

AGAINST STATIVIZING NEGATION, EXPLETIVE NEGATION AND NPI-*UNTIL**

JONATHAN E. MACDONALD^a – BARBARA ÜRÖGDI^b

^aUniversity of Illinois, Department of Linguistics,
Department of Spanish, Italian & Portuguese, USA

^bResearch Institute for Linguistics, Hungarian Academy of Sciences, Hungary

Corresponding author: Barbara Ürögdi, address: Benczúr u. 33.
H-1068 Budapest, Hungary, e-mail: urogdi@nytud.hu

Abstract: We present a novel account of phenomena that have been discussed under the labels *stativizing negation*, *expletive negation* and the licensing of NPI-(eventive)-*until*. We argue that these concepts are theoretically undesirable as well as descriptively inadequate because (a) negation does not affect event structure, (b) “eventive” *until* outscopes negation and can also occur without negation, so it cannot be treated as an NPI, and (c) the properties ascribed to negation and/or *until* are observed in a wide variety of contexts and should therefore receive a more general, non-lexical analysis. Our account derives the facts from the idea that *until*- and *for*-duratives are referential items that scope in the topic field and can receive a contrastive interpretation on analogy with regular topics. This gives us a handle on the so-called “actualization” observed with negated eventives in the scope of a durative, previously handled by lexical duplication of *until* and by stipulation of idiosyncratic lexical properties.

Keywords: negation, scope, statives, duratives, contrastive topics, *until*

1. Introduction

Durative adverbials are generally incompatible with telic predicates, as has been extensively noted. This is illustrated in (1).

- (1) John arrived #for 10 minutes/#until 2pm.

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Interestingly, as de Swart (1996); Krifka (1989); Mittwoch (1977); Verkuyl (1993), among others, observe, in the presence of negation, these duratives become compatible with telic predicates:

- (2) John didn't arrive for 10 minutes/until 2pm.

One approach to the role of negation in (2) is that it turns eventive predicates into stative predicates (de Swart 1996 and Verkuyl 1993), an effect that has become known as “stativizing negation”, despite the fact that, as far as we know, nowhere has it been suggested that there exists “non-stativizing negation” (although see Abels 2005 who ties the “stativizing effect” to the position of negation). Further support for **stativizing negation** builds on Dowty's (1979) observation that stative predicates are true down to instants; they have the subinterval property. For example, if John owned a house for 3 months, it is true for any instant of those 3 months that John owned a house. The same holds for the negated predicate in (2): for any instant of the period of 10 minutes/until 2pm it is true that John didn't arrive. Based on this, it has been suggested that negation simply creates states out of telic predicates, although the mechanics of this are unclear.

An alternative approach to the role of negation in (2) is that it is semantically empty and employed to license *until*-phrases (and by extension, one would presume, *for*-adverbials, although to the best of our knowledge no one has suggested treating *for*-adverbials as negative polarity items). In what follows, we will use the term “expletive negation” to denote instances of negation that are inserted into structure for formal (licensing) reasons, rather than for reasons of meaning. We simplify here for lack of space but see Abels (2005) for detailed discussion of this issue and several other cases where **expletive negation** has been evoked. One argument for this expletive negation approach (see e.g. Giannakidou 2002) is the so-called **actualization** witnessed in (2): *John didn't arrive until 2pm* entails that John did in fact arrive at or shortly after 2pm.¹ This is not the case without negation: *John sang until 2pm... and then kept on singing*. This approach necessitates two *until*'s: one that is an

¹ As an anonymous reviewer points out, it is not uncontroversial that this example involves entailment. The judgments on this example are far from consistent in the literature but, according to our intuition, something like *John didn't arrive until 2pm, so we just gave up and left* is awkward at best.

NPI and results in actualization and one that is not an NPI and has no such effect.²

We claim that negation does not “stativize” the predicate or affect event structure in any way (see also Csirmaz 2009; Giannakidou 2002; Karttunen 1974 for additional arguments). Rather, we argue that (2) exemplifies the **HighDur(ative) effect**, an LF scope configuration in which duratives scope over negation (although the effect is not tied to negation as we will see), and are interpreted in the topic (referential) field. As a consequence, expletive negation approaches lose force since, by scoping under *until*, negation cannot be viewed as a licenser for *until*; moreover, the readings attributed to NPI-*until* a.k.a. **eventive *until*** are present with *for*-adverbials and without negation as well. We propose that the actualization effect attributed to this instance of negation is due to a contrastive reading on the durative that is analogous to standard contrastive topics.

