

**Not even in Samish<sup>1</sup>**  
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In this paper I examine the particle *ʔaʔ* in Samish, which means “just” in non-negative environments and “(not) even” in negative contexts. I initially consider treating *ʔaʔ* as a negative polarity item in this second use, and construct a semantic analysis which respects the intuition that it is fundamentally an exclusive particle. The investigation reveals that the major commonality between scalar exclusive particles and scalar additive particles in negative environments is an identical scalar presupposition. The discussion then turns to parallel particles in German and Dutch, and to the minimizer/diminisher distinction in English. I conclude that in the negative cases *ʔaʔ* is an exclusive particle which is embedded within a larger complex particle which also contains an inherent *even*.

1. An introduction to *ʔaʔ*

In this paper I will explore the behaviour of the particle *ʔaʔ* in the Samish dialect of Northern Straits Salish. Depending on the environment in which it occurs, it appears to have rather distinct meanings. In its basic use, when encliticized onto the sentence initial predicate, *ʔaʔ* appears to mean “just”.

- (1) a. ʔəw̓ ɬix̣w ʔaʔ apələs kʷsə nə-s-ʔilən  
lnk<sup>2,3</sup> three ʔaʔ apple det 1s.pos-nom-eat  
‘I ate just three apples.’

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<sup>2</sup> Abbreviations used are as follows: asrt = assert, cnt = continuative, dat = dative, dem = demonstrative, det = determiner, irr = irrealis, lnk = link, mut = mutative, nom = nominalizer, obl = oblique, pos = possessive, prt = particle, psv = passive, req.info = request information, s = singular, sbj = subject, tr = transitivizer, ynq = yes/no question.

<sup>3</sup> The “link” particle *ʔəw̓* (Jelinek 1995) optionally coincides with *ʔaʔ* in examples such as (1) and (2). This particle occurs in a whole range of quantificational environments in the language where its function is not clear. I ignore its presence in my discussion until Section 5.

- b.  $híwə́l$   $sən$   $ʔaʎ$   $ʔə$   $mətúliyəʔ$   
 go.to 1s.sbj  $ʔaʎ$  obl Victoria  
 ‘I’m just going to Victoria.’

$ʔaʎ$  receives a very different translation when encliticized onto the negative morpheme  $ʔəwə$ . In these examples,  $ʔaʎ$  is interpreted as “(not) even”. Examples are given in (2).

- (2) a.  $ʔəw$   $ʔəwə$   $ʔaʎ$   $s-iʔ$   $leŋ-ət-s$   $k^wəsə$   $siləʔ-s$ .  
 Ink neg  $ʔaʎ$  irr-prt see-tr-3.sbj det grandparent-3s.pos  
 ‘He didn’t (go) see even his grandparents.’
- b.  $ʔəwə$   $ʔaʎ$   $s-iʔ$   $čəsəʔ$   $šewəq$   $k^wə$   $nə-s-ʔilən$ .  
 neg  $ʔaʎ$  irr-prt two carrot det 1s.pos-nom-eat  
 ‘I didn’t even eat two carrots.’

My goal is to resolve the question of whether and how these usages might be given a unified semantic analysis. I also consider this system from a typological perspective. The overarching aim is to learn something new from Samish about this class of particles and their behaviour in negative polarity environments.

In the remainder of this section, I outline my basic assumptions about the meaning of focus particles. In Section 2, I discuss the meaning of  $ʔaʎ$  in examples such as (1), and why this analysis cannot be extended straightforwardly to example such as (2). In Section 3 I conclude that one might be able to distinguish two particles – a plain  $ʔaʎ$  and a separate negative polarity  $ʔaʎ$ . In Section 4 I consider the polarity analysis of  $ʔaʎ$  in more detail. I develop a semantics for it which differs minimally in meaning from the non-polar variety used in non-negative environments. This section has an important secondary goal of determining exactly what particles like *just* and (*not*) *even* have in common. In Section 5 the discussion is opened up a little, and typological evidence from German, Dutch and English is considered. Building on the findings of Section 5, in Section 6 I develop a new analysis of  $ʔaʎ$  in the polarity environment as a complex particle which contains an inherent *even*. In Section 7 I discuss further consequences of the analysis.

### 1.1 Some assumptions

*Just* and *even* are focus sensitive particles. Following Rooth (1985) and others I assume that one of the basic roles of focus is to evoke a set of alternatives. In (3), this would be the set {John loves Mary, Bill loves Mary, David loves Mary}.

- (3)  $John_F$  loves Mary.

It is often convenient to speak of alternatives as the set of elements whose substitution for the focus results in these alternative propositions. In (3) this would be {John, Bill, David}.

Focus particles interact with the focus value of a sentence in different ways. According to König (1991), focus particles can be placed into two broad categories: *exclusive particles* and *additive particles*. Exclusive particles such as *only* and *just* presuppose that the background sentence, known as the *prejacent*, holds for the element

which is focused, while asserting that it does not hold for any alternative (Horn 1969). In (4), the set of alternatives are potential introducees.

- (4) John only introduced  $Bill_F$  to Sue.  
 a. **Assertion:** John introduced nobody but Bill to Sue.  
 =  $\neg\exists x[x\neq b \wedge \text{introduced}(j,x,s)]$   
 b. **Presupposition:** John introduced Bill to Sue.  
 =  $\text{introduced}(j,b,s)$

Additive particles such as *also*, *too* and *even* presuppose that the background sentence holds for some alternative, and assert that it holds for the element which is focused. In (5), the set of alternatives consists of potentially seen individuals.

- (5) John also saw  $Bill_F$ .  
 a. **Assertion:** John saw Bill.  
 = saw (j,b)  
 b. **Presupposition:** John saw some other person/people besides Bill.  
 =  $\exists x[x\neq b \wedge \text{saw}(j,x)]$

Thus, a major difference between exclusive and additive particles is that the former have truth conditional effects in the sentence (affecting the assertion, as in (4a)), while the latter do not (they only affect the presuppositions, as in (5b)).

