

A Scalar Opposite of Scalar *Only*

Barbara Tomaszewicz
University of Southern California

1. Introduction

In English, the adverb *only/merely* contributes to both the assertion and the presupposition of the sentence in which it occurs (Horn 1969, Klinedinst 2005, van Rooij & Schulz 2007, Beaver & Clark 2008, Roberts 2006, 2011, a.o.). The sentence in (1) presupposes that the janitor is ranked low on some contextually relevant scale (*scalarity*) and asserts that Maria did not talk to a person of a higher rank on the scale than the janitor (*exclusivity*). *Only* additionally contributes a presupposition that a proposition from the focus alternatives at least as strong as the prejacent holds, where the prejacent is the proposition that Maria talked to the janitor.¹

I propose that the Polish adverb *aż* makes exactly the opposite contribution to scalar *only*. The sentence in (2), in contrast to (1), conveys that the janitor is high on some contextual scale (which is, of course, unusual in typical contexts).

- (1) Maria *only/merely* talked to the janitor.
(2) Maria rozmawiała *aż* z dozorcą.
Maria talked *aż* with janitor
'Maria talked to somebody so important as the janitor.'

On par with *only/merely*, *aż* obligatorily associates with focus, the PP in (2), and contributes two presupposed components and an asserted exclusive component, (3)b, each of them a mirror image of the corresponding component of *only*, (3)a. The scalar presupposition is that the focus associate occupies a significantly high as opposed to low position on the contextually relevant scale. The asserted component is the exclusion of lower as opposed to higher alternatives. Finally, *aż* contributes a presupposition that at most the prejacent is true.

- (3) (a) *only*: the prejacent or an alternative at least as strong is true (presupposition)
low on the scale (presupposition)
no higher alternative is true (assertion)
- (b) *aż*: the prejacent or an alternative at most as strong is true (presupposition)
high on the scale (presupposition)
no lower alternative is true (assertion)

It is frequently noticed that *even* functions as an antonym of *only* at the level of presupposition (Horn 1969, König 1991, Beaver & Clark 2008). I show that *aż* in (2) is both similar to and different from *even* and that *aż* is a direct scalar opposite of *only*.

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¹ The status of the prejacent, i.e. the proposition modified by *only*, has been extensively discussed in the literature. It is generally accepted that the prejacent is not asserted. It has been treated as presupposed (e.g. Horn 1969, Rooth 1985), as a conversational implicature (van Rooij and Schultz 2007), as not-at-issue/backgrounded content that tends to project (Roberts 2006, 2011).

2. Focus sensitivity

2.1. Syntax of *aż*

Several syntactic arguments suggest that *aż* displays the typical behavior of focus sensitive adverbs such as *only*, *even*, *too* and obligatorily associates with focus. First, not only does the placement of focal stress in the preadjacent interact with the meaning contribution of *aż*, but also the surface position of *aż* interacts with the placement of focus. *Aż* appears as a sister to different syntactic constituents with a detectable effect on the meaning. The following contrast illustrates that, depending on which constituent *aż* associates with (a DP in (4) and a VP, or somewhat less plausibly a V in (5)), the effect on the meaning is different.

- (4) *Hanka poprosiła o pomoc aż [DP prezydenta].*
 Hanka asked for help *aż* president
 ‘Hanka asked for help such an important person as the president.’
- (5) *Hanka aż [VP [V poprosiła o pomoc] [DP prezydenta]].*
 Hanka *aż* asked for help president
 ‘Hanka went so far as to ask the president for help.’
 ‘What Hanka did was ask the president for help.’

The domain of association can also be the whole clause, and when both subject and IP association yield plausible meanings, an ambiguity arises. The associate determines the implicit comparison with alternatives of the same type. In (6) alternatives are either other people who could tell Ann to stop singing, or other less serious things that may happen (e.g. the whole auditioning committee laughing).

- (6) *Anna śpiewała tak słabo, że aż [IP[DP Maria] kazała jej przestać].*
 Anna sang so badly that *aż* Maria ordered her to stop
 ‘Anna sang so badly, that out of all things that could happen Maria told her to stop.’
 ‘Anna sang so badly, that out of all people Maria told her to stop.’

