory:

[40] Narrow Scope Interpretation:
There is something other than *Syntactic Structures* that Bill understands.
Syntactic Structures is the least likely thing for Bill to understand.

[41] Wide Scope Interpretation:
There is something other than *Mother Goose* that it is hard for me to believe that Bill understands.
*Mother Goose* is the least likely thing that it is hard for me to believe that Bill understands. (I.e., *Mother Goose* should be easy for Bill to understand)

Now consider two sentences very much like [36]-[37], with a DE operator with a non-clausemate *even* in its scope:

[42] The censorship committee kept John from reading even SYNTACTIC STRUC-TURES.

[43] The censorship committee kept John from even reading SYNTACTIC STRUC-TURES.

Rooth observes that the predicted presuppositions on the scope theory are the following:

[44] On the Scope Theory:
There is some book other than *Syntactic Structures* that the censorship committee kept John from reading.
In the given context, *Syntactic Structures* is the least likely thing for the censorship committee to keep John from reading.

Rooth asks us to imagine a situation that one may describe as [45]

[45] Imagine situation: Because they had been stolen from the library, John couldn't read *The Logical Structure of Linguistic Theory* or *Cartesian Linguistics*. Because it was always checked out, John didn't read *Current Issues in Linguistic Theory*.

Rooth's point is that in the situation [45], it still acceptable to utter the sentences [42, 43]. This, however, contradicts the existential presupposition predicted by the scope theory [44], which is false in this situation. Rooth points out that the NPI theory makes the right prediction in this situation:

[46] Rooth's NPI theory:
There is something other than *Syntactic Structures* that John didn't read.
*Syntactic Structures* is the most likely thing for John to read.

This argument is not decisive, however. As Wilkinson has pointed out in her response (Wilkinson 1997), in sentences like [42]-[43], the DP *the censorship committee* itself carries focus, and so it is reasonable to assume that the predicted existential presupposition should be something more like [48], rather than [44] (Wilkinson reformulates the existential presupposition to derive this, but this is entirely reasonable if one wants to take multiple foci into account).

[47] [The censorship committee]$_F$ kept John from reading [$_{DP}$ even [$_{DP}$ SYNTAC-
TIC STRUCTURES]]$_F$

[48] There is something other than *Syntactic Structures* that John was kept from reading (by someone or something).
*Syntactic Structures* is the least likely thing for someone (or something) to keep John from reading.

It is reasonable to assume then that this objection of Rooth is not a valid one.

## 4.2. Lack of the positive presupposition in the scope of negation

One objection to the scope theory is that under clausemate negation, the positive (or "narrow scope", under this theory) presupposition is simply unavailable.

[49] I didn't see even JOHN.

[49] lacks the positive presupposition; mysterious under the scope theory. But note that the stipulation that *even* can be an NPI is also an equivalent stipulation going the other way, and the NPI theory is no better on this account. Moreover, one has the following example from Karttunen and Peters (1979)

[50] I hope I don't have to work even on a Sunday.
[51] I have to work on some day other than Sunday.
[52] I am less likely to work on Sunday than on any other day.

In [50], the positive presupposition seems to be available even with clausemate negation. The reason for this is unclear, the semantics of *hope* may have something to do with this: maybe because *hope that p* has part of it's meaning *believe it possible that not-p* (presupposition? implicature?) and the negatives somehow cancel each other, leading to the possibility of the positive presupposition being available. Note that the positive presupposition disappears when *hope* is replaced with *believe*:

[53] I believe I don't have to work even on a Sunday. (pragmatically odd, presupposition not realistic)

But in any case, this doesn't force a choice in favour of the NPI theory.

## 5. Challenges to the Wide Scope (Ever) Theory II: Rullmann (1997)

### 5.1. The Syntactic Constraints on "wide scope" *even* on the Scope Theory

The syntactic constraints on the scope of *even* are not the same as that of run-of-the-mill Quantified DPs; they must escape islands like the antecedent of conditionals

and the restriction of the universal quantifier; moreover, they seem to mirror exactly the distribution of NPIs. This is another argument in Rullmann (1997) against the scope theory of *even*.

[54]  If you see even Mary, you must talk to her.

[55]  Everyone who sees any Brobdingnagian, even Mary, must talk to her.

Contrast [54]-[55] with the following, where the judgements are not crystal clear:

[56]  John believes that Susan danced even with BILL.

[57]  There is someone besides Bill that John believes that Susan danced with.

[58]  Bill is the least likely person for John to believe that Susan danced with.

Maybe the wide scope reading is present after all? On the one hand, *believe* usually does not allow wide scope readings with the usual quantifiers. On the other hand, there are examples from Rooth (1985), citing Taglicht, involving particles like *only* that seem to have been forgotten in recent discussions:

[59]  a.  I knew he had learned only Spanish. (I knew he hadn't learned any other language)
      b.  I knew he had learned only Spanish. (I didn't know he had learned any other language)

[60]  Someone promised to clean even the BATHROOM. (ambiguous; this one is not surprising)

Possibly:

[61]  I knew he had learned even Spanish. (Judgements hard because of factivity).

Once again, Rullmann's point is not conclusive. The exact conditions on scope are mysterious anyway. Moreover, if NPIs contain an implicit *even*, their distribution is expected to mirror that of NPIs, hence that particular objection loses much of its force.

Also, a scope theory of *even* is not necessarily committed to actual syntactic movement of *even* or other variants. One could, for example, take different "scopes" of *even* to be the result of an EmphAssert operator (following Krifka 1995) attached at different sites: such an account seems implicit in Krifka's paper, though he doesn't actually state it explicitly:

[62]  [**EmphAssert** If you see **even** Mary], you must talk to her.

[63]  **EmphAssert** [[If you see **even** Mary], you must talk to her].

Constraints on the dependencies between EmphAssert and *even* will replace constraints on movement on this account.


## 5.2.  "Negative" *Even* in Dutch/German/Spanish

Many languages have a variety of expressions that translate as *even* in English or languages like Hindi or Basque that lack such variety; furthermore such expressions often have a distribution that's either mutually exclusive and/or partially overlapping.

