

Až/čak – the scalar opposite of scalar *only*¹

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I propose an analysis of the particles *až* (*až*), found in Polish, Czech, Slovak and Russian, and *čak* in Bulgarian, Serbian and other South Slavic languages as focus sensitive adverbs with the meaning contribution of the scalar opposite of scalar *only/merely*. I argue that *až* and *čak* are focus associating propositional operators like *only* and *even*. They impose a scalar ordering on the focus alternatives according to a contextually salient dimension. I analyze the semantic contribution of *až/čak* in terms of three components, such that each is a scalar reversal of the corresponding component of scalar *only*. Thus, *až/čak* (i) assert the exclusion of lower alternatives, (ii) presuppose that among the alternatives at most the prejacent holds, and (iii) presuppose that the prejacent is significantly high on the contextual scale.

1 *Až/čak* – scalar interpretation

The sentences in (2) and (3), as opposed to (1), carry an implication about the position of the manager on the scale of people who are relevant in the context for Maria to talk to. In (2) the manager is low on the scale – the Polish adverb *zaledwie* is a counterpart of the English *merely*. In (3) due to the addition of *až* the manager is interpreted as high on the scale.

- (1) Maria rozmawiała z menedżerem. (Po)
Maria talked with manager
'Maria talked to the manager.'
- (2) Maria rozmawiała zaledwie z menedżerem. (Po)
Maria talked merely with manager
'Maria merely talked to the manager.'
- (3) Maria rozmawiała aż z menedżerem. (Po)
Maria talked aż with manager
'Maria talked to somebody so important as the manager.'

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In the Bulgarian example in (4) the presence of *čak*, parallel to *až* in (3), places Mary high on the scale of the people relevant for the speaker to talk to.

- (4) Govorix *čak* s Mary. (Bg)
 I.talked *čak* with Mary
 ‘I talked to somebody so important as Mary.’

The reading resulting from the addition of *až/čak* is similar to the effect of the addition of *even* (Polish *nawet*, Bulgarian *daže*). In (5), similar to (3), the manager is implied to be a noteworthy person for Maria to talk to. However, *nawet* is not compatible with the continuation that Maria did not talk to anybody else, (5), in contrast to *až* in (6).

- (5) Maria rozmawiała nawet z menedżerem, ... (Po)
 Maria talked even with manager
 #ale nie rozmawiała z nikim innym.
 but not talked with nobody else
 ‘Maria even talked to the manager, #but she didn’t talk to anybody else.’

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

Furthermore, there are contexts where *even* is infelicitous, but *až/čak*² contribute a reading directly translatable with *only/merely* or ‘*no sooner than*’.

- (7) Wreszcie porządnie się wyspałem, bo wstałem aż o 7-mej.³ (Po)
 finally properly self I.slept because I.woke-up *až* at 7th
 ‘I finally had a good night’s sleep. I woke up only at 7.’
- (8) Daneček se vzbudil až v 6 ráno. (Cz)
 Dan refl woke-up *až* at 6 morning
 ‘Little Dan woke up only at 6 am.’

² Throughout the text I am using the Polish spelling *až* to cover the corresponding particles spelled *až* in Czech, Slovak and Russian.

³ The same reading can be conveyed with the use of *dopiero*, which is preferred by many native speakers in this context. As a native speaker I find sentence (7) totally acceptable. It comes from the Internet and many similar examples can be found in natural speech. The preference for *dopiero* is not surprising, since it is an unambiguously temporal exclusive, i.e. it always contributes the “no sooner than” reading. The interchangeability of *až* and *dopiero* supports my analysis of *až* as contributing exclusivity as an assertion (section 3).

(9) Prepáchte, že odpisujem *až* teraz. (SI)
 excuse.imp that I.answer *až* now
 ‘I am sorry that I am replying only now.’

(10) Zašto mi kazvaš *čak* sega? (Bg)
 why me you.tell *čak* now
 ‘Why are you telling me only now?’

In (7)-(10) the use of *even* would imply that waking up/replying/telling has happened before, which is clearly not the meaning obtained with the use of *až/čak*. The inferences in negative sentences further contrast *až/čak* and *even*.

Negation in the presence of *až* in (11) conveys that the distance that Jan traveled was shorter than to Warsaw; the sentence cannot mean that Jan did not travel at all, which is a possible interpretation in (12) containing negation and *even*. The use of *merely* in (13) also induces a distance reading⁴.

(11) Jan nie pojechał *až* do Warszawy, ... (Po)
 Jan not went *až* to Warsaw
 pojechał zaledwie do Łodzi. /#został w domu.
 went *only* to Łódź stayed at home
 ‘Jan did not go as far as Warsaw, he went merely to Łódź /#he stayed at home.’

(12) Jan nie pojechał nawet do Warszawy, ... (Po)
 Jan not went *even* to Warsaw
 #pojechał zaledwie do Łodzi. /został w domu.
 went *only* to Łódź stayed at home
 ‘Jan did not even go to Warsaw, #he went merely to Łódź /he stayed at home.’