Aż obligatorily associates with the focus already present in the structure, it does not supply focus itself nor can it modify elements that cannot bear focus such as topics and clitics. In a construction inducing contrastive focus as in (7)a *aż* can modify either of the focused PPs in each conjunct, (7)b-c:

- (7) (a) *Janek nie rozmawiał [z dziekanem]_F, lecz [z rektorem]_F.*
 Janek not talked with dean but with chancellor
 ‘Janek did not talk to the dean but to the chancellor.’
- (b) *Janek nie rozmawiał (zaledwie) [z dziekanem]_F, lecz aż [z rektorem]_F.*
 Janek not talked merely with dean but *aż* with chancellor
 ‘Janek did not talk (merely) to the dean but to the chancellor himself.’
- (c) *Janek nie rozmawiał aż [z rektorem]_F, lecz (zaledwie) [z dziekanem]_F.*
 Janek not talked *aż* with chancellor but merely with dean
 ‘Janek did not talk to the chancellor himself but (merely) to the dean.’

The adverb not only can associate with focus as (7) shows, but it must do so. *Aż* cannot associate with a topic. In (8) the DP *the dean* is backgrounded, while *Marek* is the focus, and correspondingly, *aż* cannot associate with the DP *the dean*.

- (8) A: *Janek rozmawiał z rektorem.*
 Janek talked with dean
 ‘Janek talked to the dean’.
- B: *Nie. Tylko Marek rozmawiał (#aż) z rektorem i nikt inny.*
 No. Only Marek talked *aż* with chancellor and nobody else
 ‘No. Only Marek, nobody else, talked to the dean.’

Finally, clitic pronouns force a wider domain reading ((9)b vs. (9)a), which shows that *aż* cannot associate with weak (unfocused) pronouns. In (9)b *aż* has to associate with the adverbial or the verb, which can be independently focused (cf. Hoeksema & Zwarts 1997, Beaver & Clark 2008 on focus association of *only* in Dutch):

- (9) (a) [_{Adj} Wczoraj] widziałem *aż* [_{DP} jego].
 evening I.saw *aż* him
 ‘In the evening I saw him as opposed to other less important people.’
 ‘In the evening, as opposed to any other time, I saw him.’
 (b) [_{Adj} Wczoraj] *aż* [_{VP} go [_V widziałem]].
 evening *aż* him I.saw
 ‘In the evening I saw him as opposed to only hearing him.’
 ‘In the evening, as opposed to any other time, I saw him.’
 #‘In the evening I saw him as opposed to other less important people.’

The above syntactic tests, namely, (i) the interaction between the size of the focused constituent and the syntactic position of *aż*, and (ii) the inability of *aż* to associate with non-focused elements such as topics and clitics, suggest that *aż* obligatorily associates with focus.³

2.2. Semantics of *aż* vs. *only/merely*

As a focus associating adverb, and just like *only/merely*, *aż* takes propositional scope at LF where the set of propositional alternatives is established in accordance with the focus-induced presupposition (Jackendoff 1972, Rooth 1985, Beaver & Clark 2008).

Focus evokes a set of propositional alternatives, i.e. a set of propositions obtained by substituting the focus-marked expression with alternatives of the same semantic type. Focus associating adverbs like *only/merely* quantify over a subset of the focus alternatives. Focus association obtains by the co-indexation of the restrictor of *only/merely* with an implicit free variable *C*, a restrictor to a focus operator, presupposed to denote a contextually relevant subset of the focus alternatives (Rooth 1985, 1992).

Crucially, focus by itself evokes just a contrast set; there is no ordering among the alternatives (10). When a scalar item is focused, it lexically introduces a scale, (11), but not a direction of the ordering, e.g. *I6* can in (11) be either high or low on the number scale, depending on context.

- (10) (a) Maria talked to [John]_F.
 (b) {Maria talked to Jim, Maria talked to John, Maria talked to Joan, Maria talked to Jane ...}
 (11) (a) John is [16]_F. (*too old to play this game /too young to drink alcohol*)
 (b) {John is 1, ..., John is 14, John is 15, John is 16, John is 17, John is 19, ..., John is 50, ...}

The role of scalar focus associating adverbs is to both introduce an order among the alternative propositions (along a contextually determined dimension), and to indicate whether the position of the prejacent on the scale is high or low. Scalar *only* places the prejacent low; *aż* places the prejacent high on the scale.