A common pattern is the lexical opposition between a "positive" and a "negative" *even* in many Negative Concord (NC) languages, and also in languages that don't have overt NC. This is sometimes taken to be evidence that a distinction between a positive and a negative *even* is universal. Some examples:

[64] *zelfs*: "positive" *even*
     *zelfs maar*; *ook maar*: "NPI" *even*        (Dutch)

[65] *sogar*: "positive" *even*
     *auch nur*: "NPI" *even*                      (German)

[66] *incluso*: "positive" *even*
     *ni siquiera*: "NPI" *even*                   (Spanish)

The evidence from German, Dutch and Spanish are not conclusive. There are reasons to separate the Spanish case from Dutch and German: Spanish has negative concord, and *ni siquiera* has clear negative morphology. The Spanish cases will be discussed in greater detail below.

On Dutch and German, see Guerzoni (2003) for a compositional account of the behavior of *auch nur* and *ook mar* (also similar expressions in Italian): the idea being that *nur/maar* have a scalar meaning (also present in the English *only*, which interacts with *auch* leading to contradictory presuppositions in positive examples). The (near)-complementary distribution of the positive and negative *even*s in these languages would be the consequence of a blocking effect. See also Schwarz (2005) for some problems with the usual accounts of *auch nur*.

## 6. Challenges to the Scope Theory III: Giannakidou (2005) (the "three (four? eight?) *even*s" theory)

### 6.1. Three *even*s in Greek

In Greek there are three lexical items that translate as *even* in English: a positive *even*, a negative concord *even*, and a third *even* Giannakidou (2007) calls concessive *even*.

[67] I     Marija efaje akomi ke  to pagoto.           (positive *even*)
     the Maria  ate   even    the ice cream
     "Mary ate even the ice cream".

[68] * I Maria efaje oute kan to  pagoto.               (NPI (= NC /U.L.) *even*)
     the Maria ate    even the  ice cream

[69] ?? I    Marija efaje esto  to pagoto.              (concessive *even*)
       the Maria  ate   even the ice cream

Contrast with the following:

[70] ?? I    Marija dhen  efaje akomi ke  to  pagoto.   (positive *even*)
       the Maria  didn't eat   even    the ice cream

[71] I    Maria dhen  efaje oute kan to  pagoto.        (NPI (= NC /U.L.) *even*)
     the Maria didn't eat    even the  ice cream

[72] ?? I   Marija dhen efaje esto  to  pagoto.            (concessive *even*)
        the Maria  didn't eat   even the ice cream
    "Mary didn't eat even the ice cream"

The concessive *even* "esto" according to G. improves in polarity environments that are not negative, but nonveridical, e.g., questions, imperatives, protases of conditionals, and with modal verbs, e.g., from Giannakidou (2007):

[73] Efajes          esto      to pagoto?
     Did you eat at least the ice cream?

[74] *Efajes          oute kan to pagoto?
      Did you eat even       the ice cream?

[75] Fae esto        to pagoto.
     Eat at least the ice cream

[76] * Fae oute kan to pagoto.
       Eat even       the ice cream

The relevance of this point for English or Hindi is not clear. There are at least eight expressions in German that translate as *even* in English (König 1991), and yet it would be a stretch to claim that English *even* is eight-ways ambiguous. Such arguments have to be made carefully, especially if one is considering what native speakers must posit in their mental lexicons if they don't have sufficient evidence.

## 6.2.  Giannakidou's proposal for Greek and by extension, for English *even*

Giannakidou (2007) claims that the variety of *even*-like expressions in Greek arises from a combination of two possible existential and two possible scalar presuppositions. This can be stated as follows (e.g., analyzing *Even John came* as *even*(john)(came)):

[77] *even*$_n$(x)(P) = 1 iff P(x) = 1.

[78] $\exists y$ [y ≠ x & P(y)]                                    (positive existential)

[79] $\exists y$ [y ≠ x & ¬P(y)]                                   (negative existential)

[80] $\forall y$ [y ≠ x → likelihood (P(y)) > likelihood (P(x))]     (bottom-of-scale)

[81] $\forall y$ [y ≠ x → likelihood (P(x)) > likelihood (P(y))]     (top-of-scale)

Giannakidou's claim is that four lexical items/expressions in Greek exhibit all the four possible combinations of the above presuppositions.

[82] akomi ke      positive existential; bottom-of-scale

[83] esto           negative existential; bottom-of-scale, but flexible scale

[84] kan            positive existential; top-of-scale

[85] oute kan       negative existential; top-of-scale

The claim about English is that it has at least three, and possibly four *even*s just like Greek, all homophonous. Also the claim is that the above combinations of the scalar and the existential presuppositions explain the distribution of the lexical items.

It's not clear there is a coherent proposal here. For a detailed critique of earlier versions of Giannakidou's proposal, see Guerzoni (2003).

[86]  An dhiavasis esto ke mia selida ap 'afto to vivlio, kati tha mathis.
      If you read even one page from this book, you will learn something.

[87]  An dhiavasis esto ke tus *Chicago Sun Times,* kati tha matis.
      If you read even the *Chicago Sun Times,* you will learn something.

[88]  esto (ke) (x)(P) = 1 iff P(x) = 1;                                    (assertion)
      $\exists y$ [y ≠ x & C(y) & ¬P(y)] &
      $\exists Q_{scalar}$ [C(Q) & $\forall y$ [y ≠ x & Q(y) → Q(y) > Q(x)]   (bottom-of-scale, Q being "flexible")

One problem with weakening the condition in [88] to any scale is that the issue of whether the scalar presupposition is "top-of-scale" or "bottom-of-scale" becomes vacuous, since given any scale, there is a reverse scale that reverses the ordering of elements on the scale. This means no substantive predictions can be made based on the interaction of the existential and scalar presuppositions and assertion. The scale always seems to come from the linguistic environment the expression is embedded in, restricted by context. (This is expected on the scope theory, see below).

Similarly, consider her account of conditionals (on her account, the instance of "negative" *even* in English conditionals is an instance of the counterpart of the Greek *esto* (*ke*))

[89]  An dhiavasis esto ke tus *Chicago Sun Times,* kati tha mathis.
      If you read even (at least) the *Chicago Sun Times,* you will learn something.

[90]  $\exists x$ [x ≠ *Chicago Sun Times* & C(x) & ¬read (you, x)] &
      $\forall x$ [x ≠ *Chicago Sun Times* → expected (if you read x, you will learn something) > expected (if you read the *Chicago Sun Times* you will learn something)] (somewhat corrected version of G's original)

Giannakidou states that "[t]his sentence is again felicitous if the *Chicago Sun Times* is the only newspaper you read. It scores low on the speaker's expectation regarding informativity, but the speaker is ready to make the concession that it is possible to receive some information even with that newspaper".

