Are All Concessive Scalar Particles the Same? Probing into Spanish *Siquiera*.

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Short abstract

Concessive scalar particles (CSPs) are focus sensitive particles restricted to a number of non-veridical contexts: downward entailing environments, modal environments, and questions. Where do CSPs fit in the typology of polarity items? How uniform is the class of CSPs, across languages? The paper aims to contribute to our understanding of the typological space of CSPs by probing into the behaviour of Spanish *siquiera*.

Giannakidou (2007) analyzes the Greek CSP *esto* as a presupposition trigger that conveys a negative additive presupposition. This analysis does not extend to Spanish *siquiera*, for reasons already pointed out for other CSPs in Crnič 2011a,b. As an alternative, focusing on Slovenian *magari*, which he takes to be representative of the whole class of CSPs, Crnič analyzes CSPs as Lahiri-style polarity items, which decompose into *even*, conveying low likelihood, and a weak existential term that *even* associates with. This decompositional analysis does not extend to Spanish *siquiera* either, because of distributional and interpretational differences between *magari* and *siquiera*.

An alternative analysis of *siquiera* is proposed. The analysis retains two central insights from the decompositional approach: that the interpretation of CSPs makes reference to a set of propositional alternatives and that CSPs convey truth-conditionally that at least one of these alternatives is true, but it departs from the decompositional approach in assuming that the alternatives that *siquiera* brings into play contribute to a process of obligatory exhaustification.

Are All Concessive Scalar Particles the Same?
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1. Context. Concessive scalar particles (CSPs) are focus sensitive particles with a restricted distribution [1,2,3,4,5]. (1), with the Spanish CSP *siquiera*, shows that CSPs are licensed in downward entailing (DE) (1a) and modal contexts (1b), but not in positive episodic sentences (1a).

(1) a. Juan *(no) leyó siquiera el primer capítulo. b. Tienes que leer siquiera el primero.
Juan not read SIQUIERA the first chapter have:2s to read at least the first.
'He didn't even read the first chapter.' 'You have to read at least the first (chapter).'

Where do CSPs fit into the semantic typology of polarity items? Focusing on Slovenian *magari*, which he takes to be representative of the whole class of CSPs, Crnič [4,5] analyzes CSPs as Lahiri-style polarity items, which decompose into *even*, conveying low likelihood, and a weak existential term that *even* associates with. The **goal** of this paper is to contribute to our understanding of the typological space within the class of CSPs by probing into the behaviour of Spanish *siquiera*. The paper shows that there are significant differences between *magari* and *siquiera*, both in interpretation and distribution, and proposes an analysis of *siquiera*. The analysis keeps from Crnič's analysis two insights: that CSPs convey an existential component, and that their interpretation makes reference to a set of propositional alternatives, but departs from his proposal in the types of alternatives that *siquiera* brings into play and the role that they play.

2. Data. In DE environments, both *magari* (ungrammatical under clausemate sentential negation) and *siquiera* strengthen their hosting sentences by conveying information about their scalar alternatives (what [6] calls their 'characteristic implications'): (1a) conveys that Juan did not read the 1st chapter or any other contextually relevant chapter less likely for him to have read. The licensing conditions of *magari* and *siquiera* in modal contexts differ: *magari* requires priority modals, but it is licensed by both possibility and necessity ones [4,5]; *siquiera* is licensed both by priority (2) and epistemic modals (3), but it requires necessity ones (2).

(2) Para el pasaporte, J. {*puede / tiene que} enviarme siquiera una foto [escaneada]$_F$.
for the passport, J. {can / has to} send me SIQUIERA a photo scanned
'For his passport, Juan can / has to send me at least a scanned photo.'

(3) J. tuvo que haber leído siquiera el [primer]$_F$ capítulo.
P. had to have read SIQUIERA the first chapter
'Juan must have read at least the first chapter.'