In (12) and (13) scalar *only* and *aż* associate with the focused PP and operate on the same scale of alternative propositions of the form *Maria studies at x* where *x* varies over different universities and the scalar dimension is the prestige of educational institutions. *Only* introduces a presupposition that the prejacent or a scalar alternative ranked at least as high as the prejacent is true (12)a, as well as a presupposition that the prejacent is low on the scale, (12)b. The presuppositions of *aż* are the reverse: of the scalar alternatives at most the prejacent is true, (13)a, and the prejacent is high on the scale,

³ Beaver & Clark (2008) argue for a distinction between obligatory focus association, which they term *conventional*, and which is lexically encoded in *only*, *even*, etc. (as in Rooth 1985), and *free* association with focus, where operators tend to associate with but do not require a focused expression in their scope, as is the case of *always*.

(13)b. The truth conditional contribution of *only* is the exclusion of all higher alternatives (12)c. *Aż* asserts the opposite; that all lower alternatives are excluded (13)c.

- (12) Maria studiuje zaledwie [na podrzędnej uczelni]_F.
 Maria studies merely at mediocre college
 ‘Maria merely studies at a mediocre college.’
 ~ (a) Maria studies at least at a mediocre college. [presupposition]
 ~ (b) Maria’s studying at a mediocre college is not particularly prestigious. [presupposition]
 ~ (c) Maria does not study at a school more prestigious than a mediocre college. [assertion]

- (13) Maria studiuje aż [na uniwersytecie Humboldta]_F.
 Maria studies aż at university Humboldt
 ‘Maria studies at such a prestigious school as the Humboldt University.’
 ~ (a) Maria studies at most at HU. [presupposition]
 ~ (b) Maria’s studying at HU is significantly prestigious. [presupposition]
 ~ (c) Maria does not study at a university less prestigious than HU. [assertion]

The meaning components of scalar *only/merely* are presented in (14). (14)a specifies the ‘at least’ presupposition, while (14)b is the presupposition that the prejacent is low on the contextual scale (I am following Klinedinst 2005, but see also Zeevat 2009 and Beaver & Clark 2008 for a mirative presupposition that the prejacent falls short of what is expected). The assertion of exclusivity is expressed in (14)c (i.e. no proposition higher on the scale than the prejacent is true).

- (14) A sentence with the logical form *only p*, where *p* is a proposition, S a contextually determined pre-order over alternative propositions, *s* a contextual standard in S and $a \gg_s b$ indicates that *a* significantly exceeds *b* on S
 (a) presupposes that at least *p* is true
 (b) presupposes that $s \gg_s p$
 (c) asserts that $\sim \exists p'. p' \neq p \ \& \ p' \gg_s p$

Reversing the scalar orientation of each of the three components of *only* in (14), while maintaining their presupposed/asserted status, results in the following characterization of the meaning contribution of *aż*:

- (15) A sentence with the logical form *aż p*, where *p* is a proposition, S a contextually determined pre-order over alternative propositions, *s* a contextual standard in S and $a \gg_s b$ indicates that *a* significantly exceeds *b* on S
 (a) presupposes that at most *p* is true
 (b) presupposes that $p \gg_s s$
 (c) asserts that $\sim \exists p'. p' \neq p \ \& \ p' \ll_s p$

In the next section I show that the scalar reversal of each of the components of *only* in (14), i.e. the presupposed components (14)a-b resulting in (15)a-b, as well as the asserted exclusive component (14)c resulting in (15)c, provides the right interpretation for *aż*. I also show how the reversed exclusive component, though not apparent from the examples (1)-(2) and (12)-(13) emerges clearly in negative sentences containing *aż*.

3. Scalarity and Exclusivity of *Aż*

3.1. Presupposed and asserted content

Using tests for projective meaning such as negation (16), we see that the components in (13)a-b are not asserted given that they project, as shown in (16)a-b. The exclusive component, on the other hand, does not project, (16)c, and is targeted by negation:

- (16) Maria nie studiuje aż na uniwersytecie Humboldta.
 Maria not studies aż at university Humboldt
 ‘Maria does not study at such a prestigious institution as the Humboldt University.’
 ↪ (a) Maria studies at most at HU. [projects]
 ↪ (b) Maria’s studying at HU is significantly prestigious. [projects]
 ↪ (c) Maria studies at a university less prestigious than HU.