Focus particles are very often associated with a scale. Horn (2000) takes the exclusive particle *just* to be scalar, such that the alternatives which are asserted to be excluded are ranked higher than the focus value. This gives rise to a “no more than” interpretation. In these scalar cases, the alternatives are ranked with respect to each other.

- (6) John just talked to  $his\ sister_F$  (at the party).  
 a. **Assertion:** John talked to no one ranked higher than his sister.  
 =  $\neg\exists x[\text{his.sister} < x \wedge \text{talked.to}(j,x)]$   
 b. **Presupposition:** John talked to his sister.  
 =  $\text{talked.to}(j, \text{his.sister})$

The English additive particle *even* is also scalar. Beyond the existential presupposition there is also a second scalar presupposition that the likelihood of the background sentence holding for the focused element is lower than the likelihood that it holds for an alternative to the focused element (Karttunen and Peters 1979).

- (7) John even invited  $Bill_F$ . (Rullmann 1997).  
 a. **Assertion:** John invited Bill  
 =  $\text{invited}(j,b)$   
 b. **Presupposition (i):** There are other x besides Bill that John invited.  
 =  $\exists x[x\neq b \wedge \text{invited}(j,x)]$   
**Presupposition (ii):** For all x besides Bill, the likelihood that John invited x is greater than the likelihood that John invited Bill.  
 =  $\forall x[x\neq b \rightarrow \text{invited}(j,b) <_{\text{likely}} \text{invited}(j,x)]$

Languages often use the same particle for both the non-scalar and scalar cases (König 1991).

Given this background, we can state the preliminary descriptive generalization as follows: Samish *?aʹ* looks like a scalar exclusive particle in examples like (1) and like a scalar additive particle in the negative polarity environments like (2).

## 2. The meaning of *?aʹ*

The semantics given for English *just* work well for the basic uses of *?aʹ* in Samish. Samish *?aʹ* can be treated as a scalar exclusive particle. In the following example, where travelling plans are being discussed, the speaker indicates that they are not venturing very far from home. Consequently, given a set of alternative places to go, nearby Victoria is ranked low. A suitable scale would be one as follows: <Victoria, Vancouver, Calgary>.

- (8) a.  $híwə́lʹ sən \ ?aʹ \ ?ə \ mətúliyəʔ$   
 go.to 1s.sbj just obl Victoria  
 'I'm just going to Victoria.'
- b. **Assertion:** I am going no place ranked higher than Victoria.  
 $= \neg \exists x[\text{Victoria} < x \wedge \text{go.to}(I,x)]$
- c. **Presupposition:** I am going to Victoria.  
 $= \text{go.to}(I, \text{Victoria})$

I will henceforth take this to be an adequate semantic characterization of uses of *?aʹ* which correspond to English "just", as in (1). Now what about the examples given in (2), where *?aʹ* means "(not) even"? The simplest scenario imaginable is that one can maintain the semantics for *?aʹ* just given in (8). But as it turns out, this analysis is unworkable, regardless of what scope the particle has with respect to negation.

Under the scope of negation, this analysis yields the semantics in (9), with the Logical Form in (9b), which can be paraphrased by the logical formulas in (9c-d).

### Neg > ?aʹ

- (9) a.  $?əw̃ \ ?əwə \ ?aʹ \ s-iʔ \ leŋ-ət-s \ kʷsə \ siləʔ-s.$   
 lnk neg just irr-prt see-tr-3.sbj det grandparent-3s.pos  
 'He didn't (go) see even his grandparents.'
- b.  $?əwə \ [ \ ?aʹ \ [leŋ-ət-s \ kʷsə \ siləʔ-s]]$
- c. **Assertion:** It is not the case that there is no alternative x ranked higher than his grandparents such that he saw x.  
 $= \neg \neg \exists x[\text{his.grandparents} < x \wedge \text{see}(\text{he}, x)]$   
 $= \exists x[\text{his.grandparents} < x \wedge \text{see}(\text{he}, x)]$
- d. **Presupposition:** He saw his grandparents  
 $= \text{see}(\text{he}, \text{his.grandparents})$

There is obviously a problem here with the truth conditions in (9c). To paraphrase, it says that there is some alternative x ranked higher than his grandparents that he saw. This would correspond to the English "He didn't see just his grandparents". However, as we see in the English gloss in (9a), we are actually looking for something that means "He didn't even see his grandparents". The presupposition is of course wrong as well, because it is not negated and thus conflicts with the meaning we are aiming for. This is because

negation is a presupposition hole which allows presuppositions within their scope to project unaffected (Karttunen 1973).

The alternative analysis of assigning wider scope to the particle than negation also fails. For example, rather than (9b), one might wish to analyze the Logical Form of this sentence as in (10b), with the logical paraphrase in (10c-d).

### ?aʹ > Neg

- (10) a.  $?əw̃ \ ?əwə \ ?aʹ \ s-iʔ \ leŋ-ət-s \ kʷsə \ siləʔ-s.$   
 lnk neg just irr-prt see-tr-3.sbj det grandparent-3s.pos  
 'He didn't (go) see even his grandparents.'
- b.  $?aʹ \ [?əwə \ [leŋət \ kʷsə \ siləʔs]]$
- c. **Assertion:** There is no alternative x ranked higher than his grandparents such that he didn't see x.  
 $= \neg \exists x[\text{his.grandparents} < x \wedge \neg \text{see}(\text{he}, x)]$
- d. **Presupposition:** He didn't see his grandparents  
 $= \neg \text{see}(\text{he}, \text{his.grandparents})$

Once again there is a problem. The truth conditions in (10c) cannot be right. It says that there are no alternatives ranked higher than his grandparents that he didn't see. In other words, it asserts he saw everybody ranked higher than his grandparents. This is wrong again.