(13) Jan nie pojechał zaledwie do Łodzi, ... (Po)
 Jan not went *merely* to Łódź
 pojechał *až* do Warszawy. /#został w domu.
 went *až* to Warsaw stayed at home
 ‘Jan did not go merely to Łódź, he went all the way to Warsaw /#he stayed at home.’

I now present arguments that the way *až/čak* induces a comparison with scalar alternatives is a result of its association with focus and of imposing an ordering on the focus alternatives according to a contextually salient dimension.

2 The ranking of focus alternatives

⁴ In (13) negation takes the widest scope. Slavic also permits *merely* to scope over negation: ‘Jan travelled to places further than Łódź, but he didn’t go to Łódź’.

2.1 Association with focus – syntax

Až/čak can appear as sisters to different syntactic constituents with a detectable effect on the meaning. The syntactic associate determines the implicit comparison with alternatives of the same type. In (14) the alternatives are people other than Mary, in (15) other things Ivan could do (as a result of being emotional).

(14) Govorix čak [_{PP} s Mary]. (Bg)
 I.talked čak with Mary
 ‘I talked to somebody so important as Mary.’

(15) Ivan čak [_{VP} se zaduxa] ot vulnenie. (Bg)
 Ivan čak refl breathed-heavily from emotion
 ‘Ivan as much as started breathing heavily, being so emotional.’

The following contrast illustrates that depending on which constituents *až/čak* associate with (a DP in (16)⁵ and a VP, or, somewhat less plausibly, a V in (17)), the effect on the meaning of the full sentence is different.

(16) Hanka poprosila o pomoc až [_{DP} prezidenta]. (Po)
 Hanka asked for help až president
 ‘Hanka asked for help such an important person as the president.’

(17) Hanka až [_{VP} [_V poprosila o pomoc] [_{DP} prezidenta]]. (Po)
 Hanka až asked forhelp president
 ‘Hanka went as far as asking the president for help.’
 ‘What Hanka did wrt. the president was ask him for help.’
 #‘Hanka asked for help such an important person as the president.’

The domain of association can also be the whole clause. E.g., in (18) alternatives are either other people who could tell Anna to stop singing, or other less serious things that may have happened (e.g., the whole auditioning committee laughing).

(18) Anna pela tak ploxo, čto až [_{IP} [_{DP} Maria] ej skazala ostanovit'sja]. (Ru)
 Anna sang so badly that až Maria her said to-stop.inf
 ‘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.’

The following evidence from Polish and Bulgarian indicates that *až/čak* obligatorily associate with the focus already present in the structure: they cannot itself supply focus, nor can they modify elements that cannot bear focus such as

⁵ Note that DP association in the Czech counterpart of (16) receives an ambiguous interpretation which will be discussed in section 4.2.

topics and clitics. In a construction inducing contrastive focus, (19)a, *aż* can modify either of the focused PPs in each conjunct, (19)b-c:

- (19) a. Maria nie rozmawiała [z menedżerem]_F, lecz [z prezesem]_F. (Po)
Maria not talked with manager but with president
'Maria did not talk to the manager but to the president.'
- b. Maria nie rozmawiała [z menedżerem]_F, lecz *aż* [z prezesem]_F.
Maria not talked with manager but *aż* with president
'Maria did not talk to the manager but to the president himself.'
- c. Maria nie rozmawiała *aż* [z menedżerem]_F, lecz [z prezesem]_F.
Maria not talked *aż* with manager but with president
'Maria did not talk to the manager himself but to the president.'

Furthermore, *aż/čak* not only can associate with a focus as (19) shows, but they must do so. They cannot associate with a topic. In (20) the DP *the president* is backgrounded, while *Marek* is the focus, and correspondingly, *aż* cannot associate with the DP *the president*.

- (20) A: Maria rozmawiała z prezesem. (Po)
Maria talked with president
'Maria talked to the president.'
- B: Nie. Tylko Marek rozmawiał (#*aż*) z prezesem i nikt inny.
no only Marek talked *aż* with president and nobody else
'No. Only Marek, nobody else, talked to the president.'

Weak/clitic pronouns, which cannot bear focus, force a wider domain reading in Polish and Bulgarian ((21) vs. (22)). In (22) *čak* has to associate with the adverbial or the verb, which can be independently focused (cf. Hoeksema & Zwarts 1991, Beaver & Clark 2008):

- (21) [Večerta] čak vidjax [nego]. (Bg)
evening čak I.saw 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.'
- (22) [Večerta] čak [go vidjax]. (Bg)
evening čak him.clitic 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/čak*, and (ii) the inability of

až/čak to associate with non-focused elements such as topics and clitics, suggest that *až/čak* obligatorily associate with focus in Polish and Bulgarian.⁶

I assume that *až/čak* always induce a scalar ordering over alternative propositions (section 2.2). I now present an argument that *až/čak* are propositional operators and not just scalar modifiers of the phrase they syntactically associate with, e.g., the way *very* or *as much/far as* are. Intensifiers like *very* or *so* indicate that the degree of a gradable property has significantly exceeded the standard of comparison⁷ (Kennedy and McNally 2005), e.g., (23).