Let us demonstrate that this result mirrors the presuppositions and assertions of a corresponding sentence with *only*. Exclusivity is the only asserted component in both (16)c and (17)c. The placement on the scale projects in (16)b and (17)b, and the ‘at most’ and ‘at least’ components in (16)a and (17)a project. The prejacent proposition itself, namely ‘Maria studies at HU’ in (16), and ‘Maria studies at a mediocre college’ in (17), is negated.

- (17) Maria nie studiuje zaledwie na podrzędnej uczelni.
 Maria not studies merely at mediocre college
 ‘Maria does not merely study at a mediocre college.’
 ↪ (a) Maria studies at least at a mediocre college. [projects]
 ↪ (b) Maria’s studying at a mediocre college is relatively not prestigious. [projects]
 ↪ (c) Maria studies at a university more prestigious than a mediocre college.

Other common tests for projective content (Chierchia & McConnell-Ginet 1990, Simons et al. 2010, Roberts 2011) yield the same results: the (a-b) components project, while the question and modal operators target the exclusive component ‘Maria does not study at a university less prestigious than HU’, resulting in (18)-(19)c.

- (18) Czy Maria studiuje aż na uniwersytecie Humboldta?
 Q Maria studies aż at university Humboldt
 ‘Does Maria study at such a prestigious school as the Humboldt University?’
 ↪ (a) Maria studies at most at HU.
 ↪ (b) Maria’s studying at HU is significantly prestigious.
 ↪ (c) Does Maria not study at a university less prestigious than HU?

- (19) Być może Maria studiuje aż na uniwersytecie Humboldta.
 Perhaps Maria studies aż at university Humboldt
 ‘Perhaps Maria studies at such a prestigious institution as the Humboldt University.’
 ↪ (a) Maria studies at most at HU.
 ↪ (b) Maria’s studying at HU is significantly prestigious.
 ↪ (c) Perhaps it is not the case that Maria studies at a university less prestigious than HU.

Other important diagnostics whose results suggest that the sole asserted contribution of *aż* is the exclusion of lower alternatives involve emotive factive verbs and *because*-clauses (cf. Beaver & Clark 2008, Coppock & Beaver 2010, Drteske 1972). For *only* the results indicate that the factive predicate in (20) targets only the exclusive component (20)c, the assertion of the embedded proposition. Jan is not disappointed that Maria graduated from high-school (a), because this already counts as satisfactory. Jan is also not disappointed that Maria’s graduation from high-school is low on the scale of academic achievements (b) (which is difficult to see from this example and I address this below).

- (20) Jan jest zawiedziony, że Maria ukończyła zaledwie szkołę średnią.
 Jan is disappointed that Maria completed merely school secondary
 ‘Jan is disappointed that Maria only graduated from high-school.’
 Jan is disappointed that ...
 ↪ (a) Maria graduated at least from high-school. [presupposed]
 ↪ (b) Maria’s graduating from high-school is not relatively prestigious. [presupposed]
 ↪ (c) Maria did not graduate from any higher institution. [asserted]

Similarly to *only*, the emotive factive test targets only the exclusive component of a sentence containing *aż*. Embedding the sentence in (13) under ‘*be happy*’ in (21), makes it clear that Jan’s happiness is not merely due to the fact that Maria studies at HU (which would be the case in the absence of *aż*), but due to the fact that Maria does not study at a less prestigious school (21)c. The ‘at most’ and the ‘high on the scale’ components are not the reasons for Jan’s happiness (21)a-b, although again this is not so clear for (b).

- (21) Jan cieszy się, że Maria studiuje aż na uniwersytecie Humboldta.
 Jan happy self that Maria studies aż at university Humboldt
 ‘Jan is happy that Maria studies at such a prestigious institution as the Humboldt University.’
 Jan is happy that ...
 → (a) Maria studies at most at HU. [presupposed]
 → (b) Maria’s studying at HU is significantly prestigious. [presupposed]
 → (c) Maria does not study at a university less prestigious than HU. [asserted]

The way to demonstrate that the ‘high on the scale’ component (21)b (and thus also ‘low on the scale’ in (20)b) is not targeted by the emotive factive is to embed a negative statement containing *aż*, as in (22). Now also the asserted exclusive component emerges fully. In (22) Jan is happy that the university where Maria studies is less prestigious than HU, (22)c. That Maria’s studying at HU counts as prestigious, (22)b, and that HU is the most prestigious in the context, (22)a, are not the reasons for his happiness.