No matter what the relative scope of negation and the particle *?aʹ* are, pursuing the regular denotation of the exclusive particle as given in (8) is a dead end. It appears that something more subtle has to be said about this construction.

## 3. Introducing *?aʹ<sub>NPI</sub>*

Rooth (1985), Rullmann (1997) and Herburger (2000) have argued that (*not*) *even* in English is a distinct negative polarity item from non-negative polarity *even*.

- (11) John didn't *even<sub>NPI</sub>* invite *Bill<sub>F</sub>*. (Rullmann 1997)

Intuitively, this sentence communicates that John didn't invite Bill, that there are other people that John didn't invite, and that it is less likely that John didn't invite Bill than that John didn't invite somebody else (= it would have been more likely that John invite Bill than other people). The presuppositions given for non-NPI *even* do not provide the meaning we are looking for, as can be seen in (12).

### Even in the scope of negation

- (12) John didn't *even* invite *Bill<sub>F</sub>*.
- a. **Assertion:** John didn't invite Bill.  
 $= \neg \text{invited}(j,b)$
- b. **Presupposition (i):** There are other x besides Bill that John invited.  
 $= \exists x[x \neq b \wedge \text{invited}(j,x)]$   
**Presupposition (ii):** For all x besides Bill, the likelihood that John invited x is greater than the likelihood that John invited Bill.  
 $= \forall x[x \neq b \rightarrow \text{invited}(j,b) <_{\text{likely}} \text{invited}(j,x)]$  (Rullmann 1997).

The problem is in the presuppositions. Negation is a hole to presupposition projection, as mentioned above, so the presuppositions of (12) cannot be negated. However, these presuppositions in (12b) do not match the intuitive meaning, as discussed above in relation to (11). These presuppositions should be negated as well. To fix this problem, Rooth (1985), Rullmann (1997), Herburger (2000) propose that this sentence contains a separate lexical item, *even<sub>NPI</sub>*, with the distinctive presuppositions in (13b).

**Even<sub>NPI</sub> in the scope of negation**

(13) John didn't *even<sub>NPI</sub>* invite Bill<sub>F</sub>.

a. **Assertion:** John didn't invite Bill.

= ¬invited(j,b)

b. **Presupposition (i):** There are other x besides Bill that John didn't invite.

= ∃x[x≠b ∧ ¬invited(j,x)]

**Presupposition (ii):** For all x besides Bill, the likelihood that John didn't invite x is greater than the likelihood that John didn't invite Bill.

= ∀x[x≠b → ¬invited(j,b) <<sub>likely</sub> ¬invited(j,x)]<sup>4</sup> (Rullmann 1997).

The difference is that negation is incorporated within the presuppositions, so it no longer matters that the sentential negation is a presupposition hole. These presuppositions themselves are already inherently negated and survive the presuppositional hole of overt sentential negation.

Now back to Samish. *?al'* means "(not) even" in negative contexts. In light of the previous discussion, and the fact that the regular denotation of *?al'* seems to fail in these contexts, one might wish to say that here we are dealing with a negative polarity item, *?al'<sub>NPI</sub>*.

As for what *?al'<sub>NPI</sub>* means, two alternative analyses come to mind. The first hypothesis is to adopt the same semantics for *?al'<sub>NPI</sub>* as given above for *even<sub>NPI</sub>* in (13). This treatment takes advantage of the fact that *?al'* and *?al'<sub>NPI</sub>* are separate lexical items, while abandoning the possibility that there is any interesting connection between them. In the case of English, *even* and *even<sub>NPI</sub>* may be lexically distinct, but they certainly have a lot in common. They are both scalar additive particles with no truth conditional effects, that have both existential and scalar presuppositions. The sole difference is whether negation is built into the presuppositions or not.

The second hypothesis is to try to keep a close relation between the meaning of *?al'* and *?al'<sub>NPI</sub>*. As *?al'* is a scalar exclusive particle with truth conditional effects, it would be a very interesting result if we could maintain that *?al'<sub>NPI</sub>* is an exclusive particle too. Since one of my primary goals is to see what exclusive particles and additive particles have in common in negative polarity environments, this path potentially yields much more enlightening results.

<sup>4</sup> An equivalent way of treating the scalar presupposition of *even<sub>NPI</sub>* is to say that, rather than containing an implicit negation, it simply has the reverse ordering relation from non-polar *even*.

4. The meaning of *?al'<sub>NPI</sub>*

In this section I explore the possibility that *?al'<sub>NPI</sub>* is an exclusive particle – hopefully revealing what particles like *just* and *even<sub>NPI</sub>* have in common and what sort of new assumptions must be made to make the connection.

Here is a first attempt which makes very minimal changes to the semantics of *?al'*. *?al'<sub>NPI</sub>* is just like normal *?al'*, except: (i) the assertion no longer contains an implicit negation (it is supplied by the overt sentential negation *?əwə*), (ii) the presupposition is altered to include negation. This is given for the sentence in (14) below.

**?al'<sub>NPI</sub>: First version**

(14) a. ?əwə ?əwə ?al' s-i? leŋ-ət-s k<sup>w</sup>sə siləʔs.

lnk neg ?al'<sub>NPI</sub> irr-prt see-tr-3.sbj det grandparent-3s.pos

'He didn't (go) see even his grandparents.'

b. ?əwə [?al'<sub>NPI</sub> [leŋəts k<sup>w</sup>sə siləʔs]]

c. **Assertion:** There is no alternative x ranked greater than his grandparents that he saw.

= ¬∃x[his.grandparents < x ∧ see(he, x)]

d. **Presupposition:** He didn't see his grandparents.

= ¬see(he, his.grandparents)

On a very superficial level, the semantics given in (14) appear to be sufficient. Since negation is only supplied by the clausal negation *?əwə*, there is no longer a risk of double negation, one of the problems with (9) above. Furthermore, since the preajacent presupposition now contains a negation, it no longer matters that *?əwə* is a hole to presupposition projection.