- (23) Ivan mnogo [_{VP} počervenja] ot sram. (Bg)
 Ivan very reddened from shame
 ‘Ashamed, Ivan blushed very much.’

Až/čak cannot modify the scale of degrees associated with a gradable property. In (24)-(25) the alternatives are not different degrees of blushing, but e.g., other things that could result from Ivan’s being ashamed.

- (24) Ivan čak [_{VP} počervenja] ot sram. (Bg)
 Ivan čak reddened from shame
 ‘Ivan was so ashamed that he blushed.’

- (25) Chlapec v zeleném overalu se překvapením až začervenal. (Cz)
 boy in green jumpsuit self with surprise až reddened (Čapek, 1991)
 ‘The boy in a green jumpsuit as much as blushed with surprise.’

The fact that *až/čak* do not apply to gradable properties is compatible with the view that they are propositional operators like *only/merely* and *even*. Grammaticalization of *až/čak* is not identical across the Slavic languages. There appear to be semantic restrictions on the types of scales they can modify (number and distance scales are both ‘natural scales’, whereas rankings of people are context dependent, cf. section 4.3), as well as stylistic restrictions (e.g., in Russian *až* is highly expressive and its use is considered colloquial). I am proposing a general characterization of the semantic contribution of *až/čak* (section 3), which can be further specified.

⁶ 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 it is the case for *always*.

⁷ The positive form of a gradable adjective itself indicates that the standard is exceeded (Kennedy 1999 a.o.).

2.2 Association with focus – semantics

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 (Rooth 1985, 1992), a restrictor to a focus operator, presupposed to denote a contextually relevant subset of the focus alternatives. Crucially, focus by itself evokes just a contrast set; there is no ordering among the alternatives, (26). When a scalar item is focused, it lexically introduces a scale, but not a direction of the ordering, e.g., the age of 16 in (27) can be either interpreted as especially young or old, depending on the context.

- (26) a. Maria talked to [John]_F .
b. {Maria talked to Jim, Maria talked to John, Maria talked to Joan, Maria talked to Jane, ...}
- (27) a. Dan is [sixteen]_F. He's too old to play this game./He's too young to drink alcohol.
b. {Dan is 1, ..., Dan is 14, Dan is 15, Dan is 16, ..., Dan is 60, ...}

The role of scalar focus associating adverbs is to both introduce an order among the alternatives and to indicate whether the position of the prejacent on the scale is high or low. Scalar *only/merely* place the prejacent low; *aż/ćak* place it high on the contextual scale.

In (28) *merely* and *aż* operate on the same scale of alternative propositions of the form *Maria is x* where *x* varies over different positions that Maria could hold, as illustrated in (29).

- (28) Maria jest zaledwie/aż menedżerem. (Po)
Maria is merely /aż manager
'Maria is merely/aż a manager.'

(29) *Scale for (28)*:

Maria is the president
Maria is a vice president
...
Maria is a senior manager
Maria is a manager
Maria is an assistant manager
...
Maria is an employee

Merely in (28) conveys both that Maria holds no position higher than a manager on the contextual scale, (29), and that this position is considered low (lower alternatives are not even relevant). The reverse is contributed by *až* in (28) – Maria’s position as a manager is considered significantly high on the scale, higher positions are not under consideration, but it is significant that Maria holds no lower position than a manager (e.g., in a situation where Maria is just starting her career and is advancing at a pace faster than expected). In the next section I demonstrate that the semantics of *až/čak* consists of three components, each of them a mirror image of the corresponding component of scalar *only*.

3 The meaning components of *až/čak*

I propose that *až/čak* are scalar opposites of scalar *only/merely* that contribute to both the truth-conditions and the presuppositions of the sentence in which they occur. Like *only/merely* they operate on a scale whose dimension is determined by the context. I show that these properties make *až/čak* different from *even* contributing only at the level of presupposition and whose scalarity can be generalized to likelihood, which is not the case with *až/čak* and *only/merely*.

3.1 The meaning components of *only/merely* and *even*

Scalar *only/merely*⁸ is standardly assumed to contribute both to 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).

⁸ Non-scalar *only*, sometimes called quantificational, asserts that no other alternative is true, e.g., *Maria only talked to the manager and nobody else*. The alternatives are either seen as not ordered or as an instance of exclusion along a logical/entailment scale (van Rooij 2002, Klinedinst 2005, Riester 2006, a.o.). The dimension of the scale is set pragmatically, and where no pragmatic ordering is available, the logical scale is the default.

Using tests for presupposition, such as embedding under a question operator or negation (Chierchia & McConnell-Ginet 1990), we can identify three meaning components of *only/merely*, one asserted (exclusivity) and two presupposed components (the prejacent and the ‘low on the scale’ reading).

The asserted component is the exclusion of all alternatives higher on the scale. E.g. (30) asserts that Maria’s rank is no higher than a manager. This component is targeted by the question operator, (31)a, and by negation, (32)a.

(30) Maria jest zaledwie menedżerem. (Po)

Maria is merely manager

‘Maria is merely a manager.’