- (22) Jan cieszy się, że Maria nie studiuje aż na uniwersytecie Humboldta.
 Jan happy self that Maria not studies aż at university Humboldt
 ‘Jan is happy that Maria does not study at such a prestigious institution as the Humboldt University.’
 Jan is happy that ...
 → (a) Maria studies at most at HU. [presupposed]
 → (b) Maria’s studying at HU is significantly prestigious. [presupposed]
 → (c) Maria studies at a university less prestigious than HU. [asserted]

Further consequences of asserting the exclusion of lower alternatives are illustrated in the next section.

3.2. Asserted exclusion of lower alternatives

More support for the asserted status of the exclusive inference in (22)c comes from the contrast in (23). Both negative statements (a) and (b) in (23) convey that Maria studies at a university other than HU when the PP ‘at the Humboldt University’ is focused. Adding a continuation that explicitly negates this inference results in a contradiction only in (23)a⁴. In the sentence without *aż* in (23)b the inference is an implicature and hence it is cancellable. In the case of (a) it is not an implicature. ‘Maria studies *aż* at HU’ asserts that she doesn’t study at a lower ranked university; negating this asserts that she does study at some lower ranked university.

- (23) (a) Maria nie studiuje aż na uniwersytecie Humboldta. #Nie studiuje na żadnym uniwersytecie.
 Maria not studies aż at university Humboldt not studies at any university
 ‘Maria does not study at such a prestigious institution as the Humboldt University. #She doesn’t study at a university at all.’

⁴ The continuation in (23)a is felicitous only if the first statements is echoing (with an emphasis on *aż*) what somebody else said. Cf. ‘Maria didn’t merely graduate from high-school, she never went to high-school in the first place’.

- (b) Maria nie studiuje na uniwersytecie Humboldta. Nie studiuje na żadnym uniwersytecie.
 Maria not studies at university Humboldt not studies at any university
 ‘Maria does not study at the Humboldt University. She doesn’t study at a university at all.’

Utterances of direct dissent target asserted content (Simons et al. 2010, Roberts 2011). In (24)a the utterance of dissent is followed by a correction, which directly asserts that a lower alternative is true. The university where Maria studies is not as prestigious as the Humboldt University, but it can still be ranked high, i.e. above the standard. (24)b-c illustrate the same point: considering that RWTH Aachen University is ranked⁵ 7th in Germany, Humboldt University 5th and Heidelberg University 3rd, (24)b can assert that a lower alternative is true, while (24)c cannot. Moreover, (24)d shows that in order to dissent and say that Maria actually studies at a school lower than an average position in the ranking, the use of *only* is needed (to make an additional contribution ‘lower than the standard’).

- (24) Maria studiuje aż na uniwersytecie Humboldta.
 Maria studies aż at university Humboldt
 ‘Maria studies at such a prestigious school as the Humboldt University.’
- (a) Nie prawda. Maria studiuje na prestiżowym uniwersytecie, ale nie tak prestiżowym jak HU.
 Not true Maria studies at prestigious university but not so prestigious as HU
 ‘That’s not true. Maria studies at a prestigious school but not as prestigious as HU.’
- (b) Nie prawda. Maria studiuje na politechnice RWTH w Aachen.
 Not true Maria studies at technical.university RWTH in Aachen
 ‘That’s not true. Maria studies at RWTH Aachen University.’
- (c) Nie prawda. #Maria studiuje na uniwersytecie w Heidelbergu.
 Not true Maria studies at University in Heidelberg
 ‘That’s not true. Maria studies at Heidelberg University.’
- (d) Nie prawda. Maria studiuje zaledwie na podrzędnej uczelni.
 Not true Maria studies merely at mediocre college
 ‘That’s not true. Maria studies merely at a mediocre college.’

Further evidence for the exclusive component (15)c that lower alternatives are excluded, comes from the data in (25)-(26). If the contribution of *aż* was only at the level of presupposition, i.e. (15)a-b, the contrast between the use of *very* in (25) and the use of *aż* in (26) would be unexplained. The intensifier *very* indicates that the degree to which each university is prestigious significantly exceeds the contextual standard, e.g. Kennedy and McNally (2005). If the sole contribution of *aż* was the presupposition that the prejacent significantly exceeds the standard, in (26) each of the universities could be presupposed to be significantly high on the scale. However, the use of *aż* in the second conjunct is infelicitous, which can be accounted for assuming the exclusive component as in (15)c.