However there are some problems. The first problem is that it is difficult to accept that this preajacent could be presupposed. This is illustrated with the example in (15).

(15) a. ?əwə ?al' s-i? čəsəʔ šewəq k<sup>w</sup>ə nə-s-ʔilən.

neg ?al'<sub>NPI</sub> irr-prt two carrot det 1s.pos-nom-eat

(?əwə nəčə ?al' k<sup>w</sup>ə nə-s-ʔilən.)

lnk one ?al' det 1s.pos-nom-eat

'I didn't even eat two carrots. (I just ate one.)'

b. **Assertion:** There is no number n ranked greater than 2 such that I ate n carrots.

= ¬∃n[2 < n ∧ |{x: carrot(x) ∧ ate(I,x)}| = n]

c. **Presupposition:** I didn't eat 2 carrots.

= ¬|{x: carrot(x) ∧ ate(I,x)}| ≥ 2

It is hard to imagine that the speaker actually intends to encode a presupposition meaning "I did not eat 2 carrots" while asserting "I did not eat n carrots, n greater than 2". Under the standard assumption that numerals truth conditionally have the one sided "at least" reading, the presupposition in (15c) entails the assertion in (15b). Presuppositions are normally understood as noncontroversial propositions that are taken for granted or can be easily accommodated by the interlocutors (Kadmon 2000). This is clearly not the case here.

Simply disposing with the preajacent altogether will result in the wrong meaning too. It seems like the simplest way to adjust the semantics of *?al'<sub>NPI</sub>* while remaining

faithful to its exclusive particle nature is to incorporate the prejacent into the truth conditions. This has been proposed for the prejacent in the case of English *only*, by Taglicht (1984), Atlas (1993) and many others. This revision is given in (16). Note that the assertion is phrased disjunctively.

- (16) a.  $\text{ʔəw} \quad \text{ʔəwə} \quad \text{ʔaʔ} \quad \text{s-iʔ} \quad \text{leŋ-ət-s} \quad \text{kʷsə} \quad \text{siləʔ-s}$   
 lnk neg just irr-prt see-tr-3.sbj det grandparent-3s.pos  
 ‘He didn’t (go) see even his grandparents.’  
 b. **Assertion:** There is no alternative equal to or higher than his grandparents that he saw.  
 $= \neg[\exists x[\text{his.grandparents} < x \wedge \text{see}(\text{he}, x)] \vee \text{see}(\text{he}, \text{his.grandparents})]$   
 c. **Presupposition:** *Scrapped*

A second issue with the semantics of  $\text{ʔaʔ}_{\text{NPI}}$  as developed so far is whether it adequately reflects the scalar nature of  $\text{even}_{\text{NPI}}$ . The scalar aspect of the meaning of  $\text{ʔaʔ}_{\text{NPI}}$  comes from the fact that it truth conditionally excludes alternatives which are higher ranking. This can plausibly be recast in such a way that exclusive particles like *just* or *ʔaʔ* have a scalar presupposition very similar to the one found with  $\text{even}_{\text{NPI}}$ .

Very often, scalar exclusive particles are used to downplay the significance of an utterance. For instance, the utterance in (17a) contains a natural use of *just*. In (17b), however, the use of *just* is infelicitous out-of-the-blue, because it requires the listener to construct a context in which eating quail is very unremarkable. The infelicity derives from the difficulty in reconstructing such a context.

- (17) a. We’re just going to eat leftovers for supper.  
 b.# We’re just going to eat quail for supper.

This indicates that the scale involved with scalar exclusive particles is one of “notworthiness”.

A similar claim has been made about the scalar presupposition associated with *even*. Rather than saying that the associate of *even* is the least likely of the alternatives, Kay (1990) has argued that the associate can be considered the most informative of them. Herburger (2000), building on Kay’s work, recasts this slightly and argues that the associate of *even* is the most noteworthy of the alternatives. Adopting Herburger’s terminology, the result is replacing the likelihood scale in the presupposition associated with *even* with a notworthiness scale.

The negated notworthiness scale associated with  $\text{even}_{\text{NPI}}$  is given in (18). Note that this negated scale is equivalent to a non-negated reversed scale, such that the associate of  $\text{even}_{\text{NPI}}$  is the least noteworthy of the alternatives.

- (18) a. John didn’t  $\text{even}_{\text{NPI}}$  invite *Bill*. (Rullmann 1997)  
 b. **Scalar Presupposition (ii):** For all  $x$  besides *Bill*, it is more noteworthy for John not to invite *Bill* than for John not to invite  $x$ .  
 (For all  $x$  besides *Bill*, it is less noteworthy for John to invite *Bill* than for John to invite  $x$ ).  
 $= \forall x[x \neq b \rightarrow \neg \text{invited}(j,x) <_{\text{noteworthy}} \neg \text{invited}(j,b)]$   
 $(= \forall x[x \neq b \rightarrow \text{invited}(j,b) <_{\text{noteworthy}} \text{invited}(j,x)])$

The upshot is that the scale associated with  $\text{even}_{\text{NPI}}$  and *just* is arguably not that different.

In order to capture this similarity between the two types of particles, we add an additional scalar presupposition to scalar exclusive particles. In the case of  $\text{ʔaʔ}_{\text{NPI}}$ , it is given in (19b) below.

