On the syntax of English minimizers

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Abstract. The syntactic behaviour of English minimizers such as *(not) a/one word*, *(not) a/one bit* and *(not) sleep a/one wink* is puzzling: while they can behave as polarity items (PIs) in non-negative and negative contexts, they become negative quantifiers (NQs) when merged with a negation in negative contexts. Unlike previous accounts, where emphasis is put mainly on highlighting the similarity of minimizers to *any*-PIs and on supporting the contribution of an *even*-reading, I integrate the peculiar behaviour of minimizers in English within an analysis of negative indefinites as existential quantifiers that can structurally associate with negation in different ways. I claim that English minimizers contain three basic ingredients: a Numeral Phrase, a Focus particle and, in negative contexts, a Negative Phrase, *not*. The presence of a Focus particle *even* in the structure of minimizers plus the flexible merging possibilities of *not* with respect to the other two components of the minimizer result in their NQ-like behaviour, which can be now fully integrated into a theory of negative indefinites as syntactic objects that are compositionally built.

Keywords: minimizers, English, negative quantifiers, polarity items, Focus particle, negation

1. Introduction

Minimizers are positive expressions that denote a minimal quantity or extent and that may reinforce negation. As illustrated in (1) and (2), English minimizing expressions like *a soul* and *a word* occurring in the scope of negation receive an interpretation that is roughly equivalent to that of a negative polarity item. Such an observation has motivated the definition of English minimizers as "partially stereotyped equivalents of *any*" (Bolinger 1972: 121).[1]

(1)   a. She didn't see a soul.
        b. She didn't say a word.

(2)   a. She didn't see anybody at all.
        b. She didn't say anything at all.

In addition, like polarity items (PIs) of the *any*-kind, English minimizers can occur not only in negative contexts, but also in non-negative ones, such as questions (both *yes/no*-questions and *wh*-questions) (Ladusaw 1979; Giannakidou 1998, 2011; Guerzoni 2004), conditionals (Giannakidou 1998, 2011), directive propositional attitudes (Giannakidou 2011), the scope of *only* (Giannakidou 2011) and complement clauses of emotive factive verbs (Giannakidou 2011). These different contexts are illustrated in (3)-(7) with examples from the literature.

(3)   a. Did Mary contribute a red cent for this cause?
        b. Who contributed a red cent for this cause?

(Guerzoni 2003: 99)

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[1] As discussed in Horn (1989), minimizers are already addressed in Pott (1857) and Wagenaar (1930), who provide numerous examples of these kind of expressions taken from a variety of Indo-European languages such as Sanskrit, Greek, Latin, French, Old Spanish, Italian, English, Dutch, German, and Slavic. With reference to Pott's (1857: 410) and Wagenaar's (1930: 74-75) examples, Horn gives a list of minimizers that contains

> "minimal quantities from the culinary domain (= 'not a cherrystone, a chestnut, a crumb, an egg, a fava, a fig, a garlic, a grain, a leek, an oyster, a parsnip, a pea'), coins of little value, animals and body parts ('not a cat's tail, a hair, a mosquito, a lobster [*sic*], a sparrow'), and other objects of little value and/or salience ('not an accent, an atom, a nail, a pinecone, a point, a shred, a splinter, a straw')." (Horn 1989: 452-453)

Hoeksema (2009: 23) distinguishes between minimizers, adverbial minimizers and minimizing predicates, which have been illustrated in (ia-c) respectively, and includes them in an admittedly partial list of different types of PIs in English.

(i)   a. Minimizers: *a word, a thing, a syllable, a moment, an inch*
        b. Adverbial minimizers: *in the least, in the slightest, one bit, the least bit*
        c. Minimizing predicates: *say boo to a goose, lift a finger, sleep a wink, bat an eyebrow, know the first thing about, have a clue, have a prayer*

(Hoeksema 2009: 23)

(4) If you give a damn, you'll listen.

(5) She's still funny and cute and smart and I wish she gave a damn that we aren't friends anymore. I miss Candice. www.xanga.com/betweenIDs

(6) Only Mary gives a damn.

(7) I'm glad he said a word.

(Giannakidou 2011: 1685)

In non-negative contexts such as (3)-(7), minimizers activate alternatives (i.e., they force the speaker to consider different options along a scale, with minimizers being at the low end) and give rise to an *even*-reading (cf. Pott 1857; Wagenaar 1930; Schmerling 1971; Horn 1972, 1989; Fauconnier 1975a, b; Linebarger 1980; Heim 1984; Giannakidou 2007, 2011).[2] In the particular case of questions, (3), these are not neutral when they contain a minimizer: they are biased in the sense that a negative answer is expected from the speaker (Ladusaw 1979). As noted in Heim (1984) and Wilkinson (1996), this is the same effect that is obtained in a clause when *even* relates to the low endpoint of a pragmatic scale (Guerzoni 2003: 99), as shown in (8), where subindexed *f* indicates the relevant endpoint of the scale that associates with the Focus particle *even*. Such an effect in questions lends plausibility to the analysis of minimizers as containing a tacit *even* particle (cf. Lahiri 1998; Lee and Horn 1994).

(8) a. Can this truck even fit an [elephant]$_f$? (neutral question)
b. Can this truck even fit a [fly]$_f$? (biased question)

(Guerzoni 2003: 99)

In negative contexts, negation denotes the presence of no quantity at all and, therefore, minimizers are seen as negative reinforcement (Horn 1989: 400).[3] The idiomatic reading of the minimizer, however, is associated with sentential negation, defined as "[n]egation taking scope at least above (the existential quantifier binding the event argument of) the main predicate" (Penka 2007: 11). This is the case not only when negation is expressed by means of the affix *-n't* –which unambiguously expresses wide scope sentential negation– but also when negation is conveyed by the adverbial *not*, which can either express sentential or constituent negation, the latter being defined as negation taking scope over a particular constituent rather than the whole proposition (Zeijlstra 2004: 47). In other words, a sentence like (9) is ambiguous between the reading in (10a) and the reading in (10b). In (10a) negation takes sentential scope, whereas in (10b), it only scopes over the constituent *a word*, hence inducing the interpretation of *a word* as a plain existential DP.

(9) Mary said not a word.

(10) a. Mary said nothing at all.
b. Mary said not a word (but a full sentence).