- (25) Maria i Anna studiują na bardzo prestiżowych uczelniach.
 Maria and Anna study at very prestigious colleges
 ‘Maria and Anna study at very prestigious universities.’
- (26) Maria studiuje aż na Uniwersytecie Humboldta, ...
 Maria studies aż at university Humboldt
 ... a Anna (#aż) na politechnice RWTH w Aachen.
 ... and Anna aż at technical.university RWTH in Aachen
 ‘Maria studies at HU and Anna at (such a prestigious institution) as the RWTH Aachen.’

In the next section I discuss how *aż* is similar to *very* in that it must make a reference to the contextual standard of comparison.

⁵ <http://www.timeshighereducation.co.uk/world-university-rankings/2011-2012/europe.html>

3.3. Significantly exceeding the contextual standard

The scalar presupposition as defined in (15)b sets a felicity requirement on the context. *Aż* is licensed in the context where the prejacent can be significantly high on the contextual scale of alternatives. The presence of *very* directly results in a context licensing *aż*. In (27) the sentence *Maria studies at a very prestigious school* asserts that her school is ranked high, and is thus compatible with *aż* in the parenthetical. In (28), without *very* in the main clause, *aż* sounds odd, unless the property of HU being significantly prestigious is somehow emphasized (e.g. ‘prestigious’ is stressed).

- (27) Maria studiuje na bardzo prestiżowej uczelni, *aż* na Uniwersytecie Humboldta.
 Maria studies at very prestigious college *aż* at university Humboldt
 ‘Maria studies at a very prestigious institution, at no less than the Humboldt University.’
- (28) Maria studiuje na prestiżowej uczelni, (?*aż*) na Uniwersytecie Humboldta.
 Maria studies at prestigious college *aż* at university Humboldt
 ‘Maria studies at a prestigious institution, (?at no less than) the Humboldt University.’

The way *aż* indicates a threshold beyond which the positions on the scale are taken to be high is similar to the contribution of the intensifiers *very* and *so* in the gradable domain (29) (abstracting from the presupposed status of the contribution of *aż*). These intensifiers indicate that the degree of a gradable property has significantly exceeded the standard of comparison⁶, e.g. Kennedy and McNally (2005). Being a propositional operator, *aż* does not apply to gradable properties. *Aż* operates on a set of propositions and not a set of degrees so that with a gradable predicate, as in (30), the alternatives are not different degrees of the same property, but other things that could result from Janek’s being ashamed.

- (29) Janek bardzo [_{VP} poczerwieniał] ze wstydu.
 Janek very reddened from shame
 ‘Ivan blushed very much.’
- (30) Janek *aż* [_{VP} poczerwieniał] ze wstydu.
 Janek *aż* reddened from shame
 ‘Janek was so ashamed that he blushed.’ (Cf. ‘Janek even blushed’.)

This behavior indicates that *aż* takes propositional scope at LF. My analysis of *aż* as locating the prejacent on the scale of alternative propositions significantly high with respect to a contextually salient parameter puts *aż* in the class of evaluative expression such as *very*, *so*, *quite* (Kennedy and MacNally 2005), equatives (Rett 2008) and exclamatives (Castroviejo 2006, Rett 2008). For example, the equative *as many as* when used evaluatively, (31), presupposes that a number is significantly high (Rett 2008). In the same context *aż* has the same effect (32).

- (31) Baldwin has as many as [300]_F DVDs. (Rett 2008:118)
- (32) Baldwin ma *aż* [300]_F płyt DVD.
 Baldwin has *aż* 300 disks DVD

The dimension of the scale operated on by *aż* is established on the basis of the prejacent proposition as well as the wider context. The context also sets a salient parameter with respect to which the position of the prejacent on the scale is evaluated as significantly high. According to Rett (2008) the comparison with a contextual standard is also the source of evaluativity in exclamatives, in contrast to the comparison with expectations. Rett argues that in a situation where a child with extremely short parents is expected to also be short, but actually turns out to be taller than expected, for (33) to be felicitous the child’s height still needs to exceed the average height for his or her age group.