- (19) a.  $\text{ʔəw} \quad \text{ʔəwə} \quad \text{ʔaʔ} \quad \text{s-iʔ} \quad \text{leŋ-ət-s} \quad \text{kʷsə} \quad \text{siləʔ-s}$   
 lnk neg just irr-prt see-tr-3.sbj det grandparent-3s.pos  
 ‘He didn’t (go) see even his grandparents.’  
 b.  **$\text{ʔaʔ}_{\text{NPI}}$  Scalar Presupposition:** For all alternatives  $x$  to his grandparents, it is less noteworthy for him to see his grandparents than for him to see  $x$ .  
 $= \forall x[x \neq \text{his.grandparents} \rightarrow \text{see}(\text{he}, \text{his.grandparents}) <_{\text{noteworthy}} \text{see}(\text{he}, x)]$

As can be seen, the form of the scalar presuppositions of  $\text{even}_{\text{NPI}}$  and  $\text{ʔaʔ}_{\text{NPI}}$  are identical.

This treatment has a couple of notable features. First of all, it is no longer necessary to encode scalarity into the truth conditions of scalar exclusive particles. The difference between non-scalar and scalar exclusive particles is simply the presence of an additional scalar presupposition, just as with non-scalar and scalar additive particles. A second interesting feature is that, unlike in the case of *even* and  $\text{even}_{\text{NPI}}$ , the scalar presupposition I have proposed for  $\text{ʔaʔ}_{\text{NPI}}$  is identical to the one I would posit for non-NPI *ʔaʔ*. That is, the scale is not negated or reversed in the polarity item. In (20), plain *ʔaʔ* has a scalar presupposition of the same form as the one found with  $\text{ʔaʔ}_{\text{NPI}}$ .

- (20) a.  $\text{híwəʔ} \quad \text{sən} \quad \text{ʔaʔ} \quad \text{ʔə} \quad \text{mətúliyəʔ}$   
 go.to 1s.sbj just obl Victoria  
 ‘I’m only going to Victoria.’  
 b. **Scalar Presupposition:** For all alternatives  $x$  to Victoria, it is less noteworthy for me to go to Victoria than for me to go to  $x$ .  
 $= \forall x[x \neq \text{Victoria} \rightarrow \text{go.to}(I, \text{Victoria}) <_{\text{noteworthy}} \text{go.to}(I, x)]$

A third issue is whether it matters that  $\text{ʔaʔ}_{\text{NPI}}$  lacks the existential presupposition that is presumably found in  $\text{even}_{\text{NPI}}$ . One way to deal with this would be to say that the existential inference arises indirectly as a pragmatic entailment from the scalar presupposition, which I have just proposed. This is Rullmann’s (1997) reanalysis of the existential presupposition associated with *even*. Citing conflicting data which both support and undermine positing an existential presupposition for *even*, he argues the conflict is solved if one considers the existential inference as such a pragmatic entailment. Working with the “likelihood” theory of *even*, he reasons that since speakers know that the asserted alternative is the least likely, they will be inclined to conclude that the more likely alternatives which are not asserted are also true. This follows from a default assumption that if  $p$  is less likely than  $q$  and  $p$  is true, then (in all likelihood)  $q$  is also true. Taking the case of (21), the use of *even* here not only presupposes that Mary inviting *Bill* is the least likely of the alternatives, it also justifies the hearer in concluding that more likely alternative propositions are also true.

- (21) Mary even invited *Bill*.

If Rullmann is right, then my proposed scalar presupposition for  $\text{ʔaʔ}/\text{ʔaʔ}_{\text{NPI}}$  should give rise to the same pragmatic entailment, provided that such default reasoning holds for

scales of noteworthiness as well as likelihood.<sup>5</sup> In that case, then  $?a'_{NPI}$  and  $even_{NPI}$  do not differ with respect to the presence of an existential presupposition. To demonstrate, the reasoning would go as follows for (19): the subject *he* didn't see his grandparents. His grandparents are the least noteworthy people for him to have visited (because normal grandchildren take some interest in their grandparents, for example). If he didn't make the least noteworthy visit, then chances are that he didn't make any noteworthy visits either. So, chances are, there are other people he didn't visit.

To recap, in order to make the parallel between scalar exclusive particles like *just* and negative polarity scalar additive particles like  $even_{NPI}$  as tight as possible, we have had to make some revisions to our basic assumptions. First of all, one needs to adopt the controversial hypothesis that the preadjacent clause of the scalar exclusive particle is built into the truth conditions of *just/?a'* rather than treating it as a presupposition. Second, we have discussed the merit of positing an additional scalar presupposition for *just/?a'* which ensures that the focal alternatives are ranked on a scale of noteworthiness. Adopting Herburger's (2000) reanalysis of the scalar presupposition associated with *even* as being one of noteworthiness, it can then be shown that the scalar presupposition generated by *just/?a'* is exactly the one generated by  $even_{NPI}$ , but not non-polar *even*. Finally, one can get around the problem of the missing existential presupposition by accepting Rullmann's (1997) argument that this existential inference associated with scalar additive particles falls out as a pragmatic entailment derived from the scalar presupposition. Since exclusive particles arguably have the same sort of scalar presupposition, the same existential inference is predicted to be licensed.

Table 1 shows how our original standard assumptions were incorporated into the semantics of  $?a'_{NPI}$ , as reflected in (14), and Table 2 takes into account the revisions discussed in this section.

ORIGINAL

	$even_{NPI}$	<i>just/?a'</i>	$?a'_{NPI}$
<i>Affect Assertion</i>	✗	✓	✓
<i>Preadjacent Presupposition</i>	✗	✓	✓
<i>Existential Presupposition</i>	✓	✗	✗
<i>Scalar Presupposition</i>	✓	✗	✗

TABLE 1

REVISED

	$even_{NPI}$	<i>just/?a'</i>	$?a'_{NPI}$
<i>Affect Assertion</i>	✗	✓	✓
<i>Preadjacent Presupposition</i>	✗	✗	✗
<i>Existential Presupposition</i>	✗	✗	✗
<i>Scalar Presupposition</i>	✓	✓	✓

TABLE 2

Putting it all together, the revised semantics for  $?a'_{NPI}$  are given in (22).

<sup>5</sup> Herburger (2000) argues that this type of inference is valid given a scale of noteworthiness.