In short, English minimizers clearly behave as PIs (see examples (3)-(7) above) in non-negative contexts and in negative contexts where negation merges high in the clause (see (1) and (2) above). In negative contexts, however, they become negative quantifiers (NQs) when negation is merged with the minimizer (as in (9)) and take sentential scope (hence yielding the (10a) reading). In this paper, I try to offer an analysis of English minimizers that can accommodate such facts.

The article is organised as follows. In Section 2, I discuss how minimizers fit into the definition of PI while also showing similarities with NQs, and apply Klima's (1964) tests to negative sentences with minimizers to show that their idiomatic reading obtains with sentential negation but not with constituent negation. In Section 3, the literature on English NQs as decomposable lexical items is reviewed, while in Section 4, I deal with the internal structure of English minimizers showing that their syntactic behaviour supports the approach to NQs presented in Section 3. Finally, Section 5 concludes the paper.

2. The syntactic behaviour of English minimizers
2.1. The distribution of English minimizers: parallelisms with PIs and NQs

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[2] That minimizers yield a *nicht einmal das* 'not even…' reading when they occur in negative contexts was already noticed by Pott (1857: 410).

[3] Vulgar minimizers, also known as 'squatitive negation' (Horn 2001) or 'SQUAT' (Postal 2004) seem to be inherently negative and can license *any*-PIs in English (but not in other languages such as Greek and Korean) (Giannakidou and Yoon 2011). Although discussing the syntax and semantics of vulgar minimizers is beyond the purpose of this paper, their existence shows that interesting differences exist within the class of minimizers not only in English, but also across languages. For an analysis of SQUAT-minimizers as downward entailing quantifiers that express semantic sentential negation see De Clercq (2011).

The examples in (11) and (12) show that the distribution of minimizers in negative contexts is similar not only to that of PIs like *any* and its derived forms, but also to that of NQs like *no*, *nobody*, *nothing*, etc. Notice that the difference between (11b) and (12b) is the position of negation (above the verb in the former vs. below the verb in the latter). In (12b), as happens with NQs in English, the negative operator (*not*) immediately preceding the minimizer can end up in a scope position and convey sentential negation.

(11)   a. I didn't see anybody last night.   (*Neg … PI*)
        b. I didn't see a soul last night.   (*Neg … minimizer*)

(12)   a. I saw nobody last night.   (*v*P … NQ)
        b. I saw not a soul last night.   (*v*P … not + minimizer)

Minimizers fit into Giannakidou's (2006: 464) definition of PI given in (13), as they are sensitive to some semantic property of the context, namely, to non-veridicality. Recall that, as has been shown in the previous section, English minimizers occur in non-assertive contexts with non-veridical operators such as interrogatives, conditionals, directive propositional attitudes, in the scope of *only* and with emotive factive verbs (see (3)-(7) above). They also occur in negative contexts with antiveridical operators (see (1), (9), (11b), (12b)), which constitute a subset of non-veridical operators.[4]

(13)   A linguistic expression α is a polarity item iff:
       (i)   the distribution of α is limited by sensitivity to some semantic property β of the context of appearance; *and*
      (ii) β is (non)veridicality.

                                                (Giannakidou 2006: 464)

In what follows, I use Vallduví's (1994) diagnostic tests to further show that English minimizers behave like PIs both in negative and non-negative contexts, but also like NQs in one particular negative context. As will be seen, the crucial factors for NQ-like behaviour seem to be the presence of an adjacent Negative Phrase (NegP), Spelled-Out as *not*, and the presence of an *even* Focus Phrase (FocP) as part of the structure of the minimizer.

Although Vallduví's (1994: 270-280) four diagnostic tests aim at determining whether a lexical item is an n-word (Laka 1990) or not, in this paper I discuss how they can be applied to English PIs and NQs and then examine which results these tests yield for English minimizers. Before doing so, nonetheless, the term *n-word* needs to be defined in relation to the tests.

N-words, which are typically found in Negative Concord (NC) languages such as Italian, Catalan, Spanish, Modern Greek, Romanian and Hungarian, among others, are operator-dependent elements that display quantificational variability. N-words must be licensed by a semantically appropriate operator. In negative contexts, post-verbal n-words clearly behave like PIs, as they need to be c-commanded by a negative marker (or by another n-word in pre-verbal position), whereas pre-verbal n-words are closer to NQs in certain NC languages such as Spanish or Italian –known as Non-Strict NC languages (Giannakidou 1998, 1999, 2000)– where the sentential negative marker cannot co-occur with a pre-verbal n-word if a single negation or NC reading is intended. In Strict NC languages such as Modern Greek or Romanian, by contrast, the sentential negative marker co-occurs with n-words in all contexts. In both kinds of NC languages, n-words can occur in isolation as answers to questions, as shown in (14) and (15) for Spanish and Romanian, respectively.

(14)   Q: ¿Quién   ha   venido?   (Spanish)
           who   has   come
           'Who came?'
       A: *Nadie.*
           n-body
           'Nobody'

(15)   Q: Ce   ai   văzut?   (Romanian)
           what have.2SG seen
           'What did you see?'
       A: *Nimic.*
           n-thing
           'Nothing'

According to Giannakidou's (2006: 328) definition of n-word, formalised in (16), the ability to occur as answers to questions is a defining property of n-words.

(16)   An expression α is an *n-word* iff:

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[4] According to Giannakidou (1998: 106), an operator is veridical just in case Op $p \rightarrow p$ is logically valid. Otherwise the operator is non-veridical. Negation is antiveridical, as Op $p \rightarrow \neg p$ is logically valid.

a. α can be used in structures containing sentential negation or another α-expression yielding a reading equivalent to one logical negation;

b. α can provide a negative fragment answer.

<div align="right">(Giannakidou 2006: 328)</div>

Actually, the characteristic behaviour of n-words stated in (16b) is what sets them apart from other PIs such as the Spanish post-nominal indefinite *persona alguna* lit. person some 'anybody', or the Romanian expression *cine știe ce* lit. who knows what 'much'. This is illustrated in (17A) and (18A) for Spanish and Romanian, respectively.