- (33) #(My,) How tall Manny is!

⁶ The positive form of a gradable adjective itself indicates that the standard is exceeded (Kennedy 1999 a.o.).

Likewise, *aż* cannot be used felicitously if our expectations are exceeded but a contextual standard is not. In (34) the use of *aż* is not felicitous because it is odd to have potatoes high on the scale of important/significant dinner dishes.

- (34) Maria nigdy nie kończy całego obiadu, ale dziś zjadła nawet/#*aż* ziemniaki.
 Maria never not finishes whole dinner, but today ate even/#*aż* potatoes
 ‘Maria never eats all of her dinner, but today she even ate up the potatoes.’

In contrast, the use of *even* in (34) is fine, since it indicates that potatoes are unlikely for Maria to eat for dinner. *Even* is associated with a scale of likelihood, and is thus directly related to expectations.

4. A note on *aż* vs. *even*

An immediate observation about the sentences (1)-(2) is that *aż* makes a very similar meaning contribution to that of *even*. It is important to point out the main differences between *even* and *aż*.

Aż like scalar *only/merely* evokes scales of variable dimensions constructed on the basis of the preadjacent proposition with respect to the context. Crucially, the scalar dimension cannot be subsumed under the general notion of likelihood. In (35), the use of *aż* would imply that hiring a non-professional is high on the scale of alternatives involving other actors, which is unrealistic. *Even*, on the other hand, indicates that the speakers are willing to do an unlikely thing since the norm is to hire professional actors.

- (35) Potrzebujemy sobowtóra głównego aktora. Zatrudnimy nawet/#*aż* nieprofesjonalistę.
 We.need double lead actor we.will.hire even/*aż* non-professional
 ‘We need a double of the main actor. We will even hire a non-professional.’

A reverse case is presented in (36). When there is no non-likelihood implication in the context, the use of *even* is infelicitous, because *even* makes reference to likelihood (Karttunen & Peters 1979).⁷

- (36) *Given that Janek wanted to spend his vacation in extreme conditions, I am not surprised that ...*
 Janek pojechał *aż*/#nawet do Doliny Śmierci.
 Janek went *aż*/even to Death Valley
 ‘Janek went to such a hot place as Death Valley.’

How the scalar dimension is determined depends both on the local context and on pragmatic factors. Without a specific context, when *aż* associates with a location denoting PP, (37), it primarily contributes a reading of a great distance. However, knowing that Death Valley is the hottest place on earth makes the distance reading less salient, (38). Also for (37), once it is known that the Rose Valley is a beautiful place and a famous tourist destination in Bulgaria, *aż* gives the reading that the Rose Valley is a top vacation destination.

- (37) Janek spędza urlop *aż* w Dolinie Róż.
 Janek spends vacation *aż* in Valley Roses
 ‘Janek is on vacation in a significantly distant location which is the Rose Valley.’
 (38) Janek spędza urlop *aż* w Dolinie Śmierci.
 Janek spends vacation *aż* in Valley Death
 Janek is on vacation in a significantly hot/unusual/distant location which is Death Valley

Another crucial point of contrast between *aż* and *even* is illustrated in (39). Here *even* is infelicitous because it implies that Janek is in Buenos Aires and some other city at the same time.

⁷ Herburger (2000) argues that noteworthiness is better suited to the NPI account of *even* (which assumes no existential presupposition) than likelihood.

- (39) Janek jest teraz *aż/#nawet* w Buenos Aires.
 Janek is now *aż/even* in Buenos Aires
 ‘Janek is now as far as/#even in Buenos Aires.’

Even typically implies that some alternative to the prejacent is true⁸, while *aż* does not carry such existential/additive presupposition. In (40) both *aż* and *even* result in the reading where the manager is a noteworthy person for Maria to talk to. However, *aż* is compatible with the continuation that Maria did not talk to anybody else (40), whereas *nawet* is not (41).

