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## Adverbial clauses with *-ig* and the “*until*-puzzle”

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**Abstract:** This paper is devoted to untangling some of the cross-linguistic puzzles that are associated with temporal adverbial clauses in general, and *until*-clauses in particular. After a brief introduction to the issues raised by the construction in Hungarian, the paper presents an overview of the complexities of *until*-clauses and prior attempts at analyzing these. Then, an account that was first proposed in MacDonald & Ürögdi (2009a;b; 2011) for English is presented, and it is argued that *until*-constructions do not require any of the special machinery that has been proposed to explain their behavior. The analysis outlined accounts for the properties of temporal adverbials formed with *until* and *for* without reference to auxiliary concepts like “expletive negation” and “stativizing negation”. After this detour into English, we return to Hungarian, where *until*-clauses present a more complex picture than they do in Germanic, and we see how even these data can be accounted for without special stipulations. Finally, the results are tied into the general picture of temporal and event relativization (cf. Haegeman & Ürögdi 2010a;b), providing support for an analysis of a well-defined class of subordinate clauses involving operator movement.

**Keywords:** embedded clauses; temporal adverbials; *until*; expletive negation; operator movement

*Until*-clauses present a number of puzzles cross-linguistically, and this paper is devoted to (partially) untangling some of these. After a brief introduction to the issues raised by the construction in Hungarian, I present an overview of the complexities of *until*-clauses and attempts at analyzing these cross-linguistically. Then, I review an account that was proposed in MacDonald & Ürögdi (2009a;b; 2011) for English, and argue that *until*-constructions in fact do not require any of the special machinery that has been proposed in order to explain away their behavior. After this detour into English, I return to Hungarian, where *until*-clauses present a much more complicated picture than they do in Germanic, and show how even these data can be accounted for without various stipulations regarding *until*. Finally, I tie all this into the general picture of temporal and event relativization (cf. Haegeman & Ürögdi 2010a;b).

The properties of temporal clauses featuring *-ig* ‘until, as long as’ vary greatly across regional dialects as well as individual speakers of Hungarian. In what follows, I limit discussion to the least restrictive dialect

(spoken primarily in the capital city Budapest), which displays the three-way contrast illustrated in (1). Dialectal differences are potentially very enlightening because some speakers do not permit the entire range in (1) and there is also variation with respect to the more complex scope and extraction patterns discussed below;<sup>1</sup> a thorough discussion of this variation, however, falls outside the scope of this paper. Thus, most of what I have to say below in reference to Hungarian *until*-constructions should be taken as applying to this least constrained dialect of the language. After the core discussion, I comment briefly on a more restrictive dialect of Hungarian (spoken, roughly, in the eastern parts of the country) that only allows (1c) out of the variants in (1). This more archaic dialect is discussed in É. Kiss (2010) and analyzed by Lipták (2005).

In the dialect that utilizes each of the structural variants shown under (1), I will assume that each of these structures is a productive syntactic construct, without any special lexical or idiomatic properties:

- (1) a. Itthon maradok, **ameddig** Emma át-jön.  
 home I-stay dem-wh-until Emma over-comes
- b. Itthon maradok, **ameddig** Emma **nem** jön át.  
 home I-stay dem-wh-until Emma not comes over
- c. Itthon maradok, **ameddig** Emma át **nem** jön.  
 home I-stay dem-wh-until Emma over not comes  
 ‘I’ll stay home until Emma comes over.’

The three sentences in (1) appear to convey the same meaning (at least as far as the English translation goes) but have diverging pragmatic and semantic interpretations that, I will argue, result from different syntactic structures. (1a) is an **event relative** construction with *-ig* where the embedded clause features a punctual event, and, accordingly, the relative operator originates outside the adverbial clause. The central idea that referential CPs are formally event relatives (derived by short operator movement) as opposed to speech acts is discussed in detail in Haegeman & Ürögdi (2010a;b) among others (see references therein). A rough definition and schematic structure is as follows.

<sup>1</sup> In particular, Lipták (2005) explicitly says that examples like (1a), that is, *until*-clauses without negation, are ungrammatical. This is just one indication that Lipták analyzes a dialect distinct from mine.