Both *magari* and *siquiera* are licensed in questions. In this environment, *magari* patterns with weak *even* in that it triggers a negative bias (the speaker takes the positive answer to be false.) In contrast, *siquiera can* but *need not* convey a negative bias (contra [3]): in Context 1 in (5), my uttering (4) can indicate that I suspect that Peter has not read any chapters; in Context 2, (4) does not convey this bias, rather, it is an information seeking question about whether or not Pedro has read a chapter.

(4) ¿Leyó siquiera el primer capítulo?
read:3s SIQUIERA the first chapter

(5) *Context 1.* We are discussing the performance of students. Pedro is lazy. When we get to discussing his performance, I utter (4). ‖ *Context 2.* I want to hire Pedro. For me to justify the hiring, he needs to have read a chapter. Justifying the hiring will be easy if he has read the second or third, but I suspect he hasn't. Having read the first will do, in a pinch. I ask (4).

3. CSPs as EVEN + weak associate [4,5] Under the analysis in [4], CSPs are decomposed at LF into two (focus-sensitive) propositional operators: EVEN and AT LEAST. (1) receives the LF in (6-a). AT LEAST combines with a set of propositional alternatives C and a proposition p (its prejacent), triggers the presupposition that p is the most likely alternative in C and weakens p by mapping it to the proposition that either p or one of the less likely alternatives in C is true (6-b) (in Crnič's analysis C is determined by looking at the focus alternatives of the argument of the operator — we will gloss over this part of the proposal.) EVEN is purely presuppositional: it conveys that p is not the most likely proposition in C (6-c). Assuming the sets of alternatives in (7-a), EVEN triggers the presupposition that $[1 \vee 2 \vee 3]$ is not the most likely alternative in C_2. The fact that this presupposition cannot be satisfied — both $[2 \vee 3]$ and $[3]$ are stronger — is assumed to derive ungrammaticality. Some intervening operator can break the problematic entailments. When a DE operator intervenes, the problematic entailments in C_2 get reversed and the scalar presupposition of EVEN presupposition is satisfiable (7-b).

(6) a. LF: $\text{EVEN}_{\mathbf{C}_2}$ (not) $\text{AT LEAST}_{\mathbf{C}_1}$ [Pedro read the first_F chapter]
b. $[\![\text{AT LEAST}]\!] = \lambda C.\lambda p : \forall q \in \mathbf{C}\ [p \neq q \rightarrow q \lhd_c p].\lambda w.\exists q \in \mathbf{C}\ [q \trianglelefteq_c p\ \&\ q(w)]$
c. $[\![\text{EVEN}]\!] = \lambda C.\lambda p : \exists q \in \mathbf{C}[p \lhd_c q].\lambda w.p(w)$

(7) a. $[\![\mathbf{C}_1]\!]^g = \{[1],[2],[3]\}$, $[\![\mathbf{C}_2]\!]^g = \{[1 \vee 2 \vee 3],[2 \vee 3],[3]\}$
b. $[\![\mathbf{C}_1]\!]^g = \{[1],[2],[3]\}$, $[\![\mathbf{C}_2]\!]^g = \{\neg[1 \vee 2 \vee 3],\neg[2 \vee 3],\neg[3]\}$

The negative bias of *magari* in questions is captured *à* la [7]. Polarity questions with a negative bias are assumed to be 'defective' questions: the denotation of their positive answer is associated with presuppositions that can never be satisfied. The LF of the counterpart of (4) with *magari* involves a silent *whether*. Simplifying, *whether* leaves a trace ranging over the identity function over propositions and negation. When it scopes over EVEN, (8a) the presupposition that rules out the positive version of (1a) is associated with both the negative and positive answers to (4), none of which can then be defined. When the trace intervenes between EVEN and AT LEAST (8b), the problematic presupposition is only triggered by the positive answer.