↪ (a) Maria is no more than a manager. [assertion]

↪ (b) Maria is at least a manager. [presupposition]

↪ (c) Maria’s being a manager is not significant. [presupposition]

Additionally, *only/merely* contributes two presuppositions. First, it presupposes that the alternatives under consideration are at least as high on the scale as the prejacent (Beaver & Clark 2008, Klinedinst 2005). In (30) other positions that Maria could hold are at least as high as the manager, (30)b. This component is more readily apparent projecting in a question, (31)b, and under negation, (32)b.

The second presupposition is that the prejacent is low on the scale of alternative propositions, which I paraphrase as ‘is not significant’, (30)c (Klinedinst 2005). The low-on-the-scale inference projects, (31)c, (32)c. Zeevat (2009) and Beaver & Clark (2008) call this function of *only* ‘mirative’ – as a mirative marker, *only* implies that the prejacent proposition falls short of what is expected.⁹

(31) Czy Maria jest zaledwie menedżerem? (Po)

Q Maria is merely manager

‘Is Maria merely a manager?’

↪ (a) Is Maria more than a manager?

↪ (b) Maria is at least a manager. [presupposition]

↪ (c) Maria’s being a manager is not significant. [presupposition]

(32) Maria nie jest zaledwie menedżerem. (Po)

Maria not is merely manager

‘Maria is not merely a manager.’

↪ (a) Maria is more than a manager.

↪ (b) Maria is at least a manager. [presupposition]

⁹ Note that the low-on-the-scale presupposition works in conjunction with the ‘at least’ presupposition, but does not follow from it. Maria could be at least a manager in some company and this could be a significant achievement.

↪ (c) Maria's being a manager is not significant. [presupposition]

In contrast to *only/merely*, the semantic content of *even* is purely presuppositional (Karttunen & Peters 1979, Horn 1969, Rooth 1985, 1982). The prejacent is asserted, (33)a; it does not survive in a question, (34)a, nor under negation, (35)a. In affirmative sentences *even* introduces a scalar presupposition that the prejacent is the least likely among the alternatives. E.g., (33) asserts that Maria is a manager, (33)a, and presupposes that this fact is considered very unlikely, and thus, significant, (33)b. In negative sentences the scalar presupposition is reversed: the prejacent is the most likely/least significant, cf. (35)b. Questions with *even* are ambiguous between the least- and most-likely readings, (34)b (Karttunen & Karttunen 1977). *Even* is also frequently taken to introduce an existential presupposition that some scalar alternative is true, (33)c, (34)c, (35)c.

(33) Maria jest nawet menedżerem. (Po)

Maria is even manager

'Maria is even a manager.'

↪ (a) Maria is a manager. [assertion]

↪ (b) Maria's being a manager is unlikely/significant. [presupposition]

↪ (c) Maria holds a position other than being a manager. [presupposition]

(34) Czy Maria jest nawet menedżerem? (Po)

Q Maria is even manager

'Is Maria even a manager?'

↪ (a) Is Maria a manager?

↪ (b) Maria's being a manager is unlikely/significant/quite likely/
/not significant. [presupposition]

↪ (c) Maria holds a position other than being a manager. [presupposition]

(35) Maria nie jest nawet menedżerem. (Po)

Maria not is even manager

'Maria is not even a manager.'

↪ (a) Maria is not a manager.

↪ (b) Maria's being a manager is quite likely/not significant.[presupposition]

↪ (c) Maria holds a position other than being a manager. [presupposition]

On the so-called 'scope theory' (originated in Horn 1971, Karttunen and Peters 1979), in negative contexts *even* takes scope above negation, so that the scale of alternatives is built upon the negated proposition, which is perceived as

scale reversal.¹⁰ Unlike *even*, *only* takes scope under negation as seen in (32), where the low-on-the-scale presupposition projects (32)c.

3.2 *The asserted and presupposed components of aż/ćak*

The high-on-the-scale presupposition found with *aż/ćak* projects under negation and in questions, and the orientation of the scale stays the same, as shown in (36)c, (37)c, (38)c. Embedding under question and negation operators reveals the asserted exclusive component – the scalar opposite of the contribution of *only*.

Although (36) could simply be taken to convey that Maria is a manager and that this is significant (i.e. the prejacent would be asserted and scalarity presupposed as with *even* in (33)), its negative version, (37), crucially asserts not only that Maria is not a manager, but also that she holds a position lower on the scale than the manager, (37)a. This is evidence for an asserted exclusive component.¹¹

(36) Maria jest aż menedżerem. (Po)

Maria is *aż* manager

‘Maria got as far as being the manager.’

↪ (a) Maria is no less than a manager. [assertion]

↪ (b) Maria is at most a manager. [presupposition]

↪ (c) Maria’s being a manager is significant. [presupposition]

(37) Maria nie jest aż menedżerem. (Po)

Maria not is *aż* manager

‘Maria did not get as far as being the manager.’

↪ (a) Maria is less than a manager.

↪ (b) Maria is at most a manager. [presupposition]

↪ (c) Maria’s being a manager is significant. [presupposition]

Exclusivity also emerges in the question in (38) which asks whether Maria’s position is lower than a manager, (38)a. (This is exactly the opposite of the effect of the presence of *zaledwie* (*merely*) in the question in (31)).