(2) a. **Event relative:**

A relative clause where the relativized constituent is TP, and as such, the relative clause refers to the entire eventuality denoted by the TP. Event relativization is a syntactic operation that creates a referential proposition from an event, which can now be used as argument.

b. **Structure** (adapted from Haegeman 2007):

[CP OP<sub>*i*</sub> C ... [XP *t<sub>i</sub>* [TP ... ]]]

Event relativization has been formalized in a number of ways in the literature, and here I will assume a derivation along the lines of (2b). The idea is that there is an event variable housed in a functional projection just outside TP, with which TP (= the event) stands in a predicational relationship. This event operator moves up to Spec,CP in event relativization. The nature of XP here is not very important for our purposes – what matters is the starting position of the operator and its movement path, so I will focus on these below.

The idea that (1a) involves an event relative is confirmed by the fact that this construction does not allow the low reading in multiple embedding constructions:

- (3) **Add-ig** maradok, **a-medd-ig** mondod, hogy megjössz.  
 dem-until I-stay dem-wh-until you-say comp you-arrive  
 HR: ‘I’ll stay as long as you keep saying that you’ll arrive.’  
 \*LR: ‘You tell me that you’ll arrive by time *t*. I’ll stay until time *t*.’

The simple event relative construction with *-ig* is quite straightforward both in terms of meaning and structure. Meanwhile, the examples in (1b) and (1c), both involving negation in the lower clause, convey different implicatures. According to speaker intuition (to be made more precise below) (1b) is simply a statement about two simultaneously occurring states/activities, with no further implications. In the concrete (1b) scenario, the sentence asserts that the duration of my staying home will coincide with Emma’s not having come over (i.e., Emma’s being somewhere other than home). At the same time, (1c) seems to implicate (or perhaps entail) that, once the event in the lower clause takes place, the situation will reverse: I will leave when Emma appears. This reading is sometimes referred to in the literature as the “switch-reading” or “actualization” (cf. Giannakidou 2002, among others), and it is an unresolved question whether this reading is an implicature associated with certain combinations of *until* and negation, or an uncancelable entailment (see Giannakidou 2002

for arguments for the latter position).<sup>2</sup> Several authors assume that the switch-reading is brought about by the presence of negation in the temporal clause, based on English examples like (4):

- (4) John didn't get angry until Jack broke the vase.

In (4), it appears that a necessary outcome of the situation is that John got angry, and this happened when (or even as a result of the fact that) Jack broke the vase. If this effect is somehow related to the presence of negation in (4), this could mean that we would expect a contrast (1a) against (1b–c). In Hungarian, however, (1b) – which also involves negation – normally lacks the switch-reading, meaning that another explanation must be sought for the strong preference for this reading in (1c).

The discussion is organized into the following sections. First, section 1 presents a brief overview of the main issues in the “*until*-debate” based on relevant recent literature. The aim of the section is to outline the general direction my analysis will take, as well as to provide sufficient context for the issues. Section 2 presents a novel analysis of English *until*-constructions and the related issues of the role of negation in these constructions, the switch-reading and the relative positions of operator elements in these constructions. In section 3, I return to the Hungarian data briefly illustrated in (1). In a nutshell, I argue that the Hungarian facts can be accounted for without positing two homophonous *-ig* suffixes (I thereby join the “single-*until*” line of analyses) and without appealing to “expletive negation”. I look at syntactic and semantic differences among the three constructions illustrated in (1). I show that the examples (1b) and (1c) are differentiated structurally by the position where the negation is interpreted (higher than its surface position for (1c)), which leads to a number of syntactic contrasts (e.g., the scope of negation with respect to other operators, the licensing of negative quantifiers) and semantic effects (e.g., the availability and interpretation of temporal modifiers within the clause). I argue that *until*-constructions have no special or unusual properties that necessitate such extraordinary machinery as “expletive negation”, “stativizing negation”, or “actualization”. Rather, all the relevant properties fall out of simple assumptions about scope, focus and the position of negation.

<sup>2</sup> On some accounts, the switch-reading is due to a cause–effect interpretation associated with the construal exemplified by (1c) – see, for example, Español-Echeverría & Vegnaduzzo (2000).

## 1. Overview of the “*until*-debate”

The exceptional semantic (and, to a lesser extent, syntactic) properties of *until* among temporal connectives/adpositions, especially its interaction with negation, have been discussed by a number of authors (see, among many others, Piñón 1991 on Hungarian; Giannakidou 2002 on Greek and for a good overview of the issues and the most influential proposals in the literature; Español-Echeverría & Vegnaduzzo’s 2000 work on Spanish and Italian; and Eilam & Scheffler 2007 on Hebrew). There are a few fundamental questions that authors do not seem to have reached a consensus on – I briefly look at each of these in turn, and then go on to propose an account that hopefully improves upon all of these.