(17) Q: ¿Quién   ha   venido?   (Spanish)
        who   has   come
        'Who came?'
    A: *Persona   alguna
       person   some

(18) Q: Ce   ai   văzut?   (Romanian)
        what   have.2SG   seen
        'What did you see?'
    A: *Cine   știe   ce.
       who   knows   what

N-words such as Italian *nessuno* 'anybody' / 'nobody', Catalan *cap* 'any' / 'no' or Spanish *nada* 'anything' / 'nothing', successfully go through Vallduví's tests in (19a-c), whereas other PIs like Catalan *gaire* 'many'/ 'much' and the Spanish post-nominal indefinite *N alguno* lit. N some 'any N(oun)' do not. This has been shown in (14), (15), (17) and (18) above for the test in (19a), and is illustrated in (20) and (21) for tests (19b, c) with data from Catalan and Spanish. [5]

(19) a. Ability to occur in isolation
    b. Ability to be modified by *almost* or *absolutely*
    c. Grammaticality in pre-verbal position
    d. Ability to appear in *yes/no* and *if* contexts with a non-negative value

(20) a. No he   dit   gairebé / absolutament res.   (n-word)   (Catalan)
      not have.1SG said almost   absolutely   nothing
      'I haven't said almost/absolutely anything'
    b. No he   vist *(absolutament / gairebé) gaire gent.   (PI)
      not have.1SG seen absolutely   almost many people

(21) a. Nadie   vino.   (n-word)   (Spanish)
      nobody came
      'Nobody came'
    b. *Persona alguna vino.   (PI)
       person   some   came

Whereas the tests in (19a-c) show that n-words may behave as NQs, the test in (19d) aims at establishing whether they are inherently negative or not. Vallduví (1994) takes this test from Laka (1990, 1993), who holds the view that n-words are PIs and, hence, non-negative.[6] In (22), the data from Catalan show that, unlike what was the case for (19a-c), both n-words and PIs successfully go through the test in (19d).[7]

(22) a. Has   vist res?   (n-word)   (Catalan)
      have.2SG   seen anything
      'Have you seen anything?'

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[5] Some of these diagnostic tests are explicitly credited to a number of other scholars in Vallduví (1994). In particular, (19a) is related to Zanuttini's (1991) work, and (19b) to Horn (1972), Hoeksema (1983), Zanuttini (1987, 1991) and Quer (1993). Finally, (19d) is attributed to Laka (1990, 1993).

[6] Differences exist among NC languages with respect to whether n-words can appear in non-negative contexts: while in some NC languages such as Catalan, n-words often occur in non-negative contexts with a non-negative meaning, they only marginally do so in Spanish. In Romanian or French, by contrast, n-words cannot appear in non-negative contexts at all.

[7] See also Espinal (2000), who builds on Vallduví's (1994) tests to show that Catalan and Spanish n-words display an ambiguous behaviour: they behave like negative universal quantifiers in some contexts, but as non-negative existential quantifiers in some others. She suggests that they may be analysed as weak numeral quantifiers that encode a ⸤0⸥ meaning and are underspecified for quantificational force.

      b. Has   vist   gaires coses?   (PI)
      have.2SG   seen many things
      'Have you seen many things?'

As is well known, Standard English does not have NC as part of its grammar, as negation cannot be expressed more than once in the same clause without inducing a Double Negation reading. Hence, if English (at least the Standard variety) does not have the possibility of deriving NC structures, it cannot be assumed to have n-words, either. English has a set of non-assertive indefinites with *any-* (referred to as PIs in this paper), and a set of negative indefinites with *no-* (referred to as NQs in this paper) (Quirk et al. 1973: 376). Since PIs and NQs occur in the contexts where n-words occur in NC languages, Vallduví's (1994) tests can be applied to English to gain some insights into the following question:

(23)   Are minimizers best characterized as PIs, as NQs, as both, or as neither?

In order to answer the question in (23), Vallduví's (1994) tests have to be applied not only to minimizers, but also to *any*-PIs and to *no*-NQs so that the behaviour of the three kinds of indefinite expressions can be compared. Let us start with the test in (19a), which assesses the ability of a given word to occur in isolation.

(24)   A: Who came to the party?
       B: Nobody.   (NQ)
       B': *Anybody.   (PI)

As shown in (24B), NQs can occur in isolation as answers to a question, whereas this is not possible for PIs, (24B'). Likewise, NQs can be modified by *almost* or *absolutely*, whereas PIs cannot. This is illustrated in (25).

(25)   a. She ate almost/absolutely nothing for dinner.   (NQ)
       b. *She ate almost/absolutely anything for dinner.   (PI)

Notice, though, that if the PI occurs in a negative context, as in (26), *almost / absolutely* modification is possible.

(26)   She almost / absolutely didn't eat anything for dinner.

With respect to the test in (19c), namely grammaticality in pre-verbal position, only NQs successfully go through it. As shown in (27b), PIs are not grammatical if they are not bound by a semantically relevant operator (Giannakidou 2006: 464). Hence, they are excluded from a pre-verbal position.

(27)   a. Nobody was waiting for John outside.
      b. *Anybody was waiting for John outside.

As far as the test in (19d) is concerned, NQs fail it: they can occur in *yes/no*-questions and conditional contexts, but the meaning they convey is necessarily a negative one, which shows that they are somehow negative words. This is exemplified below, where (28a) is interpreted as questioning whether it is true that the addressee did *not* have any Erasmus student in his / her class rather than whether s/he had *any* Erasmus student in the class, and (28b) is pragmatically very odd, as it is not usual for people to call the police if it is *not* the case that someone is trying to break into a house. The opposite situation totally justifies such a call, though.

(28)   a. Did you have no Erasmus students in your class last year?
      b. #If you see nobody trying to break into the house, call the police.

If the examples in (29) are construed with PIs, by contrast, they are pragmatically felicitous and interpreted as conveying a non-negative meaning.

(29)   a. Did you have any Erasmus students in your class last year?
      b. If you see anybody trying to break into the house, call the police.

Let us see now what happens when Vallduví's (1994) tests are applied to English minimizers. As can be seen in (30a)-(34a), it turns out that if the negative adverb *not* is adjacent to the minimizer, this aligns with NQs when going through the tests. Conversely, when an adjacent *not* is absent, as in (30b)-(34b) minimizers align with PIs (see (24)-(29)).[8]

(30)   a. A: Who came to the party?
         B: Not a soul.
      b. B: *A soul.

(31)   a. She said almost / absolutely not a word.

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[8] Both Vallduví (1994) and Espinal (2000) mention the same effect for the negative particle *ni* 'not even', which makes it possible for Catalan and Spanish minimizers to be used in isolation and in pre-verbal position, and to be modified by *almost* and *absolutely*.

b. *She said almost / absolutely a word.

(32)   a.   Not a soul was waiting for John outside.
        b. *A soul was waiting for John outside.