The structure of the squib is the following. In section 2, we show that negation does not affect event structure, and in section 3, we argue that in examples like (2), negation is outscoped by the durative. In section 4, we extend the HighDur effect to constructions without negation to show that it is not solely limited to the presence of negation. Section 5 discusses the implications of our account for the *until*-debate. We conclude and summarize in section 6.

2. Negation does not affect event structure properties of predicates

Observe a well-known contrast between eventive and stative predicates in the present simple in English in (3a) and (3b), respectively.

- (3) (a) #John drops the book. (b) John owns a car.
(c) #John doesn't drop the book.

² It has been noted (in Giannakidou 2002 in particular) that some languages (Greek, Czech, etc.) lexicalize the two different uses of *until* by different words. Thanks to an anonymous reviewer for reminding us of this. We would like to point out, however, that the fact that some languages lexicalize different uses of duratives differently, or that structural relations are morphologically marked in some languages while only indicated by position or prosody in others is not an argument for abandoning a structural account. (Cf. Hungarian, where a single suffix *-ig* carries the meaning of English *until* and *while*, yet an account without duplication of this suffix in the lexicon is still possible, see Ürögdi 2009 for this analysis.)

The eventive predicate in (3a) is only felicitous on a habitual interpretation, hence the infelicity of (3a) out of the blue. In contrast, statives do not require a habitual interpretation to be felicitous, as illustrated in (3b). As Csirmaz (2006; 2009) observes, when the eventive is negated, as in (3c), it is still only felicitous on a habitual interpretation, which is unexpected if negation stativizes.

Consider another contrast between statives and eventives in the advancement of the action of the narration (Kamp–Reyle 1993):

- (4) Joan glanced at her car. (i) *She took a picture.* (ii) *She was happy.*

The eventive in (4i) advances the action: the picture is taken after glancing at the car. In contrast, the stative in (4ii) does not necessarily advance the action; that is, being happy can co-occur with glancing at the car. As Kamp–Reyle (1993) and Csirmaz (2006; 2009) observe, negated eventives pattern like their non-negated eventive counterparts:

- (5) Joan glanced at her car. *She didn't take a picture.*

If negation did actually turn eventive predicates into stative predicates, we would not expect this advancement of the narration.

For extensive arguments against the stativizing effect of negation which we cannot review here, see Giannakidou (2002).

3. The HighDur effect

3.1. Duratives scoping over negation

Karttunen (1974) and Mittwoch (1977; 2001) observe that negation and durative adverbials scopally interact. Consider the sentence in (6).

- (6) John didn't sleep for an hour/until 3pm.
 (i) Dur > Neg: there was a period of an hour/up to 3pm of no sleeping by John
 (ii) Neg > Dur: John slept less than an hour/until a time before 3pm

The predicate in (6) is atelic, and there are two interpretations depending on whether negation scopes over or under the durative.³ Reconsider the

³ Note that (6ii) involves constituent negation, as most examples in the literature on so-called **stativizing negation**. Consequently, they do not actually show the

datum from (2); the duratives are compatible with negation, but only one of these two scope relations is available:

- (7) John didn't arrive for an hour/until 3pm.
 (i) Dur > Neg: there was a period of an hour/up to 3pm of no arrival by John
 (ii) ~~Neg > Dur: John arrived for less than an hour/until a time before 3pm~~

We refer to this as the **HighDur effect**, which we simply take to describe the (at this point descriptive) observation that in the case of a predicate like 'arrive' we only get a felicitous interpretation if the durative outscopes negation. Mittwoch (1977) takes this as evidence that negation stativizes, since it combines with the predicate first, and only this negated (i.e., "stativized") predicate can combine with the durative. That the durative cannot combine first, however, is arguably because this particular telic predicate disallows an iterative interpretation. Consider the two telic predicates in (8).

- (8) (a) #John arrived for an hour/until 3pm.
 (b) John missed a note for an hour/until 3pm.