This cannot be right: the negative existential should not be there. The negative existential cannot be satisfied if I read every newspaper in Chicago. Hence, the English counterpart of [89] is predicted to be unacceptable in such a situation. This is not right.

To summarize, there is no evidence for a separate concessive *even* in English. The Greek expression *esto* (*ke*) needs an analysis, of course, but G's account of it cannot be right. See discussion of the Spanish concessive *even* below, *aunque sea*.

### 7.  Problems for the NPI Theory: *simply* does not make the right predictions in the DE non-negative cases

Finally I will consider what I consider to be the most serious problem for the NPI theory as applied to scalar additive particles in languages like English, Hindi or Basque. And that is that they simply do not make the right predictions in the DE but non-negative cases. Consider English conditionals first:

[91]  If you read even the *New York Post,* you will become well informed.

[92]  If you read even the *New York Times,* you will be knowledgeable about things.

(These sentences are ambiguous, the use of the particular lexical items and assumptions about the informativeness of the *New York Post* versus the *New York Times* helps disambiguate the two senses).

According to the NPI theory, the "NPI *even*" reading of [91] should be the presupposition that you are more likely to read the *New York Post* than anything else. This is of course, not true: the sentence presupposes nothing about your reading habits, only about what makes you well informed. (To make the judgements sharper, consider a variant of 91, with the subject *Mary* instead of *you*, who is known to be very educated and very unlikely to read the *New York Post).*

[93]  If Mary reads even the *New York Post,* she is will become well informed.

On the Scope theory the scalar presupposition of [92] is the following:

[94]  $\forall$x [x $\neq$ *New York Post* $\rightarrow$ the likelihood that if Mary reads the *New York Post,* she will become well informed < the likelihood that if Mary reads x, she will become well informed]

This is correct. The point generalizes to DE environments that are not negation-like:

[95]  Everyone who reads even the *New York Post* will become well-informed.

[96]  Even those who read even the *New York Times* will stay ignorant.

In this context it also worth recalling Rooth's original example *the censorship committee kept John from reading even SYNTACTIC STRUCTURES*: this doesn't really presuppose that *Syntactic Structures* is the most likely thing for John to read, but rather [97]:

[97]  *Syntactic Structures* is the least likely thing for the censorship committee to stop John from reading.

Contrary to the discussion implicit or explicit in work by supporters of the ambiguity theory, appeal to contextual scales doesn't help here: the relevant "context" always includes material from the linguistic environment as expected on the scope theory. So contra Giannakidou, *esto ke* is, if anything, *less* flexible in what scales it can invoke from the extralinguistic context. One may contrast this with genuine

contextual determination of variables, as in the oft cited examples like the following:

[98]  a.  big flea
      b.  small elephant

While a default comparison class in [98a,b] is usually the average size of the set denotation of the common noun, one can easily rig contexts in such a way that the comparison comes from the (extralinguistic) context, rather than from the common noun, as for exampled, pointed out in Kamp and Partee (1995). This is not possible in the "wide scope" *even* cases, showing that something else is involved.

## 8. Scalar Additive Particles in another language with a richer inventory of these particles: the three *even*s of Spanish - Positive, Negative and Concessive[1]

### 8.1.  Basic Introduction

Giannakidou's three kinds of *even* are mirrored in Spanish as well, and one can find positive, negative and concessive variants of expressions translateable into English as *even*.

[99]   incluso              "even"

[100]  ni siquiera          "even, not even"

[101]  aunque sea           "even"

On the Scope theory, *incluso* would be a "narrow scope" *even*, *ni siquiera* a N(egative) C(oncord) *even*, and *aunque sea* contains a wide scope *even*. Hence, no conclusions about English *even* or Hindi *bhii* follow from the existence of the three *even*s in Spanish. A lexical ambiguity theory would simply stipulate three different meanings for these three expressions, and stipulate their distribution. It is also possible to imagine a hybrid account, one that assigns slightly different meanings to the three (as in the lexical ambiguity theory), but tries to capture the common core by positing the requirement of being necessarily in the scope of an EmphAssert operator whose scope with respect to other elements (negation, inside the antecedent of a conditional vs. scope over the entire conditional, etc.) is something that it might have in common with the scope theory.

Spanish also has more than one "positive" *even*, as discussed in Schwenter (2002), the most common one being *incluso*, which can also mean *also*. As can be seen from the following examples, *incluso* can only appear in positive contexts, and avoids negative contexts altogether, being in complementary distribution with *ni siquiera*.

[102]  He   visto incluso a    Juan.
       have seen  even    acc John
       "I have seen even John"

---

[103] No he   visto ni siquiera a    Juan.
      not have seen  neg-even   acc John
      "I haven't seen even John"

[104] * No he visto incluso a Juan.

[105] * He visto ni siquiera a Juan.

*Hasta* is also a "positive" *even*, as can be seen from the following examples:

[106] Hasta Pablo vino  a   clase
      even   Pablo came to class
      "Even Pablo came to class"

[107] * No   vino  hasta Pablo a   clase
       neg  came even  Pablo to class
       "Not even Pablo came to class"

Schwenter shows, however, that there are subtle differences between *hasta* and *incluso*, in that *hasta* is much less context dependent in the sense that *incluso* requires a conversationally active scale of alternatives whereas *hasta* doesn't. This means that it is possible to climb scales (cf. section 3.3) much more easily with *incluso* than with *hasta*. And as one may guess, *hasta* is much more intolerant of exceptions than *incluso*, and hence must mark the endpoint of a scale, unlike *incluso*. An example from Schwenter's paper illustrates this (Schwenter's (19)), where only *incluso* is felicitous in the context of a non-endpoint on the tennis tournament scale:

[108] A: ¿Ganó Marta       en la  tercera ronda?
         "Did  Martha win in the third  round?"
      B: ¡Pues claro! ¡Incluso/#Hasta ganó   la  semifinal!
         "Of   course! She       even  won in the semifinals!"

However, both *incluso* and *hasta* are felicitous in B's reply when Maria won in the finals of the tournament, i.e., when she achieved the endpoint value on the scale:

[109] A: ¿Ganó Marta       en la  tercera ronda?
         "Did  Martha win in the third  round?"
      B: ¡Pues claro! ¡Incluso/Hasta ganó   la  final!
         "Of   course! She       even  won in the finals!"