(38) Czy Maria jest aż menedżerem? (Po)

Q Maria is *aż* manager

‘Has Maria got as far as being the manager?’

¹⁰ The alternative *NPI theory* (beginning with Rooth 1985) assumes two lexical items for *even*, one occurring in the NPI-licensing contexts and the other one elsewhere.

¹¹ One of the reviewers observes that the pragmatically most plausible reading of (36)-(38) even without *aż* is such that other jobs/positions are excluded. In section 4.2 I demonstrate using further examples, (58)-(59), that the exclusion clearly comes from *aż*.

- ↪ (a) Is Maria anything less than a manager?
- ↪ (b) Maria is at most a manager. [presupposition]
- ↪ (c) Maria's being a manager is significant. [presupposition]

The exclusive component of *až/čak*, (a) in (36)-(38), i.e. the assertion that the alternatives lower on the scale are excluded, is the reverse of the contribution of *only/merely*, where higher alternatives are excluded. The two other meaning components of *až/čak* that project, (b-c) in (36)-(38) are scalar reversals of the two presuppositions of *only/merely* in (30)-(32) (b-c).

In (36)-(38), the presupposition (b) is that the alternatives under consideration can be at most as high on the scale as the prejacent. The presupposition (c) is that the prejacent is significantly high on the scale. For (36) this gives us the interpretation that considering the alternative positions that Maria could hold (b), being a manager is the most significant among them (b-c), and Maria is indeed no less than a manager (a).

Beaver & Clark (2008) sum up the contribution of *only* as “*contra* expectation, nothing stronger holds” (p. 279). The scalar reversal of each of the meaning components of *only*, yields the interpretation for *až/čak* that can be described as: *contra* expectation, something stronger holds. In section 3.4 I employ further tests for asserted/presupposed content to demonstrate that this is a correct characterization of the semantic contribution of *až/čak*.

3.3 The proposal

My analysis of *až/čak* as the scalar opposite of *only/merely* is based on the scalar reversal of the meaning components assumed for *only/merely*, as identified above in (30)-(32). *Only/merely* asserts exclusivity, (39)a (no proposition higher on the scale than the prejacent *p* is true), presupposes that at least *p* is true, (39)b, and presupposes that *p* is low on the contextual scale (39)c.

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

The three meaning components I propose for *až/čak* in (40) result from reversing the scalar orientation of each of the three components of *only* in (39), while maintaining their presupposed/asserted status:

- (40) A sentence Σ with the logical form $a\acute{z}/\acute{c}ak\ p$, where p is a proposition, S is a contextually determined pre-order over alternative propositions, s is a contextual standard in S and $a \gg_s b$ indicates that a significantly exceeds b on S
- (a) asserts that $\sim\exists p'. p' \neq p \ \& \ p' <_s p$
 - (b) presupposes that at most p is true
 - (c) presupposes that $p \gg_s s$

The exclusion of lower alternatives as the truth-conditional contribution of *aż/ćak* is not readily evident in the positive sentences containing *aż/ćak*. In the next section I use further diagnostics to show that *aż/ćak* contribute both presupposed and asserted content, the latter best characterized as excluding alternatives lower on the contextual scale.

3.4 The asserted exclusive component

Emotive factive verbs target asserted content (Beaver & Clark 2008, Coppock & Beaver 2010, Dretske 1972). For *only* the results indicate that the emotive factive in (41) targets only the exclusive component (41)a. Janek is disappointed that Maria has no better position than a manager, (41)a. He is not disappointed that Maria *is* a manager, (41)b, because this position already counts as satisfactory in the first steps in her career. That Maria's position as a manager counts as low on the scale is also not the reason for Janek's disappointment, (41)c, which, however, is not immediately apparent in (41) but will become clear in (42).

- (41) Janek jest zawiedziony, że Maria jestzaledwie menedżerem. (Po)
 Janek is disappointed that Maria is merely manager
 'Janek is disappointed that Maria is merely a manager.'
 Janek is disappointed that ...
- ↪ (a) Maria is no more than a manager. [assertion]
 - ↪ (b) Maria is at least a manager. [presupposition]
 - ↪ (c) Maria's being a manager is not significant. [presupposition]

Embedding a negative sentence containing *only* under an emotive factive verb shows that neither the 'at least' presupposition, (42)b, nor the low-on-the-scale presupposition, (42)c, are the reasons for Janek's being happy.

- (42) Janek cieszy się, że Maria nie jest zaledwie menedżerem. (Po)
 Janek is.happy self that Maria not is merely manager
 'Janek is happy that Maria is not merely a manager.'
 Janek is happy that ...
- ↪ (a) Maria is more than a manager. [assertion]

- (b) Maria is at least a manager. [presupposition]
- (c) Maria's being a manager is not significant. [presupposition]

The emotive factive test also confirms the asserted status of the exclusive meaning component of *aż/čak*. In (43) Janek is happy not merely because Maria is a manager (which would be the case without *aż*), but because among the alternatives Maria does not have a lower position, (43)a. Janek is happy because his expectations are exceeded, (43)a, but not because there are lower alternatives of which being a manager is the highest, (43)b, nor because being a manager is significantly high on the scale, (43)c. That (43)b-c are not the reasons for Janek's happiness, becomes more apparent in the presence of negation in (44).