(8a) cannot be interpreted iteratively because it is pragmatically odd to arrive repeatedly for a period of time without contextual support.⁴ On the other hand, repeatedly missing the same note requires little contextual support, thus an iterative interpretation is available for (8b), and the durative is compatible.⁵ As expected with *miss a note*, negation and

positions of negation and the durative in a relevant way. Wide-scope propositional negation (WSPN) is also available in (6iii) **Neg > Dur**: *it didn't happen [that John slept for an hour/until 3pm]*, which is not discussed in the literature. The (un)availability of WSPN patterns with constituent negation in what follows. For space reasons we do not explicitly discuss WSPN below. While it is clear to us that scopal interaction exists between negation and the duratives in question, this still does not tell us much about the absolute positions of these items, and it could easily be the case that the durative is in the same position in (i–ii) above and (iii) in this footnote.

⁴ We return to the semantics of this construction, and offer an explanation for why certain telic predicates resist an iterative interpretation in section 4.

⁵ Note that (8b) in itself suggests that the received generalization about (1) is in need of reformulation since it does not appear to hold that telic predicates are, as a rule, incompatible with durative adverbials. One reviewer proposes that what we have in the case of 'miss a note' is coercion (cf. 'keep missing a note'). We do not find this term extremely enlightening, so we avoid its use. It should be noted,

the durative show the same scopal interaction observed with the atelic predicate in (6):

- (9) John didn't miss a note for an hour/until 3pm.
- (i) Dur > Neg: there was a period of an hour/up to 3pm of no note missed by John
 - (ii) Neg > Dur: John kept missing a note for less than an hour/until a time before 3pm

In (9) we observe the HighDur effect in the configuration Dur > Neg. This configuration obtains independently of the (a)telicity of the predicate. That is, there is no need to posit a stativizing effect of negation to explain the generalization in (1) since the generalization is wrong: telic predicates can occur with *until/for* with or without negation, and allow for the same scope relations as atelic predicates.

3.2. Duratives take scope in the topic field

For and *until* duratives appear to take scope outside *vP*. In this respect, they are H(igh)-duratives, and as we will see, they contrast in several respects with L(ow bare)-duratives (e.g. *an hour*). First, observe that L-duratives are compatible with atelic predicates:

- (10) (a) John slept an hour.
 (b) John swam 10 minutes.

Nevertheless, as Morzycki (2004) points out, unlike H-duratives, L-duratives can only be interpreted under negation, illustrated in (11).

- (11) John didn't sleep an hour.
- (i) ~~L-Dur > Neg: there was a period of an hour of no sleeping by John~~
 - (ii) Neg > L-Dur: John slept less than an hour

Observe that even with negation L-duratives are not compatible with a telic predicate that cannot be interpreted iteratively (Csirmaz 2006):

however, that if we were to posit that (8b) involves coercing the eventive predicate into a durative, we would miss the point that (8b) behaves in exactly the ways eventives are expected to behave under *until*, namely it carries the actualization reading which has been claimed to be non-existent or at least optional with duratives (Giannakidou 2002).

- (12) (a) #John didn't arrive an hour. (b) John didn't arrive for an hour.

These facts suggest that H-duratives are structurally higher than L-duratives (see also Morzycki 2004).⁶ Why should H-duratives be high in the structure and L-duratives obligatorily low? We claim that H-duratives are referential in nature, identifying a subinterval of the reference time, and L-duratives are predicative in nature, measuring the run time of the event (Morzycki 2004; Csirmaz 2009).⁷ First, observe that H-duratives allow deictic modification, while L-duratives do not:⁸

- (13) John danced # (for) those thirty minutes.

Second, the subinterval of time identified by H-duratives must be a contiguous stretch of time, while this is not the case for L-duratives. Consider a context in which studying took place yesterday afternoon from 12 to 1 and from 4 to 5. In this context, (14a) with the H-durative is infelicitous, while (14b) with the L-durative is perfectly fine.

- (14) (a) #John studied for 2 hours yesterday afternoon.⁹
 (b) John studied 2 hours yesterday afternoon.

Note, moreover, that the contiguous subinterval interpretation is the only one available in the presence of negation, illustrated in (15).

⁶ The *do so* construction offers further support that H-duratives are structurally higher than L-duratives: *John slept ??(for) an hour and Bill did so ??(for) three*. With normal prosody, H-duratives are fine in the *do so* construction, L-duratives are not, although judgments are somewhat subtle.

⁷ Minimally, H-duratives do not identify the utterance time, which leaves us with the reference time and the event time within theories of aspect such as Klein (1995) or Demirdache–Uribe-Etxebarria (2004). There is a possibility that the *for*-adverbial can identify the event time, in this case it would pattern with an L-durative. In the cases we are interested in, as an H-durative, it identifies a subinterval of the reference time.