They are both "positive" scalar additive particles, however.

## 8.2. *Ni siquiera:* "Negative *even*"

For a detailed examination of the behaviour of *ni siquiera*, see Vallduví (1994) and Herburger (2003). The latter argues for a Rooth-style lexical entry for the existential and scalar presuppositions of the "negative" *even*, but for an ambiguity in the TCM of *ni siquiera*, depending on whether it appears in the preverbal or the postverbal position:

[110] ni siquiera (p) = p

[111] ni siquiera (p) = ~ p

[112] Dudo que ni siquiera Héctor lo sepa.
      doubt-is that "even" Hector that know-subj
      "I doubt that even Hector knows it" (on the Hector is the most likely to
      know reading) or
      "I doubt that not even Hector knows it"

This mirrors the usual preverbal — postverbal asymmetry in Spanish in negative quantifiers:

[113] No he   visto a   nadie
      no  have seen  acc n-one
      "I haven't seen anyone"

[114] * He visto a nadie

[115] Nadie ha  visto a   él
      N-one has seen  acc him
      "No one has seen him"

[116] Nadie no  ha  visto a   él
      N-one not has seen  acc him
      "No one has not seen him", not "no one has seen him" (the latter reading
      is possible only in children's Spanish)

[117] Dudo     que nadie lo  sepa.
      Doubt-1s that n-one it  know-subj
      "I doubt that anyone knows it", or
      "I doubt that noone knows it"

As such, one has the option of taking either a narrow scope Roothian view or wide scope K&P-an view; either view will have to be supplemented with some extra stipulations about the preverbal-postverbal difference in the TC-content. But this is a problem intrinsic to the analysis of Negative Concord. Note also that in English, *even* never means "not even" in the subject position, even in the NC dialects. Hence any conclusions about English *even* from Spanish *ni siquiera* must be treated with some caution. Interestingly enough, *siquiera* (without the *ni* — dropping of the *ni* seems to be obligatory in these examples for some reason) can appear in the complement of verbs like *prevent X from Y*:

[118] a. Juan impidió a María        leer     siquiera *La Blancanieves  y  los*
         Juan prevented Maria from reading even        Snowhite     and the
         *siete  enanitos.*
         seven dwarfs
      b. Juan impidió que María leyera siquiera *La Blancanieves y los siete enanitos*
         same as above.

It is possible to argue that *siquiera* in the above example involves a "wide scope" *even*, since "Snowhite and the seven dwarves" is a book least likely to be prohibited from reading, rather than a book most likely to be read by Maria.

### 8.3. Bare *Siquiera:* A Note

*Siquiera* is known to be allowed in Spanish either with or without the explicit negative minimizer *ni*. While *ni siquiera* has been discussed in the literature on negative polarity reasonably extensively (e.g., in the works cited above), it has been noted much less commonly that, e.g., *siquiera* can occur in a variety of nonnegative contexts but crucially without the *ni*. In these contexts it is almost always (with the one exception: in the scope of *impedir/prohibir* "to prevent/prohibit", cf. [118] above) translatable as *at least* rather than *even*. The only discussion in the formal grammar literature of this phenomenon known to this author is Alonso-Ovalle (2009).

In strict "negative" contexts, *ni siquiera* is allowed and the *ni* is optional, except in the preverbal position, as observed by many authors, including, e.g., Herburger (2003) who provides a systematic description. This can be shown by the following pair from Herburger (2003):

[119] a. *(Ni) siquiera Hector lo    sabía.
          Not even      Hector knew that
     b. No lo sabía (ni) siquiera Hector.
        "Not even Hector knew that".

[120] Ignacio decidió    comprar el   cuadro sin (ni) siquiera preguntar
      Ignacio decided to buy      the  painting without n even ask
      cuánto     costaba.
      how much cost
      "Ignacio decided to buy the painting without even asking how much it cost".

In a variety of other contexts, however, *siquiera* not only can but also must appear alone: in some of these cases *siquiera* is most naturally translated into English as *at least*, in others as *even*. The latter include contexts where the English *any* is allowed, like the antecedent of a conditional, the object of a preposition like *before* but not *after*, and questions (which then get a biased reading). The former include a variety of "strong" modal contexts, e.g., the future, imperatives, optatives, necessity modals as well as directives. The following examples from Alonso-Ovalle (2009) illustrate this:[2]

[121] Si el   fútbol atendiera    siquiera un poco a  la  lógica, el  Barcelona
      if the soccer follow-subj. siq.     a   bit  to the logic, the Barcelona
      arrollaría    al    Getafe.
      would crush to-the Getafe
      "If soccer followed logic even a bit, the Barça would crush the Getafe".

[123] El clima   del    viernes era {demasiado/*bastante} malo para siquiera
      the weather of-the Friday  was {too/*enough}        bad  to   siq.
      intentar un lanzamiento.
      try      a  launching
      "The Friday weather was too bad to even try a launching".

---

[2]  These examples are all culled either from the web or literary sources, see Alonso-Ovalle's paper for the actual sources; I omit mention of them here.

[124] ¿Has leído siquiera el título del     post?
       have read siq.     the title  of-the post
      "Have you read even the title of the post?"

[125] ¡Tú y    yo, Rusca, comeremos siquiera una vez   al día lo  bueno de la
      you and I   Rusca will-eat     siq.      one time a  day the good   of the
      tierra!
      earth
      "You and I, Rusca will eat good produce at least once a day."

[126] Déme   siquiera un vaso de agua, médico de mierda.
      give me siq.     a  glass of water doctor  of shit
      "Give me at least a glass of water, you crappy doctor!"

[127] Ojalá siquiera una minima    parte de los trabajadores    y
      I wish siq.     a   minimum part of the workers-masc. and
      trabajadoras  respondieran de la  forma en lo   que han hecho ellos.
      workers-fem. respond-subj. of the form  in that have     done they
      "I wish at least a minimum part of the workers answered the same way
      that they did"

[128] La  compañía tiene que pagar siquiera el  60 por ciento del     salario
      the company has  to  pay   siq.     the 60 percent    of the salary
      completo promedio.
      complete average
      "The company has to pay at least sixty percent of the average complete sal-
      ary."