(33)   a. *Did she lift not a finger to help you?
        b. Did she lift a finger to help you?

(34)   a. *If you give not a damn, call her tonight.
        b. If you give a damn, call her tonight.

Minimizers also align with PIs under affix *-n't* negation for the tests in (19b, d), as shown in (35)-(37), which correspond to the examples in (31a), (33a), and (34a) now with affix negation. Notice that if (33b) and (34b) contained the negative affix, the reading could not be non-negative, as required by the test in (19d).

(35)   She almost / absolutely didn't say a word.

(36)   Did*(n't) she lift a finger to help you?

(37)   If you *(don't) give a damn, call her tonight.

To summarise, Table 1 displays the results of Vallduví's (1994) tests for PIs, NQs and minimizers in English.

	Isolated	*Almost/ absolutely*	Pre-verbal	*Yes/no*; *if*
PI	No	No (unless under the scope of negation)	No	Yes
Minimizer	No	No	No	Yes
NQ	Yes	Yes	Yes	No
Not + **minimizer**	Yes	Yes	Yes	No

Table 1. Results of Vallduví's (1994) tests for PIs, NQs and minimizers in Standard English

As can be seen in Table 1, NQs and PIs show the right opposite behaviour when going through the tests in (19). While minimizers unsurprisingly align with PIs (for, as has been shown earlier, they can occur in non-veridical contexts), they display NQ-like behaviour if negation (in the form of *not*) is directly adjacent to them.

The (obvious) question is why this is so, and I try to answer it by arguing that English minimizers share properties of both PIs and NQs because these two kinds of words are structurally related in a way that is also relevant for minimizers. In line with Klima (1964), Jacobs (1980), and, most recently, Penka (2011), Iatridou and Sichel (2011), Zeijlstra (2011) and Temmerman (2012), I argue that NQs are decomposable syntactic objects consisting of a NegP, *not*, and a PI. The merging possibilities of *not* (below or above the verb) play a crucial role in the quantificational-like behaviour of minimizers: being a scope-taking operator, negation merged in a low structural position (i.e., with the PI, below the verb) may induce Q(uantifier) R(aising) of the whole syntactic object to an IP-adjoined position from where negation takes scope over the whole proposition. If, by contrast, negation is merged higher in the structure (i.e., above the verb) and independently from the indefinite part (i.e., the PI/minimizer), minimizers display polar behaviour, and the negative indefinite surfaces discontinuously, namely as sentential negation binding a PI/minimizer.

The merging possibilities of NegP, however, cannot be entirely responsible for the NQ-like behaviour of the structure *not* + minimizer since, as shown in (38), not every indefinite occurring with an adjacent *not* can undergo QR. While (38a) is equivalent to (2b) (repeated here as (39a)), (38b) is equivalent to (39c), rather than to (39b).

(38)   a. She said not a word.
        b. She saw not a cat.

(39)   a. She didn't say anything at all.
        b. She didn't see any cat at all.
        c. She didn't see a cat, but a dog.

In section 4, I show that English minimizers contain a Focus particle *even* which, when merged with NegP, allows minimizers to QR to a position where the negation they are associated with can take sentential scope.

2.2. Sentential negation and the idiomatic reading of English minimizers
That the idiomatic reading of English minimizers requires sentential negation to obtain (see examples (9) and (10) above) is confirmed by the results of Klima's (1964) tests in (40)-(43).

(40)   *Test 1: Reverse polarity tags*
        a. You didn't sleep a wink last night, did you? / *didn't you?
        b. You slept not a wink last night, did you? / *didn't you?
        c. You said not a word (but a sentence), *did you? / didn't you?

(41) *Test 2a: Same polarity continuation: either / too*
   a. She didn't lift a finger to help Mary and Paul didn't lift a finger to help Mary either / *too.
   b. She lifted not a finger to help Mary and Paul lifted not a finger to help Mary either / *too.
   c. You said not a word (but a sentence) and Paul said not a word (but a sentence) *either / too.

(42) *Test 2b: Same polarity continuation: neither / so*
   a. I didn't care a bit about what she said and neither / *so did Paul.
   b. I cared not a bit about what she said and neither / *so did Paul.
   c. You said not a word (but a sentence) and *neither / so did Paul.

(43) *Test 3: Not even + X continuation*
   a. She didn't say a word, not even to complain about the situation.
   b. She said not a word, not even to complain about the situation.
   c. You said not a word (but a sentence), *not even to please your teacher.

As can be seen in (40a, b)-(43a, b), Klima's tests do not yield different results for the structure *-n't + verb + minimizer* and *verb + not + minimizer*. The (c) examples, by contrast, show that when negation does not take sentential scope, the reading for the minimizer is not the idiomatic one, but one which corresponds to a plain indefinite.

According to the first of Klima's tests (1964: 262-265), sentential negation takes a positive question tag, whereas if negation is non-sentential (i.e., constituent), the tag is negative. In (40a, b), the tag is positive both with sentential negation being expressed by means of *-n't* and by means of *not*, but it has to be negative in (40c), where negation only has scope over the constituent *a word*.

The second of Klima's tests, illustrated in (41) and (42), predicts that a sentence with sentential negation can be coordinated with a negative clause with *either*, or be followed by a pro-form with *neither*. By contrast, this is not possible with a sentence where negation is non-sentential. Notice that, as shown in (41a, b) and (42a, b), the same polarity continuation test with *(n)either* yields the same results both for *-n't* and sentential negation *not*. Conversely, opposite results are obtained when the test is applied to an example with constituent negation, as shown by (41c) and (42c).

The third test, illustrated in (43), shows that a sentence containing sentential negation (either expressed by *-n't* or by *not*) can be continued with a phrase or clause headed by *not even*, as in (43a, b). This is not possible if negation has scope only over a constituent, as in (43c).[9]

A fourth test consisting in replying to a previous utterance with another utterance that contains an expression of agreement with *so* or *not*, as exemplified in (44), also allows us to conclude that the idiomatic reading is associated with sentential negation when minimizers occur in negative contexts.

(44) *Test 4: So / not clauses as 'expression of agreement'*
   a. A: She didn't have a clue.
      B: No, I guess not / *Yes, I guess so.
   b. A: She had not a clue.
      B: No, I guess not / *Yes, I guess so.
   c. A: She read a book.
      B: *No, I guess not / Yes, I guess so.
   d. A: She read not a book (but a magazine).
      B: *No, I guess not / Yes, I guess so.