⁸ One anonymous reviewer has suggested that L-duratives may be semantically incorporated into the predicate they modify, which would explain their inability to combine with a deictic modifier. This may well be the case, and it is not incompatible with the ideas advanced here. In fact, incorporated elements are generally barred from being referential, which is in accord with our account.

⁹ Reviewers have pointed out that, according to some native speakers of English, (14a) is felicitous in the context described. This is not consistent with the native speakers that we have consulted. This difference in judgment might result from the *for*-adverbial's being treated as an L-durative in this context.

(15) (During the party,) the guests didn't arrive for two hours.

In the context of a party (whose duration provides the reference time), (15) cannot be uttered when there are two one-hour stretches of time, one at the beginning and one at the end of the party, during each of which guests did not arrive. It can only be uttered when there is a contiguous two-hour stretch with no arrivals. Moreover, this contiguous stretch typically contrasts with a distinct segment of the same reference time (i.e., the duration of the party) shown by the continuations of (15) in (16) (a.k.a. the actualization reading).

(16) (a) ... so we started calling them on their cell phones.

(b) ... but then they started pouring in.

We return to the nature of the contrast below. What is important now is that the interpretation we see here is typical of referring expressions in the topic field: they take their reference from a contextually or explicitly defined set of relevant objects, here, (stretches of) time.

We conclude that L-duratives are low in the verb phrase and predicative in nature, while H-duratives are outside the *vP* and referential in nature. Only H-duratives give rise to the HighDur effect in the presence of negation. We submit that this is because the HighDur effect is simply a scope configuration, requiring no auxiliary explanations. We now turn to a more precise syntactic and semantic characterization of this construction.

4. HighDur effect goes beyond negation and *for/until*

So far, we have derived results that are incompatible with both the 'expletive negation/NPI-*until*' and the 'stativizing negation' types of analyses. We have shown that negation cannot be claimed to "license" duratives like *until* for three distinct reasons. First, the relevant configuration, where telic predicates like 'arrive', normally incompatible with durative modification, become acceptable when negated, is one where the durative outscopes negation. Second, we have also shown that the ungrammaticality of (1) is not due to the predicate's telicity because telic predicates that lend themselves to an iterative interpretation¹⁰ do not require nega-

¹⁰ In response to a reviewer comment, we should note that whether or not there are distinct participants (as in *John ate pizzas for 10 minutes/until noon*) or

tion to be combinable with a high durative (cf. (8b)), so essentially the availability of an *until*-phrase with a telic predicate has nothing inherently to do with negation. Third, in the constructions under discussion *for* patterns completely analogously with *until*, and there is no evidence (from English or cross-linguistically) for treating *for*-phrases as NPIs. We now offer a semantic proposal that is compatible with the HighDur configuration, and accounts for the contrasts in (8) as well as the ‘actualization’ effect observed with these constructions.

It has been noted that, in addition to negation, *only* focus can also license the HighDur effect (see Csirmaz 2006; 2009); that is, non-iterating predicates like ‘arrive’ become compatible with a high durative in the presence of *only*. Consider (17).

- (17) (a) Only JOHN arrived for an hour/until 3pm.
 (b) John only locked the DOOR for a week/until yesterday.

It may be argued that ‘only’ shares some properties with negation (see, e.g., Heycock 2005 for arguments based on effects similar to Neg-raising with *only*), which could suggest an account of (17) in terms of negation in this operator (cf. Csirmaz 2006). Interestingly, however, unmarked focus (18a), universal quantifiers (18b), and *exactly* numerals (18c)—none of which are negative in any usual sense—also give rise to the relevant scope configuration:

- (18) (a) John locked the DOOR for two weeks/until last night.
 (b) Everyone failed the test for two weeks/until last week.
 (c) (Exactly) five students came to my office hours for a year/until last week.

Negation is clearly not useful in explaining these facts, nor is the subinterval property noted above for (2).¹¹ In (18a), for example, it is not the case that at any instant of the two-week period/until last night, John

whether the same participants are involved (as in *John spotted the same plane for an hour/until noon*) makes no difference to our account. Telic predicates will be felicitous in the HighDur configuration only on an iterative interpretation. In cases in which iterative interpretations are ruled out for pragmatic reasons, as in *John drank a beer* in which one cannot drink the same beer over and over, these telic predicates will be infelicitous in the HighDur configuration. See also the discussion of *arrive* below.