[129] Los conservadores han  pedido (…) que se     modifique     siquiera
      the conversatives  have asked   (…) that refl. Modify-subj. siq.
      puntualmente el   Título VIII …
      punctually      the Title   VIII …
      "The Conservatives have asked that the Eighth Title be modified at least
      minimally."

Ideally, one would like to derive both senses (at least looking at the prob-
lem from the standpoint of English) from a single source. It is true that a simple
minded scope theory cannot get the right interpretation of the *at least* sense of *si-*
*quiera* in the modal cases, as is easy to verify and as Alonso-Ovalle points out. A
simple minded lexical ambiguity theory also has other problems, it is not clear that
Alonso-Ovalle's proposal gets the facts right in all cases; and as pointed out in the
last section, at least in the *even* interpretation cases, the scope theory gets the right
results even for *siquiera* (the reader can verify this for verbs like *prohibit*, anteced-
ents of conditionals, prepositions like *before*, and so on). A promising line of inves-
tigation would be to try a hybrid theory: one that shares with the lexical ambigu-
ity theory the idea that the basic semantics of *siquiera* is indeed somewhat different
from the "positive" *even*s like *incluso* or *hasta*; but shares with the Scope theory the
idea that its association with an EmphAssert operator (and the placement of this
operator vis-a-vis other operators like negation, etc.) in certain cases is crucial in

deriving the right interpretation. Such a detailed analysis is, however, beyond the scope of this paper.

## 8.4. *Aunque Sea:* another "Concessive *even*"

A third *even* like expression of Spanish is the expression *aunque sea*, which has many different variants in different dialects of Spanish (a common variant in some parts of Latin America is *por mas que sea*). Its distribution basically limits it to non-episodic contexts. It is the counterpart in Spanish to Giannakidou's "concessive" *even*, possibly alongside the bare *siquiera*.

> *Aunque sea* is limited to non-episodic contexts.

This is probably a consequence of the subjunctive morphology of *sea* (*be* + subj). It is unlikely that the distribution is a case of "polarity" as we understand it, contra Giannakidou (2007), to be explained as a consequence of the interaction of its presuppositions.

### 8.4.1. Distribution in episodics

*Aunque sea* is disallowed in episodic sentences, positive as well as negative, as the following examples show.

[130]  * Juan leyó aunque sea *Guerra  y   Paz*.
          Juan read "even"       *War     and Peace*
       "John read even *War and Peace*"

[131]  Juan leyó incluso *Guerra   y    Paz*
       Juan read "even"  *War      and Peace*
       "John read even *War and Peace*"

[132]  * Juan no  ha  leído aunque sea *Blancanieves    y   los siete  enanitos*.
          Juan not has read  "even"        *Snowhite      and the seven dwarves*
       "John hasn't read even *Snowhite and the seven dwarves*"

[133]  Juan no  ha  leído ni siquiera *Blancanieves   y   los siete   enanitos*.
       Juan not has read  "even"        *Snowhite      and the seven dwarves*
       "John hasn't read even *Snowhite and the seven dwarves*"

### 8.4.2. Distribution in Conditionals

In the antecedent of a conditional, *aunque sea* is allowed and interpreted as the English *even* in one of its ("wide scope", on the scope theory) readings:

[134]  Si hubieras        leído aunque sea *The National Enquirer*, aprenderías
       If have+past subj read  "even'       TNE                    learn+cond.
       algo.
       Something
       "If you had read even *The National Enquirer,* you would have learned something"

[135]  Si hubieras        leído aunque fuera "TNE", habrías        aprendido
       If have+past subj read  "even"          TNE   have+cond. learned
       algo.
       something
       "If you had read even TNE, you would have learned something"

[136]  Si lees             aunque sea "TNE", aprenderás algo.
       If read+pres ind. "even"        TNE, learn+fut. something
       "If you read even "TNE", you will learn something"

[137]  Si tienes                aunque sea un   minuto, te    explico
       If you have+pres ind. "even"       one minute,  you explain+pres. Ind.
       el proyecto.
       something
       "If you have even one minute, I will explain you something"

[138]  Si me compras        aunque sea un  (solo)        caramelo te
       If me buy+pres. ind. "even"        one (only/just) candy     you
       regalo              un libro
       present+pres. ind. a   book
       "If you buy me even a candy, I will present you with a book"

The consequent in the examples [136]-[138] have indicative tense but future meaning, which I take it is a kind of modal. Contrast the examples above with the corresponding examples with *incluso* instead of *aunque sea*:

[139]  Si puedes  leer  incluso *The New York Times,* aprenderás mucho.
       If you can read even    TNYT                learn+fut. much
       "If you can read even *The New York Times,* you will learn a lot"

One can imagine [139] uttered in the context: "Si lees *The National Enquirer,* aprenderás nada. Si lees *The New York Post,* aprenderás algo. Pero si puedes leer incluso *The New York Times,* aprenderás mucho". That is, "if you read TNE, you won't learn anything. If you read *The New York Post,* you will learn something, but if you can read even the *New York Times,* you will learn a lot". [139] corresponds to the "narrow scope" of *even* of the relevant English example.

### 8.4.3.  In quantified expressions

The restriction of a universal quantifier is one context that readily allows the expression *aunque sea*, as in the following example. Note that *aunque sea* is also allowed at least marginally in the restriction of a negative universal sentence, as [141] shows.

[140]  Todos los  estudiantes que  lean aunque sea un   solo capítulo de este
       all       the students     who read "even"       one only chapter of this
       libro, estarán bien preparados para el   examen.
       book be+fut. well prepared    for   the exam
       "Everyone who reads even one chapter of this book will be well prepared
       for the exam".

[141] (?) Ningún estudiante que lea   aunque sea un  solo  capítulo de este
          No        student     that read even       one only chapter  of this
    libro, suspenderá el   examen
    book fail-fut.      the exam
    "No student who reads even one chapter of this book will fail this exam"

The interpretation of these sentences will be discussed below.

### 8.4.4.  Is aunque sea *a wide-scope* even + Δ?

One can start considering a proposal for an analysis of *aunque sea* by making some observations about the morphology of this expression.

*Aunque sea = even if* (*it*) *be*+subj.

One can begin by first taking a look at *even if* sentences in English. Consider sentences like the following:

[142] If you see even *a single* policeman, you should run away.

[143]  Even if you see *a single* policeman, you should run away.

[144]  If he drank even *a little*, he would be fired.