As can be seen in the clauses in (44a.B) and (44b.B), a *not* clause expresses agreement with a clause containing an instance of sentential negation and a minimizer (i.e., the clauses in (44a.A) and (44b.A) in this case), whereas this is not possible with an affirmative clause, as in (44c), or a clause containing a plain indefinite with negation scoping over it, as in (44d). Since, as shown in (44a.B) and (44b.B), speaker B can use a *not* clause to agree with speaker A's utterance, which contains a minimizer, we can conclude that (44a.A) and (44b.A) involve an instance of sentential negation. Again, notice that this is the case regardless of whether negation is expressed by means of the affix *-n't* or the negative adverb *not*. I return to this issue in Section 4.

In this paper, I analyse English minimizers as PIs with an in-built Focus *even* particle that can associate with negation. Hence, the varying (and otherwise puzzling) behaviour of English minimizers is integrated into an account of negative indefinites as decomposable expressions that combine a NegP and an existential quantifier, which is presented in Section 3.

3. Negative quantifiers as decomposable lexical items

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[9] Penka (2007: 7-9) discusses Klima's (1964) tests showing that what they are really sensitive to is whether negation takes widest scope. Penka (2007: 11), following Acquaviva (1997), assumes sentential negation to take scope above the event that the verb expresses.

Several scholars have argued in favour of an analysis of English NQs as decomposable into a negative component and an existential quantifier (Klima 1964; Jacobs 1980; Ladusaw 1992; Rullmann 1995; Larson et al. 1997; Sauerland 2000; Penka 2007, 2011; Penka and Zeijlstra 2010; Iatridou and Sichel 2011; Temmerman 2012; among others). That these two parts form a single lexical item has been postulated to be the result of a PF-operation (Klima 1964; Jacobs 1980; Rullmann 1995; Iatridou and Sichel 2011; Zeijlstra 2011; Temmerman 2012).

The existence of Split Scope readings in English (Potts 2000; Penka 2007, 2011; Zeijlstra 2011) is evidence in favour of the assumption that the negative meaning associated with NQs must be 'detachable' from the quantifier.[10] In the presence of operators that take scope such as modal verbs or object intensional verbs, NQs may not behave as is expected from quantifiers. It is well known that quantifiers can take wide or narrow scope. In a sentence like (45), the reading in (45a) corresponds to the quantifier taking wide scope with respect to the modal verb (a deontic *may*), while in (45b) the quantifier has taken narrow scope with respect to the modal (an epistemic *may*).

(45) No student delegates may be present in the Department's meeting.
  a. 'There are no student delegates that are allowed to be present in the Department's meeting'
$$\neg \exists > may$$
  b. 'It is possible that there will be no student delegates present in the Department's meeting'
$$may > \neg \exists$$

In some occasions, however, wide scope and narrow scope of the NQ with respect to the modal verb do not yield the correct reading. This is the case in (46), where the most prominent reading is (46a), with negation scoping over the modal verb and the existential quantifier scoping under it (i.e., a Split Scope reading). The wide scope reading is illustrated in (46b). As shown in (46c), the narrow scope reading is not possible at all.

(46) The company need fire no employees.

  a. 'It is not the case that the company is obligated to fire employees'
$$\neg > need > \exists$$
  b. 'There are no employees x such that the company is obliged to fire x'
$$\neg \exists > need$$
  c. *'The company is obligated to fire no employees' $need > \neg \exists$

(example from Potts (2000) quoted in Penka (2007: 172))

In (47), where the sentences contain a post-copular NQ subject in a *there*-construction with an epistemic modal, only the Split Scope reading is possible, as shown in (47a, b). This is unexpected, as it is the case that post-copular subjects in *there*-constructions with modals necessarily take narrow scope with respect to the modal, as shown in (48).
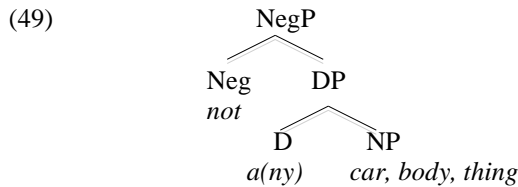
(47) a. There can be no doubt.
  'It is not possible that there is a doubt' $\neg > can > \exists$
  b. Yet here it was, a letter, addressed so plainly there could be no mistake.
  'It was not possible that there was a mistake' $\neg > can > \exists$
  (From Rowling, J. K. (1997) Harry Potter and the Philosopher's Stone. Bloomsbury, London: 42)

(Penka 2007: 172)

(48) There must be someone in John's house. $must > \exists$, $*\exists > must$

(Penka 2007: 91)

Given that Split Scope readings cast doubt on the analysis of NQs as lexical units, I adopt the view, in line with Temmerman (2012: 86), that English NQs contain a negative operator, *not*, which enters the derivation as an independent lexical item.[11] The structure of a NQ in English is assumed to be the one in (49).

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[10] See also Bech (1955/57), Jacobs (1980, 1982 and 1991), and Rullmann (1995).

[11] Temmerman (2012) assumes a structure with multidominance created by Parallel Merge (Citko 2005, 2011; de Vries 2005, 2009; van Riemsdijk 2006) for English object NQs. In Temmerman's account, the negative operator Op¬ dominates the existential DP, but is itself not dominated by the VP, which only selects the existential DP.

(49)

```
              NegP
             /    \
          Neg      DP
          not      /  \
                  D    NP
                a(ny)  car, body, thing
```

PIs would have the structure in (50), which allows the sentences in (51) to be morphologically related.

(50)

```
              DP
             /  \
            D    NP
          a(ny)  car, body, thing
```
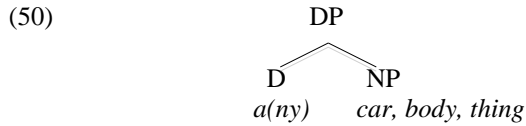
(51)   a. I invited no workmates to the party.
        b. I didn't invite any workmates to the party.
   c. I did not invite any workmates to the party.

The NQ in (51a) is analysed as a PI (see (50)) that merges with NegP, as in (49). That is, NQs are not stored as such in the Lexicon. Rather, they are complex objects built in the syntax. Neg°, which is part of the Numeration of a negative sentence, can merge with the DP, as in (51a), or in a position above the *v*P, as in (51b, c).