(8) a. whether 1 $t_{1_{\langle\langle st\rangle,\langle st\rangle\rangle}}\ \text{EVEN}_{\mathbf{C}_2}\ \text{AT LEAST}_{\mathbf{C}_1}$ [Pedro read the first_F chapter]
b. whether 1 $\text{EVEN}_{\mathbf{C}_2} t_{1_{\langle\langle st\rangle,\langle st\rangle\rangle}}\ \text{AT LEAST}_{\mathbf{C}_1}$ [Pedro read the first_F chapter]

(9) $[\![\text{whether}]\!] = \lambda f_{\langle\langle\langle st\rangle,\langle st\rangle\rangle,\langle st\rangle\rangle}.\{f(\lambda p.p), f(\lambda p.\neg p)\}$

Cases like (1c) are *prima facie* a problem. If modals are upward entailing, they should not break the problematic entailments (10-b). However, [4,5] assume that, like in other cases where an existential expression is under the scope of a modal, a default grammatical exhaustification process delivers a free choice interpretation conveying that every alternative is a possibility. As a result, the prejacent of EVEN is now the alternative boldfaced in (10-c). Since none of the other propositions in (10-c) entails it, the presupposition triggered by EVEN can be satisfied and, when it is, [4,5] contend that it captures the 'settle for less' interpretation —in the case at hand, it conveys that it would be more likely for the speaker to require the addressee to read a chapter beyond the first.

(10) a. LF: $\text{EVEN}_{\mathbf{C}_2}\Box\text{AT LEAST}_{\mathbf{C}_1}$ [Pedro read the first_F chapter]
b. $[\![\mathbf{C}_1]\!]^g = \{[1],[2],[3]\}$, $[\![\mathbf{C}_2]\!]^g = \{\Box[1 \vee 2 \vee 3],\Box[2 \vee 3],\Box[3]\}$
c. $[\![\mathbf{C}_1]\!]^g = \{[1],[2],[3]\}$, $[\![\mathbf{C}_2]\!]^g = \{\Box[\mathbf{1} \vee \mathbf{2} \vee \mathbf{3}]\ \&\Diamond[\mathbf{1}]\ \&\ \Diamond[\mathbf{2}]\ \&\ \Diamond[\mathbf{3}],\Box[2 \vee 3]\ \&\ \Diamond[2]\ \&\ \Diamond[3],\Box[3]\}$

4. Challenges. Under this analysis, AT LEAST delivers the characteristic implications of *siquiera* in DE cases as entailments, but extending the analysis to *siquiera* faces some challenges: (i) it predicts an obligatory negative bias in questions, (ii) it makes the licensing of *siquiera* parasitic on getting a

free choice interpretation for the modal, which does not tease apart the necessity from the possibility cases; and (iii) for cases like (1b), it predicts a scalar presupposition that is too strong ((1b) can be felicitously uttered in a context where it is taken to be impossible for the speaker to require the addressee to read more than the first chapter, cf. [3]).

5. An alternative. We preserve from Crnič's AT LEAST the presupposition that its prejacent is the most likely alternative, and its weakening effect. We assume a two-tiered system that computes ordinary meanings and alternatives in tandem and propose that AT LEAST introduces two alternatives: its prejacent, and the proposition that at least one alternative other than the prejacent is true.

(11) $[\![\text{AT LEAST}_C\ [\phi]]\!]^{alt} = \{[\![\phi]\!]^o, \lambda w.\exists p[p \in C\ \&\ p \neq [\![\phi]\!]\ \&\ p(w)]\}$

We assume that in declarative environments, these alternatives need to be 'used up' by a strengthening operator, call it O, that checks whether they are stronger than the ordinary meaning and, if so, strengthens the ordinary meaning by assuming that they are false (I will also assume that this operator is not sensitive to innocent exclusion.) The relevant LFs for the episodic and modal sentences, followed by their interpretations, are as in (12) (we assume that the alternatives grow past negation and modals). In a positive configuration, and when a possibility modal intervenes, O delivers a contradiction. When negation intervenes, the alternatives ($\neg[1], \neg[2 \vee 3]$) are weaker than the ordinary meaning that O has access to, so O has no effect. O yields a non-contradictory strengthened meaning in the case of necessity modals. In the case of (1b), the strengthened meaning conveys that the addressee is required to read a chapter, he is not required to read the first and he is not required to read the second or the third, but is permitted to read the first and is permitted to read more than the first, a strengthening consistent with the perceived interpretation.