[145]  Even if he drank (just) *a little*, he would be fired. (Bennett 1982)

The semantics of *even if* clauses is simply given by taking *even* to take scope over the entire conditional (the original suggestion is due to Bennett 1982, and seems to me to hold up despite objections from various quarters, most notably Lycan 1991, 2000 and Barker 1991). In an *even if* sentence, the *even* may associate with the entire clause as the focus, or only a proper part, as in the examples [143, 145] above. Note that an *even if* clause is never equivalent to a conditional where *even* has scope only over the antecedent. This makes [146] (with stress on *The New York Times,* therefore pragmatically odd, if the alternatives to *The New York Times* are, say, *The National Enquirer* and *The New York Sun*):

[146]  Even if you read *The New York Times*, you would learn a lot.

Unlike, [147]:

[147]  If you (manage to) read even the *New York Times*, you would learn a lot

which is fine (to see this reading more clearly, stress EVEN). Note that not all languages have an expression like *even if*. In Hindi, e.g., *agar bhii* is not a possible sequence:

[148] * agar bhii  raam kalkattaa jaaye,    yeh kaam puuraa nahiiN hogaa.
         If    even Ram Calcutta go+subj this job    fulfil    not    be+fut
       "Even if Ram travels to Calcutta, this job won't get done" (intended reading)

The intended reading of [148] can, however be expressed somewhat differently, by adding a demonstrative in the consequent anaphorically related to the antecedent, and adding *even* to that particle:

[149]  agar      raam kalkattaa jaaye,      to-bhii     yeh kaam puuraa nahiiN hogaa.
       If even Ram Calcutta go+subj then-even this job    fulfil    not      be+fut
       "Even if Ram travels to Calcutta, this job won't get done"

Note that this is possible (at least to my ears) only if the *even* "bhii" associates with the entire antecedent clause. Crosslinguistic idiosyncracies abound. (*bhii* can also be added to a host in the antecedent of a conditional, and the result is ambiguous, just like in English)

In Spanish, *aunque* + Subj. = *Even if*; *aunque* + Ind. = *Even though*, as one may see in the examples below:

[150]  Aunque tuviera que beber para olvidarte, lo haría.
       Even if have+imp.+subj. to drink (in order to) forget you, it I will+imp.+subj.
       "Even if I had to drink in order to forget you, I would (drink)".

[151]  Aunque bebía para olvidarte, no lo pude
       Even though drank in order to forget you, not it could
       "Even though I drank it order to forget you, I couldn't (forget you)".

*aún* = *even*, somewhat restricted distribution, as illustrated below:

[152]  Y    aún se permite el lujo    de sermonearme
       and even se lets      the luxury of lecture-inf.-me
       "And he even goes so far as to lecture me"

[153]  Ni   aún en coche llegaría      a  tiempo
       Not even by car    arrive-cond. on time
       "(S)he wouldn't have arrived on time even by car"

[154]  * Ví   aún a Juan
          Saw even  John
       "I even saw John"

It seems that *aún* only associates with non-objectual meanings, but has the meaning of *even* by itself.[3] This can be expressed schematically below:

[155]  *Aún*: TCM: <u>even</u>(a) = a

[156]  Presupposition: ∃p [C(p) & p is true & p ≠ a]

[157]  ∀p [C(p) & p ≠ a → likelihood (p) > likelihood (a)]

### 8.4.5. Aunque Sea *in Interrogatives*

*Aunque sea* is also allowed in questions, where the question gets a biased, "bottom of scale" reading, as the following examples show. The same sentences with *incluso* instead of *aunque sea* have the "top of scale", more neutral reading:

---

[3] One may note that *aún* in this sense then behaves like English, Hindi and Basque scalar particles in being okay in both positive and negative contexts, with the same range of meanings.

[158] Has    leído aunque sea la  primera página de este libro?
Have-2s read  even      the first    page   of this book
"Have you read even the first page of this book?"

[159] Has    leído incluso la  última página de este libro?
Have-2s read  even    the last    page   of this book
"Have you read even the last page of this book?"

[160] % Has leído aunque sea la última página de este libro? (pragmatically odd)

[161] % Has leído incluso la primera página de este libro? (pragmatically odd)

(assume that people read the first page of a book first, the last page last)

Compare this with English *even*:

[162] Have you seen even *John*? (ambiguous)

[163] Have you read even Mother Goose? (the "neg"-reading pragmatically more plausible)

[164] Have you read EVEN LSLT? (the "pos"-reading pragmatically more plausible)

Similar facts obtain in Greek with the "positive" and "concessive" *even*s: Giannakidou's solution is to claim that the concessive *even*, being flexible simply takes the reverse scale. This is problematic for reasons mentioned before.

On the Scope theory, this follows from a scope difference: see Guerzoni (2004), where this is argued for, under certain assumptions.

### 8.4.6. Aunque sea *in Imperatives*

One could first start by looking at *even* in English imperatives, as in the ones below:

[165] Pick any apples, even the rotten ones

[166] Pick even the rotten apples.

Both *incluso* and *aunque sea* are allowed in imperatives; however, they mean different things:

[167] Recoge aunque sea las  manzanas podridas
Pick   "even"      the apples    rotten
"At least pick the rotten apples"
(i.e., do something, even if that is picking rotten apples)

[168] Recoge incluso las  manzanas podridas
Pick    even    the apples    rotten
"Pick even the rotten apples"

The examples with *aunque sea* get an *at least* reading, whereas the ones with *even* get the usual *even* reading available in English imperatives with *even*. Compare with negative imperatives of the following kind:

[169] * No recojas incluso las  manzanas buenas y     frescas
         not pick    even      the apples    good    and fresh
      "Don't pick even the good and fresh apples" (intended reading)

[170] * No recojas aunque sea las  manzanas buenas y     frescas
         not pick    even          the apples   good    and fresh
      "Don't pick even the good and fresh apples" (intended reading)

[171] No recojas ni siquiera las  manzanas buenas y     frescas
      not pick    n-even       the apples    good    and fresh
      "Don't pick even the good and fresh apples"

Contrast [170] with [172]:

[172] No recojas las  manzanas, aunque sean                    buenas y    frescas
      not pick    the apples     even     if be+subj+3pers pl good    and fresh
      "Don't pick the apples, even if they be good and fresh"

### 8.4.7.  *An Analysis of* Aunque sea

With all of this in mind, we can outline an account that might constitute a beginning for an analysis of the concessive *aunque sea* of Spanish. We could begin by taking a look at *even if* conditionals in Spanish, which can be formed either by *incluso*, *ni siquiera* or *aunque*.