Following Matushansky (2006), I assume the clausal structure of English to be one where negation is in the Specifier of AuxP, a functional head that is sandwiched between the *v*P and the TP (Matushansky 2006: 92). In Matushansky's proposal, negation is both a head and a maximal projection (Neg°/NegP) and, hence, it may undergo m-merge with Aux° (Matushansky 2006: 81).[12] This results in the creation of a new head Aux°, which can raise to T°.

In (49) and (51a), NegP and the rest of the DP amalgamate at PF, thus resulting in what is commonly known as a NQ (cf. Temmerman 2012). In (51b, c), NegP is in Spec, AuxP and can optionally m-merge with it. After m-merger, Neg°/NegP is Spelled-Out as *-n't*, as in (51b). If m-merger with Aux° does not take place, NegP is Spelled-Out as *not*, as illustrated in (51c).

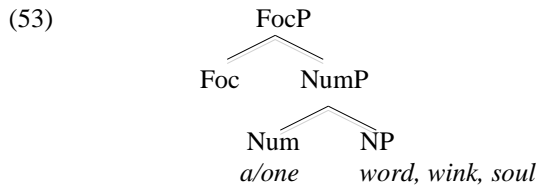## 4. The internal structure and syntax of English minimizers

In line with Linebarger (1980), Heim (1984), Horn (1989), Giannakidou (2007) and Kuno (2008), I assume that English minimizers are associated with the Focus particle *even*.[13] Given that *even* is an adverb (Quirk et al. 1985; König 1991), I follow Cinque (1999) in assuming that it occupies a Specifier position. Hence, the syntactic structure for the Focus particle associated with English minimizers is the one in (52), with Foc° being phonologically empty and Spec, FocP optionally occupied by overt *even*.

(52)

```
              FocP
             /    \
          even     FocP
                    |
                   Foc
```

---
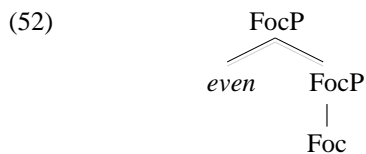
[12] Matushansky (2006: 70) defines *m-merger* as a morphological operation 'which results in the head adjunction structure traditionally associated with head movement'.

[13] In this paper the scalar behaviour of minimizers has been attributed to the presence of a Focus *even* particle in their structure. In addition, it would also be possible to argue that they activate alternatives that need to be interpreted along a pragmatic scale and introduce the implicature that the minimizer is the pragmatically strongest alternative in the context because they are specified with a semantic feature [+σ] (Chierchia 2006: 559), which linguistically codifies the need for an enriched interpretation (Chierchia 2006: 553-554). As [+σ] is an uninterpretable feature, it would need to be syntactically checked by an interpretable σ operator that can attach to non-veridical operators (including negation, which is antiveridical). Hence, English minimizers are felicitous in contexts containing operators to which a σ operator can attach, but are out in non-negative declarative sentences. The [+σ] feature has recently been argued to be part of n-words in Spanish, Catalan, Romanian and French in Espinal and Tubau (to appear). It was already postulated for Catalan n-words in Tubau and Espinal (2012).
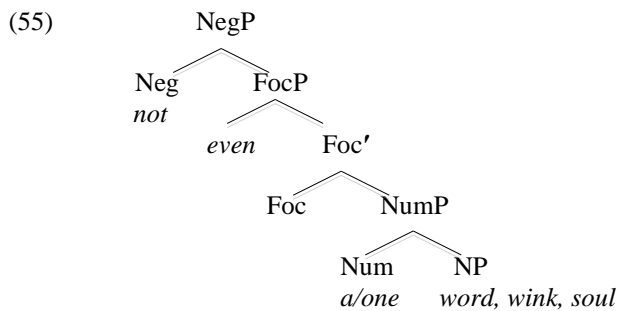
In addition, given that *one* is possible in most minimizers (e.g. *a/one red cent*, *a/one soul*, *sleep a/one wink*, *budge a/one inch*, *a/one bit*, etc.), I take the relevant functional projection not to be a DP, but a Num(eral) P(hrase), the head of which can be Spelled-Out as either *a* or *one*.[14]

(53)

```
              FocP
             /    \
          Foc     NumP
                 /    \
              Num      NP
             a/one    word, wink, soul
```

As in the case of NQs, the structure in (53) is built in the syntax and can be associated with a negative operator, Neg°. As shown in (54), *even* (when overt) is Spelled-Out lower than negation and higher than NumP.

(54)   I said not (even) a/one word at the meeting.

Therefore, NegP is assumed to merge with FocP, as represented in (55).

(55)

```
          NegP
         /    \
       Neg    FocP
       not   /    \
          even     Foc′
                  /    \
               Foc      NumP
                       /    \
                    Num      NP
                   a/one    word, wink, soul
```

As has been shown in Section 2.2, English minimizers successfully go through Klima's (1964) tests for sentential negation not only when negation is merged above the *v*P, as in (56a, b), but also whenever it is merged below, as in (57).

(56)   a. I did not (even) say a/one word at the meeting.
       b. I didn't (even) say a/one word at the meeting.

(57)   I said not (even) a/one word at the meeting.

This is due to the fact that, as has been claimed to be the case for NQs (Zeijlstra 2011), the merger of negation and the minimizer in (57) undergoes QR to an IP-adjoined position and is interpreted as having wide scope at LF. PF Spells-Out the lower copy. The syntax of the structures in (56a, b) is discussed later in the paper in connection with the distribution that *even* shows with respect to negation and NumP.

As discussed in Rooth (1985), focused constituents may undergo QR. In the case of English minimizers, they contain FocP (with an overt or covert *even*) and, hence, they can undergo QR when merged with *not*. Their doing so allows negation to take sentential scope, which, as has been discussed earlier in the paper, results in the idiomatic reading of the minimizer. This is further illustrated in (58), where the overt presence of the Focus particle *even* in (57) excludes the non-idiomatic reading of the minimizer under constituent negation.

(58)   a. I said not even a/one word, *but a sentence.
       b. I didn't say even a/one word, *but a sentence.
       c. I did not say even a/one word, *but a sentence.