(43) Janek cieszy się, że Maria jest aż menedżerem. (Po)

Janek is happy self that Maria is *aż* manager

'Janek is happy that Maria got as far as being the manger.'

Janek is happy that ...

- (a) Maria is no less than a manager. [assertion]
- (b) Maria is at most a manager. [presupposition]
- (c) Maria's being a manager is significant. [presupposition]

(44) Janek cieszy się, że Maria nie jest aż menedżerem. (Po)

Janek happy self that Maria not is *aż* manager

'Janek is happy that Maria did not get as far as being the manger.'

Janek is happy that ...

- (a) Maria is less than a manager. [assertion]
- (b) Maria is at most a manager. [presupposition]
- (c) Maria's being a manager is significant. [presupposition]

The example in (44) makes it clear that the 'at most', (44)b, and the high-on-the-scale, (44)c, meaning components do not provide the reasons for why Janek is happy. Janek is not happy either because among the alternatives Maria's being a manager is the highest, (44)b, nor because Maria's being a manager is of high significance, (44)c. (44)b-c are clearly presupposed. The asserted exclusive component now emerges fully. The reason for Janek's happiness is (44)a, that Maria has a position lower than that of a manager.

A further test that demonstrates that the exclusion of lower alternatives is asserted is the cancellation test in (45). The second sentence 'She doesn't work for them at all' explicitly cancels the positive inference of the preceding sentence. The positive inference from a negative sentence containing *aż* or *only* is that Maria has a lower/higher position than a manager, hence the continuation sounds contradictory. In the absence of *aż/only*, the negative sentence 'Maria is

not a manager with them’ implies that Maria has some other position in that company, but this inference is an implicature and hence it is cancellable.

- (45) Maria nie jest u nich (#*aż*/#zaledwie) menedżerem. ... (Po)
Maria not is with them *aż*/merely manager
Ona wcale dla nich nie pracuje.
she at-all for them not works
‘Maria does not (#merely/#as much as) work for them as a manger. She doesn’t work for them at all.’

The asserted exclusive component also emerges in utterances of “dissent with a positive continuation” (Simons et al. 2010, Roberts 2011). In (46)a the utterance of dissent is followed by a correction, which directly asserts that a lower alternative is true. An assistant manager is a lower position, but it can still be above the contextual standard. Moreover, (46)b shows that in order to dissent and say that Maria actually has a position lower than the standard, the use of *only* is needed (cf. (39)c). In (46)c, where a higher alternative is given as a correction, the use of *aż* is obligatory.

- (46) Maria jest *aż* menedżerem. (Po)
Maria is *aż* manager
‘Maria got as far as being the manger.’
a. Nie prawda. Maria jest zastępcą menedżera.
Not true Maria is assistant manager
‘That’s not true. Maria is an assistant manager.’
b. Nie prawda. Maria jest zaledwie pracownikiem.
Not true Maria is merely employee
‘That’s not true. Maria is merely an employee.’
c. Nie prawda. Maria jest *aż* prezesem.
Not true Maria is *aż* president
‘That’s not true. Maria is as much as the president.’

The above tests, emotive factives, cancellation and dissent, provide evidence for the exclusive assertion in the meaning of *aż/ćak*.

4 Contrasts between *aż/ćak* and *even*

The treatment of *aż/ćak* as an exclusive clearly contrasts with the presupposed additivity of *even*. The other important difference is the scalar dimension.

4.1 Exclusivity vs. additivity

The existential/additive presupposition has been questioned as part of the lexical meaning of *even* (e.g., Rullman 2007, Herburger 2000), but there is a clear contrast between *až/čak* and *nawet* (*even*) in (5)-(6). *Even* requires that some alternative proposition distinct from the prejacent proposition is also true in the context. In (5), as opposed to (6), it is presupposed that an alternative of the form *Maria talked to x* is true, hence it cannot be denied that Maria did not talk to any *x*. In (47)-(48) an alternative cannot, in fact, be true (Janek can only be in one place at a time), and hence *až/čak* are felicitous, while *even* is not.

- (47) Janek jest teraz *až/#nawet* w Warszawie. (Po)
 Janek is now *až/even* in Warsaw
 ‘Janek is now as far as/#even in Warsaw.’
- (48) Ivan sega e *čak/#daže* v̋v Varšava. (Bg)
 Janek now is *čak/even* in Warsaw
 ‘Janek is now as far as/#even in Warsaw.’

Až/čak ranks the propositions of the form *Janek is now in x* in terms of distance between a place *x* and the place that is the origin of the journey. On this scale Janek’s being in Warsaw ranks highest because Warsaw is the farthest of all the relevant alternative places. *Even* ranks the alternative propositions in terms of likelihood, but even if Warsaw is the least likely place for Janek to be at because it is the farthest, *even* implies that Janek is in Warsaw and some other city at the same time. The use of *až/čak* in (47)-(48) is compatible with the statement that no alternative proposition is true, which follows from my analysis: no lower alternative is true, (40)a, higher alternatives are not relevant (40)b.