### *Even If* Conditionals in Spanish

[173] Incluso si me lo explicas,     no  lo comprenderé
      Even    if me it explain-2sg not it  understand-fut.-1sg
      "Even if you explain it to me, I won't understand it"

[174] Ni siquiera si me lo explicas,     lo comprenderé
      n-even       if me it explain-2sg it  understand-fut-1sg.
      "Not even if you explained it to me would I understand it"

[175] Aunque lo supiera,           no  me lo diría
      even-if  it know-subj.-3sg.  not me it  say-cond.-3sg.
      "Even if he knew it, he wouldn't tell it to me"

*Even if* conditionals formed with *aunque* whose antecedent clause has *ser* as its main verb forces agreement of *ser* with its *pro* subject if it has one, as the following examples show:

[176] Aunque sea    podrida, tienes    que recoger la    manzana
      even-if be-3sg rotten-sg. have-2sg to  pick      the apple
      "You have to pick the apple, even if it is rotten"

[177] aunque [pro$_i$ sea podrida], tienes que recoger la manzana$_i$

[178] Aunque sean    podridas, tienes    que recoger las  manzanas
      even-if be-3pl. rotten-pl. have-2sg to  pick      the apples
      "You have to pick the apples, even if they are rotten"

[179] aunque [pro$_i$ sean podridas], tienes que recoger las manzanas$_i$

Contrast [176]-[179] with the following, where *aunque sea* appears as a concessive *even* in the antecedent of a clause associated with an NP/DP inside it, and we see below that *aunque sea* remains invariant, with a default 3$^{rd}$ person singular form. Interestingly enough, in the same context, *aunque sea* CAN be inflected for tense (depending on the tense in the antecedent clause), sometimes appearing as *aunque fuera*.

[180]  Si lees            aunque sea "TNE", aprenderás algo.
       If  read+pres ind. "even"       TNE,  learn+fut. something
       "If you read even "TNE", you will learn something"

[181]  Si lees            aunque sea revistas    de baja calidad, aprenderás
       If  read+pres ind. "even" the  magazines of low  quality, learn+fut.
       algo.
       something
       "If you read even magazines of low quality, you will learn something"

[182]  * Si lees            aunque sean revistas        de baja calidad, aprenderás
         If read+pres ind. "even"        the magazines of low  quality, learn+fut.
       algo.
       something
       "If you read even magazines of low quality, you will learn something"

[183]  Si hubieras       leído aunque fuera                  "TNE", habrías
       If have+past subj read   "even (even if be-imp.-subj.)" TNE    have+cond.
       aprendido algo.
       learned     something
       "If you had read even TNE, you would have learned something"

Note also that *incluso* and *ni siquiera* cannot be used to form concessive *even*s:

[184]  * Incluso si sea

[185]  *Ni siquiera si sea

Generalization: When used as the concessive *even*, *aunque sea* can take tense morphology, but does not agree in number with the phrase it associates with; getting a 3$^{rd}$ person singular marking instead. We could take this to mean that the semantic associate of the *sea* in *aunque sea* is a clause. In the logical syntax, then, *aunque sea* can be taken to be a two-place operator that requires a restrictor and a nuclear scope (cf. DRT treatments of such operators, Heim 1982, for example)

[186]  aunque sea [$_{restr}$ … α … ] [$_{scope}$ … β … ]

Or more properly:

[187]  aun Q [[que sea] [$_{restr}$ … α … ]] [$_{scope}$ … β … ]

where Q is a quantificational operator and α and β are the restriction and the nuclear scope respectively.

*8.4.8.* Aunque sea *in Conditionals and the restriction of a quantifier (again)*

This would cover the conditional and the quantifier cases, which I take to be the core cases:

[188]  Si  lees                    aunque sea "TNE", aprenderás algo.
       If  read+pres ind. "even"       TNE,  learn+fut.  something
       "If you read even "TNE", you will learn something"

[189]

```
                        IP
                   ┌─────┴─────┐
                  aun          IP
                         ┌──────┴──────┐
                        IP              IP
                     ┌───┴───┐       ┌───┴───┐
          que+sea+si [lees [TNE]_F]    [aprenderás algo]
```

Pick your favorite theory of conditionals (Stalnaker, Lewis, etc.), or a version by von Fintel combining some elements of both (von Fintel 2001) plus the notion that conditionals involve contextually variable universal quantification:

[190]  a.  Contextually variable strict conditional analysis. *If p, q* claims that all p-worlds in some q-worlds in some contextually limited domain are q-worlds.
       b.  There is a presupposition that there are such p-worlds in the contextually limited domain (an existence presupposition), i.e., the antecedent p is presupposed to be compatible with the domain of worlds quantified over.
       c.  There is an all-or-nothing homogeneity presupposition: all of the relevant p-worlds agree on q. This directly derives the Conditional Excluded Middle: *If p, q* or *If p, not q*.
       d.  The non-monotonic behavior of conditionals is traced back to the dynamic evolution of the domain of worlds quantified over during the course of a conversation.
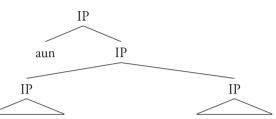
Related analyses of conditionals as definites or universals have also been recently proposed in the literature in both syntax and semantics. See for example Schlenker (2004) for semantic as well BT-arguments or Bhatt, R. and R. Pancheva (2006) for syntactic arguments for the notion that conditionals are essentially free relatives over worlds. In either case, the predicted scalar presupposition for [189], as one can easily verify, is

[191]  $\forall$x [x $\neq$ *The National Enquirer* $\rightarrow$ the likelihood that if I read *The National Enquirer*, I will learn something < the likelihood that if I read x, I will learn something]

Exactly the same reasoning applies to the case with *aunque sea* in the restriction of positive and negative universals.

[192]  Todos los  estudiantes que  lean  aunque sea un  solo  capítulo de este
       all     the  students    who  read  "even"     one only chapter  of  this
       libro, estarán bien  preparados para el   examen.
       book  be+fut. well  prepared    for  the exam
       "Everyone who reads even one chapter of this book will be well prepared
       for the exam".