But why do English minimizers require sentential negation to be interpreted with an idiomatic reading (i.e., at the low endpoint of a scale) rather than as a plain indefinite (e.g. (10b))? At this point, constituent negation needs to be explored more in depth, especially with regards to the *not X but Y* configuration that has been used in all the examples of constituent negation included in this paper. McCawley (1991: 189) refers to such a configuration as *contrastive negation*, as negation "contrasts two ways of filling a syntactic position, one that (according to what the sentence says) results in a false proposition and one that results in a true proposition,"[15]

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[14] Déprez (2005), Espinal and McNally (2007) and Labelle and Espinal (2014) also assume NQs, n-words and PIs to contain a NumP.

[15] For Klein (1998: 94) "contrastive negation can be used to replace a degree by one that is thought more applicable (*She isn't A BIT nervous, she's EXTREMELY nervous*)."

and argues that it involves coordinating two different sentences.[16] That is, a sentence such as (59) would be interpreted as in (60) if *a word* were a plain indefinite.

(59)   I said not a word, but a sentence.

(60)   I didn't say a word, but I said a sentence.

Notice, however, that if *not a word* in (59) were a minimizer (with a covert *even* FocP as part of its structure), it would undergo QR to an IP-adjoined position, thus yielding the interpretation in (61) for the first focus of the contrastive negation (namely the *not* X). As shown in (62), this would rule out the second focus of the contrastive negation on pragmatic grounds: if the speaker said nothing at all, s/he cannot have said a sentence.[17]

(61)   I didn't say anything at all.

(62)   a. #I didn't say anything at all, but I said a sentence.
        b. #I said nothing at all, but I said a sentence.

As shown in (58) above, the presence of an overt *even* excludes the possibility that *a/one word* is interpreted as a plain indefinite as in (60) and, hence, contrastive negation is not felicitous.

Let us now turn to discussing how it is possible to claim that the three sentences in (58), all containing a minimizer, are structurally related to one another. As advanced earlier in the paper, I will connect this fact to the relation that also exists between negative sentences containing NQs and discontinuous *not / -n't…*PI configurations, as in (63).

(63)   a. She bought nothing.
        b. She did not buy anything.
        c. She didn't buy anything.

As illustrated by the tree in (55) above, I have assumed NegP to merge with FocP. What I want to show now is that while the ingredients of English minimizers are NumP (*a/one* + NP), FocP (with *even* in its Specifier) and negation, the merging possibilities of FocP, on the one hand, and of NegP on the other, crucially result in a complex distribution of the three different parts of a minimizer.[18]

Let us start by substantiating the idea that FocP does not have to be adjacent to NumP when a minimizer is syntactically assembled. Consider, for example, the data in (64), where the minimizer *not even a/one soul* occurs as part of a prepositional complement.

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[16] Besides the basic form *not X but Y*, there are, according to McCawley (1991: 190), four more types of contrastive negation in English. The five have been listed in (i), (ia-c') being known as 'short' forms and (id, e) as 'expanded' forms.
  (i)   a. John drank not coffee but tea. (basic form)
        b. John drank tea, not coffee. (reverse form)
        c. John didn't drink coffee but tea. (anchored form)
        c'. I'm surprised at John not drinking coffee but tea.
        d. John didn't drink coffee, he drank tea. (basic expanded form)
        e. John drank `tea, he didn't drink ``´coffee. (reverse expanded form)
                                            (examples taken from McCawley 1991: 190, (4))
  In all of them, a minimizer would be interpreted with a non-idiomatic reading (i.e., as a plain indefinite).
  (ii) (ii) a. John said not a word but a sentence. (basic form)
        b. John said a sentence, not a word. (reverse form)
        c. John didn't say a word but a sentence. (anchored form)
        c'. I'm surprised at John not saying a word but a sentence.
        d. John didn't say a word, he said a sentence. (basic expanded form)
        e. John said `a sentence, he didn't say``´a word. (reverse expanded form)

[17] Alternatively, as suggested by a reviewer, it may be possible that the foci in contrastive negation of the *not* X *but* Y type involve Contrastive Focus (Rooth 1992; É. Kiss 1998; Zubizarreta 1998; Büring 2007, among others), a subtype of Focus that "occurs in a correction, or in a parallel structure (like in ellipsis) where it is juxtaposed directly with another contrastive focus" (Repp 2010: 2) rather than an *even* Focus particle. Deciding which account is superior is beyond the scope of this paper and is left for future research.

[18] As in negative contexts English minimizers may behave as negative polarity items that are dependent on a structurally higher negation, it could be argued that such a dependency is mediated by Agree (Chomsky 1995 and subsequent work) between negation and an uninterpretable negative feature, [uNeg], in the minimizer. In order to explain why minimizers can occur in non-negative contexts, however, it would have to be further assumed (as Espinal and Tubau to appear do for Romance n-words, for example), that [uNeg] is not an inherent feature of minimizers, but one that can be picked up in the syntax in negative contexts. Such view, nonetheless, cannot handle the parallelism that minimizers show with NQs when they merge with *not*.

(64) a. I spoke to not (even) a/one soul.
      b. I spoke not (even) to a/one soul.

As can be seen in (64a, b), the negative marker *not* and the Focus particle *even* can occupy different positions with respect to the preposition: either FocP is selected by P°, as in (64a), or FocP merges with the PP, as in (64b). The relevant syntactic structures for (64a, b) are given in (65a, b).

(65) a. [$_{TP}$ I$_i$ [$_{T'}$ [$_{T°}$ spoke$_j$] [$_{vP}$ t_i [$_{v°}$ t_j] [$_{PP}$ [$_{P°}$ to] [$_{NegP}$ [$_{Neg°}$ *not*] [$_{FocP}$ (even) [$_{Foc°}$] [$_{NumP}$ [$_{Num°}$ a/one] [$_{NP}$ soul]]]]]]]]]]

      b. [$_{TP}$ I [$_{T'}$ [$_{T°}$ spoke$_j$] [$_{vP}$ t_j [$_{v}$ t_j] [$_{NegP}$ [$_{Neg°}$ *not*] [$_{FocP}$ (even) [$_{Foc°}$] [$_{PP}$ [$_{P°}$ to] [$_{NumP}$ [$_{Num°}$ a/one] [$_{NP}$ soul]]]]]]]]]]

In (66), the verb is inflected for Tense, as negation is below the *v*P. The sentences in (64), however, can be paraphrased with the sentences in (66), where negation is first-merged higher up in the clause, namely in a position above the *v*P.

(66) a. I didn't speak to (even) a/one soul.
      b. I didn't speak (even) to a/one soul.