¹¹ Csirmaz (2006; 2009) and Condoravdi (2008) take **divisibility** to be the relevant property in the presence of negation.

locked the door. Rather, we need to look at **relevant situations** occurring during the two week period/until last night and then ask if ‘John locked the door’ is true at that situation. Dowty (1979, 82–3) observes the importance of such relevant situations in the interpretation of *for*: he claims they are “both vaguely specified and also contextually determined”, as illustrated in (19).

- (19) (a) John has been working in San Diego for the last five years. He usually spends his weekends at the beach.
 (b) [#]John has been serving his prison sentence for the last five years. He usually spends his weekends at the beach.

Since the workweek (typically) excludes the weekends, one can work in San Diego and still spend weekends at the beach, in contrast to the normal state of affairs for prison sentences. We propose that these relevant situations are not vaguely specified but are provided by the information structure of the sentence, and can arise in a number of ways (see below). For example, consider cases of unmarked (i.e., prosodically marked) focus.¹² The information structure in (20) is such that the focused element provides salient alternative scenarios, while the presupposition gives us the relevant situations where the proposition is evaluated.

- (20) (a) John locked the DOOR for a month.
 – presupposition: John locked something \rightarrow relevant situation s
 – assertion: John locked the door \rightarrow event e
 ‘For a month, each time John locked something, it was the door (and not, for example, the front gate or the window).’
 (b) John LOCKED THE DOOR for a month.
 – presupposition: John did something (i.e., took safety measure) \rightarrow relevant situation s
 – assertion: John locked the door \rightarrow event e
 ‘For a month, each time John did something relevant (e.g. took a safety measure), he locked the door.’
 (c) JOHN locked the door for a month.
 – presupposition: someone locked the door \rightarrow relevant situation s
 – assertion: John locked the door \rightarrow event e
 ‘For a month, each time someone locked the door, that someone was John (and not, for example, his assistant).’

¹² Thanks to Chris Piñón (p.c.) for useful discussions of these data. See also Mittwoch (2001) for related discussion.

In each relevant situation, different for each sentence in (20a–c) due to different presuppositions, there must be a door-locking event by John for the sentences to be true. An initial semantic formalization of the HighDur configuration based on these facts is provided in (21).

(21) for/until $i(\exists e\forall s[s \rightarrow e])$

There is a relevant situation s , determined by the presupposition, which mediates between the contiguous subinterval of the reference time i , identified by the H-durative, and the event e , denoted by the predicate, such that whenever s takes place e takes place.

Now consider other operators. The classically problematic examples involve negated and non-negated eventives, where we claim that the difference in acceptability comes down to whether or not the semantic structure in (21) is feasible. Consider the examples (22)–(24) below.

(22) (a) John didn't arrive on time for a month/until yesterday.

'For a month/Until yesterday, every time John arrived, his arrival was not on time.'

(b) John arrived on time for a month/until yesterday.

'For a month/Until yesterday, every time John arrived, his arrival was on time.'

(23) (a) #John arrived for a month/until yesterday.¹³

'For a month/Until yesterday, every time John did something relevant, it was arrive.'

(b) John missed a note for a month/until yesterday.

'For a month/Until yesterday, every time John did something relevant, it was miss a note.'

(24) John didn't arrive for a month/until yesterday.

'For a month/Until yesterday, at every relevant moment it was true that John did not arrive at that moment.'

In (22a) and (22b) both, 'on time' is the focus of the sentence and the relevant situations are 'arrivals by John', as indicated in their paraphrases.

¹³ As pointed out by an anonymous reviewer, we predict that this example should be acceptable in a specific context that makes an iterative interpretation possible, and this is so: For example, where John goes on a dangerous mission daily, and, for a month, he arrives (at the end of the mission) but one day he does not. This is highly marked but possible.

This interpretation is available independently of negation, since negation here scopes over ‘on time’, and there is no negation in the (b) example; this also shows that there is nothing in the telicity of ‘arrive’ *per se* that precludes it from combining with a durative. Now, the infelicity of examples like (23a) appears to be the pragmatic difficulty in determining the relevant situations for evaluating the truth of the predicate. We claim that since there is no clear presupposition, the relevant situations default to every instant (DEI) of the stretch of time identified by the durative. Thus, there is only the pragmatically odd interpretation that John arrived at every instant for a month/until yesterday. Observe that this DEI interpretation holds independently of negation since it is available for non-negated predicates as well, illustrated in (25).