[193]

$$
\begin{array}{c}
\text{IP} \\
\diagup \quad \diagdown \\
\text{aun} \qquad \text{IP} \\
\diagup \qquad\qquad \diagdown \\
\text{IP} \qquad\qquad\qquad \text{IP}
\end{array}
$$

       [los estudiantes [que+sea [lean [un solo]$_F$ capítulo de este libro] [estará bien ...]

Predicted scalar presupposition for the LF in [193] is the correct one:

[194]  $\forall$P [P is a cardinality Predicate & P ≠ one → the likelihood that eve-
       ryone who reads one chapter of this book will be well-prepared for this
       exam < the likelihood that everyone who reads P-many chapters of this
       book will be well-prepared for this exam]

Effectively, what this does is develop a version of the scope theory of *even* for
these cases.

### 8.4.9.  Aunque sea *in Imperatives* (again)

The imperative case is somewhat trickier. Recall the examples with *even*s in im-
peratives mentioned earlier, repeated here:

[195]  Recoge aunque sea las  manzanas podridas
       Pick    "even"       the apples      rotten
       "At least pick the rotten apples"
       (i.e., do something, even if that is picking rotten apples)

[196]  Recoge incluso las  manzanas podridas
       Pick    even    the apples      rotten
       "Pick even the rotten apples"

The example in [196] presents no particular problems: assume that there is an
imperative IMP operator in the syntax that corresponds in the semantics to "I ask
you to". *Incluso* attaches to the embedded clause, and its presuppositions are passed
up:

[197]  IMP [*incluso* [(you) recog- [las manzanas [podridas]$_F$]]]

[198]  The addressee is less likely to pick rotten apples than any other kind of ap-
       ple

[199]  The addressee will pick some kind of apple other than rotten (ones).

The example with *aunque sea*, as the one in [195] is judged to be somewhat unusual. A typical reaction from an informant:

[200] "Suppose we are a group of gardeners and I have the impression that you are not doing much and I am doing all the work. I would tell you [195], meaning that you could at least help me with the rotten ones".

Option 1 (boring): *aunque sea* is ambiguous, it can mean "at least" as well. This is unsatisfactory, for, other languages with a concessive *even* like Greek behave similarly. Moreover, the meaning of *at least* and *even* are probably related as well, hence a unified account would be desirable.

Option 2: assume that *aunque sea* has the usual meaning as analyzed above, but that the imperatives like the ones in [195] are conditional imperatives, i.e., they are commands to do something, under the condition that some condition is satisfied

[201] I am asking you to do some p, even if that p be 'picking rotten apples'.

I assume that the "I am asking you to do some p" is supplied contextually, as in the situation described in [200], for example.

The predicted scalar presupposition will be:

[202] It is less likely that I will ask you to pick rotten apples than my asking you to pick any other kind of apple (or to do anything else, depending on the form of the implicit conditional one takes the imperative to express).

Again, a solution along these lines seems promising.

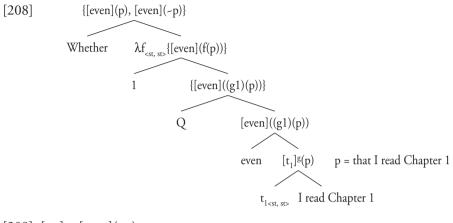### 8.4.10. Aunque sea *in Interrogatives (again)*

Look at the examples with *aunque sea* in interrogatives again:

[203] Has       leído aunque sea la   primera página de este libro?
      Have-2s read even        the first    page    of this book
      "Have you read even the first page of this book?"

[204] Has       leído incluso la   última página de este libro?
      Have-2s read even      the last    page   of this book
      "Have you read even the last page of this book?"

[205] % Has leído aunque sea la última página de este libro? (pragmatically odd)

[206] % Has leído incluso la primera página de este libro? (pragmatically odd)

(assume that people read the first page of a book first, the last page last). The case with *incluso* is straightforward: assume that it attaches to a site below a Q morpheme in an interrogative. The presuppositions are simply passed up. (See Guerzoni 2004, for example, for details).

[207] The addressee is less likely to read the last chapter than any other chapter.

The other set of presuppositions with *aunque sea* can perhaps be derived by following the proposal in Guerzoni (2004), but problems remain and the solution might be stipulative. Consider Guerzoni's analysis of the English counterpart of [203]:

[208]   $\{[\text{even}](p), [\text{even}](\sim p)\}$

Whether   $\lambda f_{<st, st>}\{[\text{even}](f(p))\}$

1   $\{[\text{even}]((g1)(p))\}$

Q   $[\text{even}]((g1)(p))$

even   $[t_1]^g(p)$   $p$ = that I read Chapter 1

$t_{1<st, st>}$   I read Chapter 1

[209]  [no] = [even]($\sim p$)                    even > not
       ScalarP: "That I haven't read Chapter 1" is the least likely among possible
       alternatives

[210]  [yes] = [even](p)
       ScalarP: "That I read Chapter 1" is the least likely among possible alternatives

Can this analysis be extended to *aunque sea*? It is unclear. While *aún* can certainly take wide scope, what is the operator that *que sea* would attach to? The only possible host is the internal clause. This does not have a neat operator-restrictor-scope structure. Alternatives could be considered, for example, van Rooij's (2003) proposal about biased *even* questions.

## 9. What is the Nature of the Presuppositions of Scalar Particles?

I will briefly take note of some recent discussions about the nature of different kinds of nonassertions: Potts (2005) on Conventional Implicature, various papers on the basis of at least some presuppositions in conversational implicatures (Schlenker, Simons, Abusch, Roberts, etc. …).

It seems we can at least say that the presuppositions of *even* are conventional. The presuppositions of *even* project through the usual holes, except for negation (most of the time). Other projection facts for *even* are not always clear, though.

[211]  John believes that even Albert passed the exam.

[212]  John said that even Albert passed the exam.

Do the "presuppositions" of *even* project through plugs as well? If yes, this would make them like Potts' Conventional Implicatures. The facts are not clear. There is much scope for further research here.

## 10. Final Conclusion

Concessive *even* in languages that have them must contain an overt or covert *even* should be able to receive wide scope across clauses.

Therefore, one can't conclude from the existence of different *even*s in, say, Greek or Romance that English *even* or Hindi *bhii* are multiply ambiguous.

This of course leaves open the question of when particles can or may not receive wide scope, a topic of interest for issues at the syntax-semantics interface.

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