### $?a'_{NPI}$ : Revised

- (22) a.  $?a'w$   $?a'wə$   $?a'$  s-i? leŋ-ət-s k<sup>w</sup>sə siləʔ-s.  
lnk neg just irr-prt see-tr-3.sbj det grandparent-3s.pos  
'He didn't (go) see even his grandparents.'
- b.  $?a'wə$  [ $?a'_{NPI}$  [leŋəts k<sup>w</sup>sə siləʔs]]
- c. **Assertion:** It is not the case that he saw an alternative x to his grandparents or that he saw his grandparents.  
=  $\neg[\exists x[\text{his.grandparents} \neq x \wedge \text{see}(\text{he}, x)] \vee \text{see}(\text{he}, \text{his.grandparents})]$
- d. **Scalar Presupposition:** For all alternatives x to his grandparents, it is less noteworthy for him to see his grandparents than for him to see x.  
=  $\forall x[x \neq \text{his.grandparents} \rightarrow \text{see}(\text{he}, \text{his.grandparents}) <_{\text{noteworthy}} \text{see}(\text{he}, x)]$

Now I will take a moment to reflect on how satisfying this analysis is overall, and what the important lessons are. Although this treatment of  $?a'_{NPI}$  is perhaps successful, it is a little hard to designate it as a straightforward exclusive particle. The truth conditional effect is to exclude all the higher ranked alternatives. But if an existential inference can be generated as a pragmatic entailment, following Rullmann, then this truth conditional exclusion is a little redundant. This reduces the interest of the analysis.

Of all the findings in this section, I think the most interesting and crucial is that scalar exclusive particles like *just* and negative polarity scalar additive particles like  $even_{NPI}$  have the same scalar presupposition. I will come back to this insight in Section 6, after opening up the discussion to a broader crosslinguistic perspective.

## 5. Some typological perspective

### 5.1 German and Dutch equivalents of $even_{NPI}$

German and Dutch use separate lexical items for “even” in non-negative polarity and polarity environments (König 1991, Rullmann 1997). Dutch uses *zelfs* “even” in non-polar environments, and *zelfs maar* or *ook maar* “ $even_{NPI}$ ”, composed of *zelfs* “even” or *ook* “also” and *maar* “only”, in polar environments.

- (23) a. Ja. Ik denk dat hij zelfs ZES meter ver kan springen.  
yes I think thathe even six meters far can jump.  
'Yes. I think he can even jump as far as six meters.'  
(Hoeksema and Rullmann 2001: 140)
- b. Nee. Ik denk niet dat hij ook maar EEN meter ver kan springen.  
no I think not that he also only one meter far can jump  
'No. I don't think he can jump even ONE meter.'  
(Hoeksema and Rullmann 2001: 141)

German uses *sogar* “even” in non-polar environments, and *auch nur* “ $even_{NPI}$ ”, composed of the particles *auch* “also” and *nur* “only”, in polar environments.

- (24) a. Sogar DER PRÄSIDENT kam zur Versammlung.  
even the president came to the meeting  
'Even the President came to the meeting.'  
(König 1991: 34)

- b. Ausserdem hält Neumann es für unvernünftig zu glauben,  
besidesconsiders Neumann it as unwise to believe
- dass ein 38-Quadratmeter-Gotteshaus ausreichte, um **auch nur 100**  
that an 38 square meter church would suffice to also only<sup>6</sup> 100
- Gemeindemitglieder aufzunehmen.  
members of the congregation hold
- ‘Besides, Neumann finds it unwise to believe that a 38 square meter church would suffice to contain even 100 congregation members.’  
(Hoeksema and Rullmann 2001: 158-9)

The use of exclusive particles in a complex that means “even<sub>NPI</sub>” is remarkably similar to Samish. From the current perspective, one might argue that in these examples we find negative polarity exclusive particles in German and Dutch, namely *nur*<sub>NPI</sub> and *maar*<sub>NPI</sub> in the respective languages.

But what about the other part of these particle combinations, the additive particles *auch*, *zelfs*, *ook* meaning “even” or “also”? So far nothing like this has come up in the discussion of *ʔal* in Samish. This makes it a little hard to judge to what degree examples like this from German and Dutch are similar to Samish. Furthermore, if these languages do all display the same pattern, then the question arises of which languages behave as expected. Do German and Dutch have an extra element that needs to be explained away somehow, or is there some missing piece from Samish that has so far been neglected? In the next section I discuss more data that sheds some light on the issue. As will become clear, the overt additive particle which shows up in German and Dutch is expected.

## 5.2 Minimizers and diminshers

A second set of data which I think may lead to a better understanding of *ʔal* comes from the behaviour of English minimizers and diminshers (Bolinger 1972, Horn 2001). Minimizers and diminshers are expressions denoting small quantities, such as *a bit* and *a little* respectively. In non-negative environments, minimizers and diminshers often have the same meaning (Bolinger 1972, Horn 2001).

- (25) **Minimizer**                      **Diminisher**  
a. I ate a bit.                      =    I ate a little.  
b. I’m a bit tired.                =    I’m a little tired.

This contrasts with the behaviour of minimizers and diminshers when in the scope of negation. When used in this environment, diminshers denote a higher quantity. That is, negation + diminshers = higher quantity. Minimizers behave quite differently under such circumstances. Rather than denoting a higher quantity they in fact denote an absence of quantity. That is, negation + minimizer = zero (Horn 2001). Examples are given below.

<sup>6</sup> I have altered some of the interlinear glosses to a literal word-by-word English translation in order to emphasize my point.

- (26) **Neg + Min**                      **Neg + Dim**  
a. I didn’t eat a bit.                ≠    I didn’t eat a little. (i.e., I ate a lot)  
b. I was not a bit tired.            ≠    I was not a little tired. (i.e., I was really tired)

According to Horn (2001), this split in behaviour is due to the fact that minimizers are negative polarity items in this context, whereas diminshers are not.