### 1.1. How many *until*-like elements are there in the lexicon?

Based on English data like (5), the existence of at least two types of *until* – durative (5a) and punctual (5b) – has been posited:

- (5) a. John slept/didn’t sleep until 5 pm/until Jane left.  
 b. John didn’t arrive until 5 pm/until Jane left.  
 c. \*John arrived until 5 pm/until Jane left.

Sentences like (5b) raise a number of interrelated issues. While the use of *until* here has been called punctual (since the matrix verb is eventive, unlike in (5a)), the *until*-clause is apparently only licit if the eventive predicate in the matrix clause is negated (compare (5c)). This well-known observation has led to two diverging types of explanation.

One line of reasoning says that the negation in (5b) functions as a stativizer (cf. Mittwoch (1977) and her later work) – thus, there is only one, durative kind of *until*. I will refer to this as the **single-*until*** account. More specifically, the *until*-phrase or -clause supplies the endpoint to the activity or state with which it combines. Since negation is taken to create a state out of eventives, *John didn’t arrive* qualifies as a proper durative argument for *until* and thus (5b) ends up being grammatical. Negation and *until* are claimed to scope freely with respect to one another, yielding two possible readings for (6a) but only one for (6b):

- (6) a. John didn’t sleep until 5.  
 i. Neg > *until*: It is not the case that John slept until 5 (he woke up earlier, or didn’t sleep at all).  
 ii. *until* > Neg: Until 5, John was awake (maybe fell asleep after).

- b. John didn't arrive until 5pm.
  - i. \*Neg > *until*: It is not the case that John arrived until 5.
  - ii. *until* > Neg: Until 5, John was in the state of not having arrived.

On this type of account, the unavailability of the Neg > *until* reading in (6b) follows from the fact that *until* is unambiguously “durative” on this view, so it can only combine with an eventive predicate after it has been stativized by negation. Therefore, (5c) is out because there is no way to felicitously combine *until* with *arrive*. According to its critics, this account makes it difficult to formalize the “switch-reading” apparently associated with sentences like (5b), since there is no structural or lexical difference between (5a) and (5b). Note that making negation responsible for the switch-reading (without any further stipulations) will not help either, since the negated version of (5a) does not obligatorily enforce this reading. Rather, both (5a) and (5b) have the same reading (with (5a) having an additional one, shown in (6ai)) where the sentence only makes a statement about the period up to the point specified by the punctual argument of *until* (in this case, 5 o'clock) and there is nothing more said about what happens after. As such, on this view the switch-reading is only a pragmatic implicature and not a strict entailment of the construction in (5b) (or the one in (5a) for that matter).

At the same time, Giannakidou (2002), rejecting the single-*until* account, argues that the weakness of a Mittwoch-style analysis is precisely that it has trouble explaining the different entailments that are associated with (5a) and (5b). On her view, (5a) entails nothing about what happened after 5, even on the wide scope reading of *until*. Meanwhile, (5b) entails a switch in the state of affairs that happens at the time specified by the *until*-phrase (in this case: John was in the state of not having arrived until 5pm, and then switched to having arrived at 5pm) and so the English (5b) is only felicitous if John actually arrived at 5pm or soon thereafter. This point is illustrated, among other examples, by the following contrast (from Karttunen 1974; ex. (21) and (23), cited by Giannakidou 2002):

- (7) a. Nancy remained a spinster until she died.
- b. #Nancy didn't get married until she died.

There is a strong feeling of pragmatic oddness associated with (7b) that we do not get with (7a), and this appears to be connected to the use of a stative in (a) and an eventive in (b) – the (b) example is strange because (as argued by Giannakidou) it has the entailment that Mary got married

when or immediately after she died, an entailment that is not there in (7a).<sup>3</sup>