- (25) (a) John sneezed for ten minutes straight.
 (b) John slept for an hour.

No DEI interpretation arises for (23b), however, since the relevant situations are readily available: John’s attempt at playing the particular piece containing the note he misses. (In the case of a predicate like ‘miss’, it is clear from the lexical meaning what the relevant situations are where the proposition should be evaluated, which is not the case for predicates like ‘arrive’.) We also claim that the same DEI is playing a role in the presence of negation in sentences like (24) as well, such that no arrival by John holds at every instant for a month/until yesterday. There is nothing pragmatically odd about this interpretation, and the sentence is fine. Additionally, in our view, this DEI interpretation is precisely what gives us the sense of expectation noted in the literature (Karttunen 1974). So, for example, in (26) below, there is an understanding that John could have arrived at any moment of the subinterval denoted by the HighDur. We propose that this is because of the DEI interpretation.

- (26) John didn’t arrive for an hour/until midnight.

When it comes to universals, there is a gradation of acceptability based on how easy it is to deduce the relevant situations *s*:

- (27) (a) ??Everyone arrived for two weeks/until last week.
 (b) Everyone arrived late for two weeks/until last week.
 (c) ??Everyone took the test for two weeks/until last week.

- (d) Everyone who came to apply for a job here took the test for two weeks/until last week.
- (e) Everyone failed the test for two weeks/until last week.

In the unmarked examples (b, d, e), the relevant situations are either given by the presupposition generated by focus (b: arrivals), or through the restriction on the quantifier (d: applying for a job), or via the lexical meaning of the verb (failing the test requires taking the test). In the latter case, we would claim that there is a silent restriction on the quantifier that is easy to reconstruct from the verb's meaning. In (a, c), however, we need an adequately salient context to come up with the relevant situations. In (27a), the context might supply a restriction on the quantifier (e.g., 'everyone who went on a daily dangerous mission threatening their arrival'), while in (27c), we either need alternatives to 'test' (which is difficult) or a restriction on the quantifier (which is provided explicitly in (27d) and implicitly in (27e)). This explains the contrasts noted in (27) straightforwardly.

Turning to more complex cases, sentences with **exactly + numeral** (marked ungrammatical by Csirmaz 2006) also require evaluation at (a) relevant situation(s):

- (28) (Exactly) one student came to class for a year/until last week.

This case is analogous to the focus examples: what has to hold is that at every relevant situation *s* (whenever someone came to class—regardless of whether it was once or on multiple occasions), it must be exactly one (i.e., the same) student who showed up.

Based on the discussion above, we summarize our proposal as follows. HighDurs identify a subinterval *i* of the reference time during which there is a set of relevant situations *s* determined primarily by the presupposition (introduced by focus or quantification, and mediated in part by context and pragmatics) at which the assertion is said to hold exhaustively. When there is no clear presupposition, relevant situation *s* defaults to all instants of the subinterval *i*. In our view, the unacceptable examples like (23a) constitute the marked case, since they represent environments where the construal of an interpretation is exceptionally difficult. There is no principled reason, however, to expect telic predicates to be incompatible with duratives, or for negation (or stativity) to be required. Thus, the contrast between (1) and (2) is misleading and misinterpreted in much of the literature.

5. Implications for the *until*-debate

Finally, let us relate our account to the *until*-debate. Briefly, there are two competing analyses trying to account for the contrast in (29):

- (29) (a) John didn't arrive/*arrived until 3pm.
 (b) John didn't sleep/slept until 3pm.

On the one hand, it has been suggested that *until* is compatible with telic predicates only in the presence of negation because there is a separate lexical item *until* which is eventive and an NPI (the other *until* being durative) (e.g., Condoravdi 2008; Giannakidou 2002; Karttunen 1974). While it is unclear why eventivity and NPIhood should be intimately linked, this line of analyses does eliminate the need for stativizing negation. On the other hand, “one-*until*” accounts (e.g. Mittwoch 1977; 2001) argue that there is only one *until* which can only combine with durative events—hence, negation is required to stativize eventives in order to make them compatible with an *until*-phrase.