(12) a. LF: O AT LEAST$_{C_1}$ [Juan read the first$_F$ chapter] | Int.: $1 \vee 2 \vee 3$ &$\neg[1]$ &$\neg[2 \vee 3]$
b. LF: O not [AT LEAST$_{C_1}$ [Juan read the first$_F$ chapter]] | Int.: $\neg[1 \vee 2 \vee 3]$
c. LF: O $\Diamond$ AT LEAST$_{C_1}$ [Juan read the first$_F$ chapter] | Int.: $\Diamond[1 \vee 2 \vee 3]$ & $\neg\Diamond[1]$ &$\neg\Diamond[2 \vee 3]$
d. LF: O $\Box$ AT LEAST$_{C_1}$ [Juan read the first$_F$ chapter] | Int.: $\Box[1 \vee 2 \vee 3]$ & $\neg\Box[1]$ &$\neg\Box[2 \vee 3]$

This setup teases apart the episodic from the modal cases, and, within the modal cases, the necessity from the possibility modals. It remains to be seen how it extends to questions, though. We remain tentative here. Assuming that O is under the scope of a question operator would not help. In the absence of a necessity modal (or negation) intervening between O and AT LEAST, the question operator would only have access to a contradiction. One possibility would be to assume, *à* la [8,9], an alternative-sensitive question operator that would ask, for (4), the question formed out of the ordinary meaning introduced by AT LEAST (whether or not Juan read at least one of the chapters) and indicate that the speaker is excluding asking the questions formed out of the alternatives that AT LEAST introduces (whether or not Juan read the first chapter and whether or not Juan read the second or third.) If the speaker wants to know which chapter Juan read, a positive answer to any of these competing questions would be more informative than a positive answer to the actual question he is asking, and a negative answer less informative, so one reason why the speaker is asking a more general question could be because he suspects that the negative answer is true (Context 1) (cf. [9]). But it could be that the speaker is excluding the alternative questions on different grounds. If the speaker is interested in knowing whether Juan has read any of the chapters, whatsoever, asking whether Juan has read the first chapter will not give him information about the second or the third, and asking whether he has read the second or third, will not give him information about the first.

References

[1] Giannakidou, A. 2007. The landscape of EVEN. *Natural Language & Linguistic Theory* 25:391.

[2] Lahiri, U. 2008. The semantics and pragmatics of some scalar expressions in Spanish. *Anuario del Seminario de Filologa Vasca "Julio de Urquijo"*, XLII(2):35989.

[3] Alonso-Ovalle, L. 2009. *Even* and biased questions: the case of the Spanish *siquiera*. In *Semantics and Linguistic Theory (SALT) 19*, ed. Satoshi Ito and Ed Cormany.

[4] Crnič, L. 2011a. Getting *even*. Ph. D. dissertation. MIT.

[5] Crnič, L. 2011b. On the meaning and distribution of concessive scalar particles. Nick LaCara *et al. Proceedings of NELS 41*, 1-14.

[6] Schwarz, B. 2005. Scalar additive particles in negative contexts. *Natural Language Semantics* 13:12568.

[7] Guerzoni, E. 2004. Even-NPIs in yes/no questions. *Natural Language Semantics* 12:31943.

[8] Krifka, M. Some remarks on polarity items. In D. Zaefferer (ed.), *Semantic Universals and Universal Semantics,* Berlin, Foris-de Gruyter 1991, 150-189.

[9] Krifka, M. 1995. The Semantics and Pragmatics of Weak and Strong Polarity Items. *Linguistic Analysis* 25. 20957.

[10] van Rooy, R. 2003. Negative polarity items in questions: Strength as relevance. *Journal of Semantics* 20(3). 23974.