The lesson for the current study is this: diminshers are very reminiscent of English *just* within the scope of negation, as pointed out in the discussion of (9), because they mean “not no more than...”, which of course means “more than...”. Minimizers are reminiscent of Samish *ʔal* in the scope of negation because they denote a lower quantity in this context.<sup>7</sup>

The difference seems to stem from the fact that minimizers have a built in *even* in the polar environment, as Heim (1984) observed for certain NPIs.

- (27) **Neg + Min**                      **Neg + even + Min**  
a. I didn’t eat a bit.                =    I didn’t eat even a bit.  
b. I was not a bit tired.            =    I was not even a bit tired.

This is quite suggestive, given the preceding discussion of German and Dutch. This suggests that we do expect to find an additive particle with these particles.

The last piece of data in the paradigm from English reinforces this point. The overt addition of *even* to a diminshers appears to “transform” it into a negative polarity item, so that a diminshers is once again interchangeable with a minimizer.

- (28) **Neg + Dim**                      **Neg + even + Dim**                      **Neg + (even) + Min**  
a. I didn’t eat a little.            ≠ I didn’t eat even a little        = I didn’t eat (even) a bit.  
b. I was not a little tired. ≠ I was not even a little tired = I was not (even) a bit tired.

This implies that the only difference between minimizers and diminshers is whether *even* is inherently built in when these particles occur in negative environments.

## 5.3 Implications for *ʔal*<sub>NPI</sub>

As noted, there are interesting parallels between the meaning of diminshers and minimizers under negation, and the difference in meaning between *ʔal* and *ʔal*<sub>NPI</sub> in the same environment. If the parallel is valid, it suggests that one might expect *ʔal* and *ʔal*<sub>NPI</sub> to differ simply on the basis of an inherent *even* found with the latter, as with minimizers. This would be a welcome analytical leap, because then *ʔal*<sub>NPI</sub> would fully partake in the pattern of *auch nur* and *zelfs/ook maar*, which have a built in overt additive component.

This brings our discussion to another particle which has been overlooked in the discussion of Samish so far – *ʔəw*, mentioned briefly in footnote 3. Although its co-occurrence with *ʔal* is preferred in the “even<sub>NPI</sub>” construction, it is fully optional. It is a rather puzzling particle in that it almost never gets translated. However, there is evidence

<sup>7</sup> This is not to say that English *just* and diminshers are exactly the same thing, or that Samish *ʔal* and minimizers are exactly the same thing. One difference between diminshers/minimizers on the one hand and *just/ʔal* on the other is that the low quantity is lexically (and contextually) specified in the former pair, while in the latter it is a question of the quantity expressed by the focused phrase.

that it is additive, at least in some general sense. In his work on the Saanich dialect, Montler (1986) discusses how  $\text{ʔəw}$  can conjoin clauses, where it is best translated as “and, and so”.

- (29)  $k^w\acute{e}n\text{-}\acute{e}t$   $s\acute{e}n$   $k^w\acute{e}$   $n\acute{e}\text{-}s$   $\text{ʔəw}$   $n\acute{e}w\acute{e}\text{-}s$   
 take-tr 1s.sbj det 1s.pos-nom lnk inside-effort  
 ‘I took it and carried it inside.’ *Saanich dialect*

Insomuch as there is often an overlap between such conjunctions and additive particles within languages (König 1991), one can take this as weak support for treating  $\text{ʔəw}$  as broadly “additive”

Somewhat more robust evidence comes from concessive environments where  $\text{ʔəw}$  corresponds to “even (if)”. The “if” here is implicit.

- (30)  $\text{ʔəw}$   $l\acute{e}m\acute{x}^w$ ,  $\text{ʔi}?$   $t\acute{e}w\acute{e}$   $ye?$   $s\acute{e}n$   $\text{ʔ}\acute{e}$   $met\acute{u}liy\acute{e}?$   
 lnk rain[cnt] then still go 1s.sbj obl Victoria  
 ‘Even if it rains, I will still go to Victoria.’

Although this evidence is a little circumstantial, it appears a case could be made for treating  $\text{ʔəw}$  (more or less) as an additive particle. If this is the case, then we can liken its optionality with  $\text{ʔal}'_{\text{NPI}}$  to the optionality of overt *even* in minimizers.

#### 6. New idea: $[\text{ʔəw}\dots\text{ʔal}]_{\text{NPI}}$ as a complex particle

Acknowledging that there is an additive particle already present in this construction offers a new perspective.<sup>8</sup> Perhaps these complex expressions really do draw different components of their meanings from their parts, although not necessarily in a transparently compositional way. Under this treatment, it is no longer the case that  $\text{ʔal}'$  by itself has a negative polarity variant. Rather,  $\text{ʔəw}\dots\text{ʔal}'$  can be regarded as a complex NPI.

One way to think of it is that  $\text{ʔəw}\dots\text{ʔal}'$  has the truth conditional attributes of the additive particle  $\text{ʔəw}$  and the scalar presupposition of exclusive particle  $\text{ʔal}'$ . But why would a language bother doing this? The answer comes out of the discussion in Section 4, where we were comparing *just* and *even*. The scale associated with  $even_{\text{NPI}}$  is reversed compared to the scale of non-NPI *even*. The scalar presupposition I have posited for scalar exclusive particles like *just* or  $\text{ʔal}'$  has exactly such a reversed scale. Therefore, the exclusive particle either carries, or at least indicates, the type of scale associated with the particle.

The consequence is that a more conservative treatment of the particles in their non-composite form is permissible. The main innovation from Section 4 that needs to be adopted is adding a scalar presupposition to the scalar exclusive particle. Furthermore, as mentioned, it is no longer appropriate to speak of  $\text{ʔal}'_{\text{NPI}}$ , since the whole thing is  $[\text{ʔəw}\dots\text{ʔal}]_{\text{NPI}}$ . The contributions lent by the subparts of this complex particle are schematized in Table 3.