As we have shown, both accounts face problems in the face of the discussion above. As far as we can tell, there is no motivation for “NPI-*until*” since the HighDur effect holds without negation, as noted above for unmarked focus (18a), universal quantifiers (18b), and *exactly* numerals (18c). *Until* is also licensed in neutral contexts with an iteratively interpreted eventive (8b). Moreover, on our analysis, duratives outscope negation in the relevant environments (e.g. in (6)), so it is unclear how NPI-*until* would be licensed anyway in this configuration. Lastly, *until* patterns exactly like *for* in the relevant respects. With respect to scope relations, our account finds itself closer to the “one-*until*” account since we agree that negation is within the scope of the durative in examples like (2). However, there is ample evidence (here and in papers cited above) that negation does not stativize. Furthermore, the other environments (focus, universals, iteratively interpreted telics) present a problem here as well because these environments cannot be claimed to involve stativity in any form.

Therefore, the implication of our account for the *until*-debate is that there is only one *until*, which is not an NPI and has no special properties in comparison with *for*. It is simply a high-scoping durative, receiving its interpretation in the referential (topic) field of the sentence, hence outside negation.

A question that remains to be answered (and which, in fact, is left open by one-*until* accounts in general) is how the so-called “actualization” reading illustrated in (30) comes about:

- (30) John didn’t arrive until 2pm/Sunday.
 > John arrived at 2pm/on Sunday.

In (30), there is an entailment that the event denoted by the positive counterpart of the predicate takes place at (or shortly after) the subinterval identified by *until* (cf. de Swart 1996; Karttunen 1974; Giannakidou 2002 a.o.) The proponents of NPI-*until* have attributed this property to the lexical item itself, which now has three special and apparently unrelated properties: eventivity, NPIhood, and actualization. This reasoning ties the NPIhood of *until* to actualization since negation in these examples is claimed to be expletive, whose sole role is to license the NPI. The “expletive” nature of negation is supposed to be supported by the actualization (so, on this view, (30) actually **means** the implicature below). Giannakidou (2002) does note, however, that this special reading appears connected to focus since in Greek, for example, so-called NPI-*until* is actually a focus particle.¹⁴ Discarding the NPI-*until* analysis then clearly leaves us with the burden of accounting for this reading. We propose that the reading is actually a straightforward result of the H-durative being a contrastive topic. Note the parallel interpretations of the two constructions:

- (31) Classic contrastive topic construction (cf. Büring 2003)
 A: What did you buy in the city?
 B: On 59th street I bought SHOES.
 Alternative: in other locations *Alt.: other things*
 > In some other location I bought something other than shoes.
- (32) John didn’t arrive until 9.
 Until 9 NO John arrive
 Alt.: at or shortly after 9 *Alt.: YES*
 > At or just after 9, John did arrive.

¹⁴ A similar suggestion is made in Declerck (1995), who actually proposes that *not+until* lexicalizes the same meaning as *only+at* and is in fact a focus particle. We do not discuss this analysis here due to lack of space, and also because it is heavily dependent on the presence of negation in the sentence.

In the topic field, H-duratives can get a contrastive reading,¹⁵ such that the alternative introduced by the H-durative is the portion of the reference time not covered by the H-durative: the introduction of alternatives derives the entailment that the event “actualizes” (in (32) that John arrives). In the case of *until*, the remainder of the reference time ends at or shortly after the time point in the *until*-phrase, hence the actualization. This view is supported, once again, by the fact that actualization obtains in all relevant environments—with *for* as well as *until*, and with operators other than negation in a similar fashion:

(33) Only John arrived/Everyone failed the test **until last week**.

(34) A: What happened at the party?

B: For two hours/Until about midnight, only John arrived.

> There were other relevant time periods when others arrived.

Based on the above, we conclude that none of the auxiliary concepts that have been introduced to account for the “special” properties of *until*-constructions (such as ‘NPI-*until*’, ‘actualization’, ‘expletive negation’ or ‘stativizing negation’) are required or desirable.