I assume, following Matushansky (2006), that sentential negation is Spelled-Out as an affix because Neg°/NegP sits in Spec, AuxP, from where it can m-merge with Aux°. That is, whereas the negative component of an English minimizer can merge with FocP, as in (65a, b), it does not necessarily have to do so. *Not* can also first-merge in Spec, AuxP, thus preventing QR of the minimizer to an IP-adjoined position.

Flexible merging possibilities of *not* are also attested with other indefinites, in particular, with NQs of the *no*-type and PIs of the *any*-type.[19] While in the former NegP merges with the existential DP (*a(ny) body*, *a(ny) thing*, etc.), which then undergoes QR at LF (Zeijlstra 2011) and Fusion Under Adjacency at PF (Temmerman 2012), in the latter NegP merges in the IP domain. The result is the pair in (67).

(67) a. I liked no movie.   (*not* + DP = NQ)
      b. I didn't like any movie.   (*not/-n't* … DP)

In the particular case of English minimizers, the pairs in (68) and (69) crucially diverge with respect to whether NegP is first-merged with FocP, as in (68a, b), or if, by contrast, it is first-merged in Spec, AuxP, as in (69a, b). When it is merged in Spec, AuxP, NegP can undergo m-merger with Aux° (as in (69a, b)), or not (as in (70a, b)).

(68) a. I spoke to not (even) a/one soul.
      b. I spoke not (even) to a/one soul.

(69) a. I didn't speak to (even) a/one soul.
      b. I didn't speak (even) to a/one soul.

(70) a. I did not speak to (even) a/one soul.
      b. I did not speak (even) to a/one soul.

To summarise, in this section I have shown that while NumP, FocP and NegP are the main ingredients of English minimizers, the merging possibilities of two of these ingredients need to be taken into account when accounting for their syntax. Firstly, FocP, the projection headed by a covert Focus particle (with *even* optionally occupying its Specifier) that is associated to minimizers, may or may not be adjacent to NumP. Secondly, NegP can merge either with FocP below the *v*P or in {Spec, AuxP} above the *v*P. In the latter case, in addition, m-merger of Neg°/NegP with Aux° is optionally possible. As shown in Table 2, these various structural factors combine in complex ways to result in the (otherwise puzzling) syntax of English minimizers.

	NegP FocP	**NegP in Spec, AuxP**	
FocP NumP	I spoke to not even a/one soul.	**no m-merger**	I did not speak to even a/one soul.
		m-merger	I didn't speak to even a/one soul.
FocP … NumP	I spoke not even to a/one soul.	**no m-merger**	I did not speak even to a/one soul.
		m-merger	I didn't speak even to a/one soul
			I didn't even speak to a/one soul

Table 2. The syntax of English minimizers as the product of the merging possibilities of FocP and NegP, and (lack of) m-merger of NegP in Spec, AuxP

4. Conclusion

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[19] That NegP has flexible merging possibilities is also shown by the fact that it can also specify nouns, adjectives and other categories.

In this paper I have shown that a parallelism exists not only between minimizers and PIs in English, as has been discussed in the literature, but also between minimizers and NQs. This results in a somewhat puzzling syntactic behaviour that is difficult to explain in accounts that do not envisage any kind of structural and derivational relationship between PIs and NQs in English. However, as I discuss in the paper, the distribution of English minimizers in negative contexts fits well into an analysis of English NQs as PIs that are associated with a NegP that has different Spell-Out possibilities: it may amalgamate with an existential quantifier at PF resulting in a NQ of the *no*-kind, or it can be first-merged in the IP domain, above the *v*P, hence being Spelled-Out as *not*, from where it can optionally m-merge with an Aux° Spelling-Out as the affix *-n't*.

Integrating minimizers in negative contexts into a view of English NQs as syntactic objects that can be decomposed into several functional projections not only lends further support to the view of negative indefinites as compositionally-built expressions, but it also allows certain apparent idiosyncrasies of English minimizers and minimizing expressions to be given a principled explanation. Different functional heads compose the syntax and the meaning of minimizers and, therefore, the merging possibilities and restrictions of these heads interact in different ways, resulting in a complex syntax of minimizers.

In this paper, English minimizers have been argued to contain three different ingredients that contribute to their syntax and semantics. These are a NumP (e.g., *a/one word*, *a finger*, *a damn*, etc.), a Focus particle (with *even* optionally sitting in Spec, FocP), and NegP. Both NumP and FocP merge in a position lower than the *v*P, but they do not have to be necessarily adjacent.

In addition, NegP can merge with FocP, below the *v*P, or in the Specifier of AuxP, above the *v*P. In the former case, NegP Spells-Out as *not*, whereas in the latter case, it can Spell-Out either as *not* or as the affix *-n't* if it m-merges with the head Aux° and then the newly formed head moves to T°. One of the interesting properties of English minimizers is that, regardless of where negation merges, it needs to take sentential scope for the minimizer reading to obtain. I showed that this is the case by applying Klima's (1964) tests. I have claimed that, as happens with NQs in English, when negation is Spelled-Out lower than the *v*P, minimizers (which contain a FocP) undergo QR to an IP-adjoined position. If negation is merged above the *v*P, no movement operation is required for negation to be interpreted as sentential and QR is precluded.

As is the case for English PIs, minimizers can occur in negative contexts, but also in non-negative ones. In this paper I have claimed that this is because negation is a potential component of a minimizer, but not an obligatory one. The Focus particle, by contrast, is always part of the structure of a minimizer and is responsible for its scalar behaviour. Syntactically, it blocks the possibility that, as happens with NQs, NegP and NumP undergo Fusion at PF resulting in one single lexical item, and makes it possible for the minimizer to QR when NegP is merged with it. The optional presence of the overt adverb *even* signals the position of FocP in the syntactic structure.

It has been shown that when English minimizers occur with a verb inflected for Tense (i.e., without *do*-support) and they are preceded by the negative operator *not*, they align with NQs. In all other cases (i.e., when negation co-occurs with *do*-support, or when the minimizer occurs in a non-negative context), English minimizers align with PIs (which is not surprising, as minimizers meet all the criteria to be considered PIs). This behaviour can be given a principled explanation within an account that allows us to relate PIs and NQs structurally, with the presence of NegP and FocP in a *v*P-internal position being what determines the NQ-like behaviour. This new way of looking at English minimizers advances our understanding of their syntax, also supporting the idea that English is best analysed as having negative indefinites with polar properties that may optionally associate with negation rather than non-decomposable NQs that are semantically negative.

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