<sup>8</sup> Thanks to Hotze Rullmann for suggesting this type of approach.

	$[\text{ʔəw}\dots\text{ʔal}]_{\text{NPI}}$		
	$\text{ʔəw}$	$[\text{ʔəw}\dots\text{ʔal}]_{\text{NPI}}$	$\text{ʔal}'$
<i>Affect Assertion</i>	✗	→ ✗	✓
<i>Prejacent Presupposition</i>	✗	→ ✗	✓
<i>Existential Presupposition</i>	✓	(→✓)?	✗
<i>Scalar Presupposition</i>	✗	✓ ←	✓

TABLE 3

The last question that remains about this analysis is the status of the existential presupposition, possibly lent by  $\text{ʔəw}$ . We might adopt Rullmann’s hypothesis that it is the result of a pragmatic entailment generated from the scalar presupposition which is lent by  $\text{ʔal}'$ . But if this is the case, then it is difficult to see what  $\text{ʔəw}$  is adding to the meaning of the complex. The truth conditional “effects” that it is lending are nonexistent. This is a possible analysis, which maintains that  $\text{ʔəw}$  does nothing more than nullify the truth conditional effects of  $\text{ʔal}'$ . Alternatively, we might wish to say that  $\text{ʔəw}$  really is doing something substantial by adding an existential presupposition. However, since the whole thing is an NPI, this existential presupposition will need to contain an implicit negation. This means that  $\text{ʔəw}$  is in fact  $\text{ʔəw}'_{\text{NPI}}$ . This is an interestingly different conundrum than the one we started out with, but I do not think I can solve the problem at this time. I will leave this as an unanswered problem for now.

#### 7. Further discussion

##### 7.1 Idiomatic minimizers

Crosslinguistically, minimizer NPIs often take the form of idiomatic minimal denoting expressions. Some examples from English are given in (31).

- (31) a. I didn’t drink (even) a drop of alcohol.  
 b. I didn’t touch (even) a hair on his head.

In these examples, the minimizers are not adding literal meaning to the sentence – they are idioms. Rather, it seems that such expressions contribute a conventional scale which arises from their literal meaning.

Following the discussion in Section 6, we can say that this presupposed scale functions like a specialized version of the sort of scale associated with  $\text{ʔal}'$  or *just*. It is the right sort of scale needed for a negative polarity version of *even*. When combined with *even*, the whole complex forms a new negative polarity item. Exactly like  $\text{ʔal}'$  in Samish, *nur* in German and *maar* in Dutch, the minimal denoting expression brings no meaning into the bargain other than a scalar presupposition. The difference between idiomatic minimizers and the languages using exclusive particles is that the scalar presupposition in minimizers just happens to be very nuanced.

##### 7.2 Unexplained uses of $\text{ʔəw}$ in Samish

Although it has been possible to situate the use of  $(\text{ʔəw})\dots\text{ʔal}'$  to mean “ $even_{\text{NPI}}$ ” into a crosslinguistic picture, this is actually a very difficult conclusion to arrive at in Samish.

This has everything to do with the difficulty in designating  $\text{ʔəw}$  as an additive particle. The problem is that  $\text{ʔəw}$  has an amazingly wide distribution in the language, and is used in all sorts of quantificational environments where it doesn't clearly contribute any meaning at all.

The most significant piece of data which inhibits the conclusion arrived at in this paper is that  $\text{ʔəw}$  is also used with  $\text{ʔal}$  in non-NPI environments. In these cases, rather than encliticizing onto the sentential negation, the particles encliticize onto the main predicate in a sentence, as in (32) with a nominal predicate “three apples”.

- (32)  $\text{ʔəw}$      $\text{hix}^w$      $\text{ʔal}$      $\text{apələs}$   $\text{k}^w\text{sə}$      $\text{nə-s-ʔhən}$   
 lnk    three     $\text{ʔal}$     apple det    1s.pos-nom-eat  
 ‘I ate just three apples (*lit. What I ate is just three apples*).’

Outside of its co-occurrence with  $\text{ʔal}$ ,  $\text{ʔəw}$  is used in a very large number of other quantificational environments. A small sample is given in (33)

- (33) a.  $\text{ʔəhán}$   $\text{ʔəw}$      $\text{x}^w\text{əy}əŋ$   
 very lnk bright  
 ‘It’s too bright.’
- b.  $\text{mək}^w$   $\text{ʔəw}$      $\text{qəl-iiməʔ}$      $\text{tə q}^w\text{a}ʔ$   
 all lnk bad-appear det water  
 ‘All the water is dirty.’
- c.  $\text{yas}$      $\text{sən}$      $\text{ʔəw}$      $\text{čéʔiʔ}$   
 always 1s.sbj lnk work[cnt]  
 ‘I’m always working.’

While I do not have an account of these different uses, I think that distinguishing [ $\text{ʔəw} \dots \text{ʔal}$ ]<sub>NPI</sub> is a first step towards sorting it all out.

## 8. Conclusion

The major finding of this paper concerning  $\text{ʔal}$  is that this particle reduces to two separate lexical items:  $\text{ʔal}$  “just” and [ $\text{ʔəw} \dots \text{ʔal}$ ]<sub>NPI</sub> “even<sub>NPI</sub>”. The major theoretical finding is that scalar exclusive particles like *just* have an identical scalar presupposition to the one found in negative polarity scalar additive particles like *even*<sub>NPI</sub>.

This accounts for why some languages incorporate exclusive particles into the make-up of more complex items meaning “even<sub>NPI</sub>”. Minimizers can be conceived in a similar way. These complex forms contain a possibly inherent *even* and some minimal denoting expression which “combine”, such that the entire item has the truth conditional effects of the additive particle and scalar presuppositions of the minimal denoting item.

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