6. Conclusions

In this squib, we have outlined a novel account of two observations that have been discussed at length in the literature. One issue is the apparent requirement for negation to be present in a sentence with an eventive predicate to yield compatibility with a durative. The other issue is the relationship between negation and *until*. We have offered a unified account that eliminates the need for positing a stativizing effect of negation (which simply does not seem to hold), expletive negation for the licensing of *until* (which, apart from being a theoretically undesirable concept, is

¹⁵ Since our account ties the actualization to a contrastive reading of the durative, it is crucial to take prosody into consideration, something that we hope to look at in future research. It should also be noted that actualization is possible (although apparently not obligatory) with atelic verbs as well (contra Giannakidou 2002) in examples like *John slept until 2pm*. It appears to be the case that actualization is an option with statives but strongly preferred with eventives. At this point, we are unclear about whether this generalization is entirely correct, and if so, why it should hold.

also not warranted since *until* is not actually an NPI, and the so-called actualization reading has received an alternative explanation) or the lexical duplication of *until*. We have shown that the observations in the literature are based on an oversimplified view of the data, since the properties ascribed to negation and/or *until* are observed in a much wider variety of contexts. Our account is rather simple, and derives the facts from the proposal that *until*- and *for*-duratives are referential items that take scope in the topic field and can receive a contrastive interpretation there on analogy with regular topics. As such, the constructions at hand display no mysterious properties.

References

- Abels, Klaus 2005. Expletive negation in Russian: A conspiracy theory. In: *Journal of Slavic Linguistics* 13: 5–74.
- Büring, Daniel 2003. On D-trees, beans, and B-accent. In: *Linguistics and Philosophy* 26: 511–45.
- Condoravdi, Cleo 2008. Punctual *until* as a scalar NPI. In: Kristin Hanson–Sharon Inkela (eds): *The nature of the word*, 631–54. MIT Press, Cambridge MA.
- Csirmaz, Anikó 2006. Aspect, negation and quantifiers. In: Katalin É. Kiss (ed.): *Event structure and the left periphery. Studies on Hungarian*, 225–54. Springer, Dordrecht.
- Csirmaz, Anikó 2009. Homogeneity and flexibility in temporal modification. In: José M. Brucart–Anna Gavarro–Jaume Sola (eds): *Merging features: Computation, interpretation and acquisition*, 235–54. Oxford University Press, Oxford.
- Declerck, Renaat 1995. The problem of *not . . . until*. In: *Linguistics* 33: 51–98.
- Demirdache, Hamida–Myriam Uribe-Etxebarria 2004. The syntax of time adverbs. In: Jacqueline Guéron–Jacqueline Lecarme (eds): *The syntax of time*, 143–80. MIT Press, Cambridge MA.
- Dowty, David R. 1979. Word meaning and Montague grammar: The semantics of verbs and times in generative syntax and in Montague’s PTQ. Reidel, Dordrecht.
- Giannakidou, Anastasia 2002. UNTIL, aspect and negation: A novel argument for two *untils*. In: Brendon Jackson (ed.): *Semantics and linguistic theory (SALT) 12*, 84–103. CLC Publications, Ithaca.
- Heycock, Caroline 2005. On the interaction of adjectival modifiers and relative clauses. In: *Natural Language Semantics* 13: 359–82.
- Kamp, Hans–Uwe Reyle 1993. *From discourse to logic*. Kluwer, Dordrecht.
- Karttunen, Lauri 1974. Until. In: *Chicago Linguistic Society* 10: 284–97.
- Klein, Wolfgang 1995. A time-relational analysis of Russian aspect. In: *Language* 71: 669–95.

- Krifka, Manfred 1989. Nominal reference, temporal constitution and quantification in event semantics. In: Renate Bartsch – Johan van Benthem – Peter van Emde Boas (eds): *Semantics and contextual expression*, 75–115. Foris, Dordrecht.
- Mittwoch, Anita 1977. Negative sentences with *until*. In: *Chicago Linguistic Society* 13: 410–7.
- Mittwoch, Anita 2001. Perfective sentences under negation and durative adverbials. In: Jack Hoeksema – Hotze Rullmann – Víctor Sánchez-Valencia – Ton van der Wouden (eds): *Perspectives on negation and polarity items*, 265–82. John Benjamins, Amsterdam & Philadelphia.
- Morzycki, Marcin 2004. Measure DP adverbials: Measure phrase modification in VP. Manuscript, UQAM.
- Swart, Henriëtte de 1996. Meaning and use of *not ... until*. In: *Journal of Semantics* 13: 221–63.
- Ürögdí, Barbara 2009. Temporal adverbial clauses with or without operator movement. In: Katalin É. Kiss (ed.): *Adverbs and adverbial adjuncts at the interfaces* (Interface explorations 20), 133–68. Mouton de Gruyter, Berlin & New York.
- Verkuyl, Henk J. 1993. *A theory of aspectuality: The interaction between temporal and atemporal structure* (Cambridge Studies in Linguistics, Vol. 64). Cambridge University Press, Cambridge.