- (40) Maria rozmawiała *aż* z menedżerem, ale nie rozmawiała z nikim innym.
 Maria talked *aż* with manager but not talked with nobody else
 ‘Maria talked to somebody so important as the manager, but she didn’t talk to anybody else’
 (41) Maria rozmawiała *nawet* z menedżerem, #ale nie rozmawiała z nikim innym.
 Maria talked even with manager but not talked with nobody else
 ‘Maria even talked to the manager, #but she didn’t talk to anybody else’

Moreover, the presence of the exclusive component in the meaning of *aż* allows it to contribute the same kind of reading as the English expressions such as *nowhere closer than*, (42). The Polish version in (43) asserts that ambulances did not transport patients anywhere closer than Elmhurst, and presupposes that transporting patients to the hospital Elmhurst is significantly far. This context is clearly incompatible with *even*.

- (42) ... ambulances have nowhere closer than Elmhurst Hospital to transport patients. (Google)
 (43) Karetki zawiozły pacjentów *aż* do szpitala w Elmhurst.
 ambulances drove patients *aż* to hospital in Elmhurst
 ‘Ambulances transported patients so far as the hospital in Elmhurst and not closer.’

The above differences between *even* and *aż* show that although *only* and *even* function as close opposites, in Polish *aż* is more of a direct scalar opposite of *only*. König (1991:59) suggests that the scalar uses of *only* and *even* in English, and *nur* and *sogar* in German “pick out extreme values on opposite ends of the same scale”⁹. However, I have demonstrated that while *even* can always be linked to the scale of likelihood, *aż* allows for scales of more specific, context dependent dimensions, just like *only*, and some of these scales are incompatible with *even*.

5. Conclusion

I have proposed that the Polish adverb *aż* should be analyzed as a scalar opposite of scalar *only/merely*. On my analysis *aż* is a focus associating adverb taking propositional scope at LF just like *only/merely*. Part of the semantic contribution of *aż* is the ordering of focus alternatives relative to a scale that is constructed on the basis of the prejacent and the wider context. A scale of propositions ordered according to a contextually salient dimension is also obtained with *only/merely*. In neither case is the dimension generalized to likelihood, which is the default dimension for *even*. *Aż* and scalar *only* place their prejacent on opposite sides of the scale. The way the two emerge as scalar opposites is due to a combination of different meaning components – two presuppositions and an assertion.

Aż presupposes that the prejacent significantly exceeds the contextual standard on the relevant scale, and asserts that no lower alternative is true. Additionally, it presupposes that at most the prejacent is true. The implication that the prejacent of *aż* is true arises from the exclusive assertion and the ‘at most’ presupposition. Scalar *only/merely* presupposes that the prejacent is low on the contextual

⁸ The existential/additive presupposition of *even* has been questioned (e.g. Rullman 1997, 2007, Herburger 2000), but there is a clear contrast between *aż* and *even* in (40) and (41).

⁹ See also Horn (1969: 99, 105) for a proposal that the presupposition of *even* is the negated assertion of *only* (the additive meaning component) and the assertion of *even* is the presupposition of *only*. (i) *Only* ($x=a$, Fx) presupposes Fx , asserts $\neg(\exists y)(y \neq x \ \& \ Fy)$; (ii) *Even* ($x=a$, Fx) presupposes $(\exists y)(y \neq x \ \& \ Fy)$ and asserts Fx .

scale (Klinedinst, 2005), that a proposition at least as strong as the prejacent holds, and asserts that no higher alternative is true. The three individual meaning components I proposed for *až* account for its properties, distinguish it from *even*, and make it a direct opposite of the scalar *only/merely*.

Scalar focus associating adverbs work at the semantics-pragmatics interfaces, contributing to both presupposed and asserted inferences. Theoretically, we can conceive of different combinations of asserted/presupposed and exclusive/additive meaning components that would yield scalar opposites. It is an empirical question which meaning components form the basis of the cross-linguistic inventory of scalar focus associating adverbs. My investigation into the meaning of *až* suggests that we can expect more types of scales that do not default to likelihood and thus cannot be fully pragmatically determined, but need to be grammatically encoded as well. A grammaticalized reference to a scale is found in various domains: it is lexically specified in the meaning of gradable predicates, it is part of the semantics of constructions such as exclamatives and equatives, and it is the basis of the contribution of scalar adverbs such as *až* and *only*. *Až* and *only*, in contrast to *even*, necessarily rely on the contextual standard of comparison for the placement of the prejacent on the scale of alternatives. Assuming that a contextually dependent scale necessarily makes reference to a contextual standard, the existence of a direct opposite of *only* is expected, and *až* fulfills this prediction.

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