4.2 Contextually determined dimension vs. likelihood

My analysis of *až/čak* in (40) makes reference to a contextually specified scale *S*, whereas the scalar presupposition of *even* is typically formalized in terms of likelihood (Karttunen & Peters 1979) or its dual, noteworthiness (Herburger 2000). *Even* contributes the reading of noteworthiness as result of its low-on-the-likelihood-scale presupposition. The scalar dimension in the case of *až/čak* and *only/merely* cannot be generalized to likelihood. I now demonstrate with Bulgarian, Czech, Polish and Russian that *až/čak* necessarily locate the prejacent on the scale with respect to a contextually salient parameter.

Without any supporting context, with *daže* (*even*) in (49) Berlin is interpreted as the most notable/least likely place for Ivan to go to, and that could be either because it is far or because he doesn’t speak German. With *čak* the immediate interpretation is that Berlin is the most notable place for Ivan to go to because it is very far.

- (49) Ivan e stignal daže/čak do Berlin. (Bg)
 Ivan aux.3sg reached *even/čak* to Berlin
 ‘Ivan even went to Berlin.’/ ‘Ivan got as far as Berlin.’

Without a specific context *až/čak* associating with a locative adverbial, (49), contributes a distance reading such that Berlin is high on the distance scale, i.e. far. With a temporal adverbial in (10), ‘now’ is indicated to be high on the time scale, i.e. late.

Crucially, the high-on-the-scale reading contributed by *až/čak* does not need to coincide with low likelihood. In (50) there is nothing unlikely about Petr’s riding his bike until dusk, hence the use of *dokonce* (*even*) is infelicitous, while the effect contributed by *až* is a comparison with other points in time x such that *Petr rode his bike until x*. The wider context specifies dusk as significantly exceeding a contextual standard, i.e. particularly late.

- (50) Petr jezdil nakole až/#dokonce do setmění, (Cz)
 Petr rode on bike *až/even* until dusk
 což nikoho nepřekvapilo, protože to dělá každý den.
 whichnobody surprised because it he.does every day
 ‘Petr rode his bike until dusk, which didn’t surprise anyone because he does it every-day.’

A reverse case is presented in (51) where *nawet* (*even*) indicates that the speakers are willing to do something unlikely since the norm is to hire professional actors. The use of *až* in (51) is infelicitous because it would imply that hiring a non-professional is high on the scale of alternatives involving other actors, which is unrealistic.

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

Comparison with respect to a contextually salient parameter is typical of evaluative expressions such as *very*¹², *so*, *quite* (Kennedy and MacNally 2005), equatives (Rett 2008) and exclamatives (Castroviejo-Miró 2006, Rett 2008). Rett (2008) argues that comparison with a contextual standard is a crucial aspect of evaluatives, in contrast to comparison with expectations. In a situation where

¹² The Bulgarian *čak* seems to be an adaptation of the Turkish *çok* – *very*. *Až* is found already in Old Slavic and appears to be related to *daže* ‘even’ in contemporary Russian and Bulgarian.

a child with extremely short parents is expected to also be short, but actually turns out to be taller than expected, for (52) to be felicitous the child's height still needs to exceed the average height for his or her age group.

(52) #(My,) How tall Manny is! (Rett 2008:608)

Likewise, *až/čak* cannot be used felicitously if our expectations are exceeded but a contextual standard is not. In (53) the use of *až* is not felicitous because it is odd to have potatoes high on the scale of significant dinner dishes.

(53) Maria nikogda ne doedaet ves' obed, no segodnja ona s''ela (Ru)
 Maria never not eats-up all dinner, but today she ate
daže/#až kartošku.
 even/#*až* potatoes
 'Maria never eats all of her dinner, but today she even ate up the potatoes.'

The use of *daže* (*even*) in (53) is fine, since it indicates that potatoes are unlikely for Maria to eat for dinner. The situations in (51) and (53) are the reverse of (50). In (51) and (53) the associate is unlikely but does not exceed the contextual standard. In (50) the associate exceeds the standard but is not unlikely. *Even* thus appears to be directly related to expectations via likelihood, while for *až/čak* this relationship is rather indirect – the wider context specifies the standard of comparison.

4.3 A note on scales

What the definition in (40) does not specify is how propositions end up ordered on a scale. The context frequently allows for multiple scales of different dimensions, and each contextually salient scale can be targeted by *až/čak*.

The Czech counterpart of the Polish example in (16) involving DP association can be shown to be ambiguous, (54)a-b, depending on the type of scale involved.

(54) Hanka poprosila o pomoc *až* prezidenta. (Cz)
 Hanka asked for help *až* president
 a. 'It was nobody less important than the president who Hanka asked for help.'
 b. 'It was no sooner than when talking to the president that Hanka asked for help.'

In (54) *až* can contribute exclusion either along the scale of people ranked with respect to the president (a), or along a temporal scale (b). On the reading in (b) the place of the president on the scale of important people does not matter. The two readings can be shown to be independent (Věra Dvořák, p.c.) in examples like (55) and (56).

- (55) Hanka poprosila o pomoc *až* svého dědečka. (Cz)
Hanka asked for help *až* her-own grandfather
'It was no sooner than when talking to the grandfather that Hanka asked for help.'
- (56) Rodina obžalovaného se dovolávala pomoci *až* u prezidenta /
family of-accused refl sought help *až* at president /
u Evropského soudu.
at European court
'It was nowhere less important but with the president / the European court where the family of the accused sought for help.'

For (55) it is implausible to assume that the grandfather is highly ranked among the people who Hanka could ask for help, thus the temporal reading is clearly the dominant one. In (56), on the other hand, where the DP associate is naturally interpreted as high in the hierarchy, the temporal reading does not obtain (unless it is additionally evoked in the context).

For the example (54) without a context some of my Czech informants reported the reading in (a) as immediately available¹³, while others rejected (a) and described their interpretation as “sort of temporal”, e.g. Hanka talked to several people, but it was only when it came to the president that she asked him for help. Thus, the two scales can interact (but don't have to), which follows from my analysis in (40) where the scale S relies on the context for the specification of its dimension. The scale for *only* in (39) is also contextually specified and thus in (57) depending on whether the DP associate is understood to be high or low in the hierarchy we are more biased towards interpreting exclusion along a pragmatic scale (Maria talked to nobody more important than the janitor, without excluding other even less important people) or a logical scale (Maria talked to nobody else than the president).

- (57) Maria only talked to the janitor / the president.

In the case of “natural” scales, e.g. distance or temporal scales, the contribution of the exclusive component is more easily demonstrated than with purely pragmatic scales. In (58)-(59), which evoke a distance scale (the present tense eliminates the interpretation involving a temporal scale), the exclusive component ‘Janek is not going to get bread anywhere closer than the bakery in the center’ accounts for the oddness of *až* in (59). Without *až*, (59) conveys that Janek buys bread in two places, i.e. more than one bread. With *až* the reading is ac-

¹³ A dialectal difference is possible (Věra Dvořák, p.c.) – the speakers who reported (54)a are from Moravia.

ceptable only in the context where Janek has to go far to get a second kind of bread that is unavailable in the local store.

(58) Janek idzie po chleb aż do piekarni w centrum. (Po)
Janek is-going for bread *aż* to bakery in center
'Janek is on his way to buy bread in the bakery in the city center.'

(59) Janek idzie po chleb dosklepu narogu i (#aż) do piekarni w centrum.
Janek is-going for bread to store on corner and *aż* to bakery in center
'J. is on his way to buy bread in the local store and in the bakery in the city center.'

With the past perfective tense in (60), a temporal ordering of events is allowed, which results in a crucial change in the interpretation such that Janek bought one bread on one occasion and a second bread on another:

(60) J. poszedł po chleb dosklepu narogu i aż do piekarni w centrum. (Po)
J. went for bread to store on corner and *aż* to bakery in center
'J. went to buy bread in the local store and to the bakery in the city center.'

The ordering of the two events, however, is independent of the distance scale targeted by the exclusive component – on the second occasion, Janek did not go to get bread anywhere closer than the bakery in the center.

Exactly parallel examples can be found with the English *merely*. In (61) *merely* excludes more serious consequences occurring at the same time, but it does exclude them from consideration as possibilities:

(61) Such relationships can benefit the organization, harm the organization, and also merely waste resources to benefit neither. (*Google*)

Especially with VP association, multiple scales can be easily evoked. As pointed out by the reviewer, in (62) an alternative lower on the scale is true, yet *aż* is allowed.

(62) W szale Maria spaliła dom i aż zabiła męża. (Po)
In rage Maria burned house and *aż* killed husband
'Out of rage Maria burned down the house and (then) even killed her husband.'

The sequential interpretation allows here for each of the events to be placed on its own scale: Maria first burned down the house and then did none of the less terrible things we could expect her to do but killed her husband. I assume that multiple scales will also explain other apparent violations of exclusivity.

5 Conclusion

I have argued that *až/čak* are focus sensitive propositional operators and that their semantic contribution can be characterized in terms of the three components in (63), an assertion and two presuppositions, each of them being a mirror image of the corresponding component of scalar *only*, (64).

(63) *až/čak*:

no lower alternative is true (assertion)

the prejacent or an alternative at most as strong is true (presupposition)

the prejacent is high on the scale (presupposition)

(64) *only*:

no higher alternative is true (assertion)

the prejacent or an alternative at least as strong is true (presupposition)

the prejacent is low on the scale (presupposition)

On my analysis, *až/čak* operate as the exact antonyms of scalar *only*, in contrast to *even* which is purely presuppositional and cannot work as an opposite of *only/merely* in all contexts. Superficially, both *až/čak* and *even* contribute the reading of high significance, in contrast to low significance contributed by *only*. However, I have shown that *až/čak* and *even* differ exactly in those respects where *až/čak* and *only/merely* are alike (contextually salient scalar dimension vs. likelihood, exclusivity vs. additivity).

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