Instead, following Karttunen (1974), Giannakidou claims that at least two types of *until* must be posited: **durative-*until*** and **NPI-*until***. The latter is licensed by negation in English sentences like (5b) and actually corresponds to a distinct lexical item in Greek. In addition to being a polarity item, NPI-*until* is eventive, so it can combine with a non-durative predicate like *arrive*, so, on this view, the role of negation in (5b) is simply to license this particular kind of *until*, and it has no effect on event structure, with *didn't arrive* still denoting a punctual event. Further, on Giannakidou's analysis NPI-*until* has the special property of leading to the switch-reading, a lexically encoded entailment that is not associated with durative-*until* (the latter only combinable with durative predicates, and requiring no special polarity). Despite the obvious drawbacks of lexical duplication of *until*, this type of analysis (which I will refer to as the “NPI-*until*” account) has the advantage that it can explain the fact that, whenever present, the switch-reading appears to be an obligatory entailment, and it does not necessitate assigning a stativizing function to negation, a problematic assumption as I discuss below. Meanwhile, though, it becomes truly unclear what the role of negation is in examples like (5b). It does not stativize on this account, and it also does not receive an interpretation that is customary for negation – it does not negate the event of arrival. In fact, just the opposite ends up being the interpretation, due to the entailment, as *John didn't arrive until 5* actually seems to mean something like *John arrived at 5*. Hence, this analysis operates with something that has become known as “expletive negation” – negation that is present in the structure for formal syntactic reasons, and does not play any role in interpretation.

As is obvious from the brief overview above, the two basic lines of accounts – the single-*until* analysis and the NPI-*until* analysis – both have their own benefits and drawbacks, and both are forced to make theoretical assumptions and adopt machinery that are based on stipulation and not very well applicable in other areas of the grammar. The facts are not very clear empirically either, since tests for the semantic import of the

<sup>3</sup> There are counterarguments presented to this example in Mittwoch (2001), who claims that the effect in (7b) and the switch-reading in general is a cancelable implicature, as shown by examples like *Mary won't start work at her new job until Monday, if then*. According to Mittwoch, the fact that you can add *if then* at the end of the example shows that the switch-reading can be canceled without resulting in a pragmatic difficulty. I return to this issue below.

switch-reading seem to go both ways, and authors often ignore the effects of focusing, or prosody in general, when evaluating the examples. For example, it is worth noting that focusing the adverbial clause (achieved in English by prosodic means) brings out the “switch” entailment in (5a) just as easily as in (5b) (contrast (8a) and (8b) with main stress indicated in bold) – and that “not until” fronting, a syntactic means of putting focus on the *until*-clause, makes the entailment obligatory (as in (8c)):<sup>4</sup>

- (8) a. I **won't** sleep until you get home. (I will wake up earlier and cook you dinner.)  
 b. I won't sleep until you **get home**. (I'll be too worried to sleep.)  
 c. **Not until** you get home will I sleep.

This suggests that the entailment is probably not construction-specific but has close ties to focus structure, and thus the existence of the “switch-reading” is not a reliable syntactic diagnostic for determining whether or not we need to posit one of two *until*'s.

Analyses that posit lexical ambiguity of *until*-type elements generally tie together two distinct properties of *until*: semantic restrictions on the type of predicate/eventuality the P is able to combine with, and syntactic restrictions on the polarity of the environment in which it occurs. It is worth noting that these two properties need not go hand in hand. It is entirely possible for *until* to always combine with the same two arguments (a state/activity and an endpoint) while retaining some sensitivity to polarity and other construction-specific factors. In particular, the fact that the relative scope of negation and *until* does not fully explain the pragmatic effects associated with negated *until*-constructions does not necessarily mean that the single-*until* approach should be abandoned. This brings us to the second major issue, the role of negation.

## 1.2. Is there such a thing as “expletive negation”?

Given the entailment associated with (5b) above, the “expletive” nature of the negation in these constructions has been argued for by various authors. The argument goes like this: The role of negation in (5b) is not to stativize the verb (arguments have been forwarded that in fact negated events are

<sup>4</sup> Cf. Mittwoch (2001)'s suggestion that *not until* is in fact on its way to becoming a focus particle in English. Also noteworthy is the fact that the element Giannakidou (2002) calls NPI-*until* in Greek is actually a focus particle (*only*). See also Declerck's (1995) suggestion that *not-until* means ‘only-at’, a proposal I discuss below.



not stative; cf. Csirmaz (2006) among others) but only to license NPI-*until*. Moreover, this instance of negation does not share with run-of-the-mill negation its most fundamental characteristic, since it does not affect the truth conditions in the usual way. (Concretely, in (5b) *John didn't arrive until 5* does not mean that John did not arrive – in fact, it entails or at least implicates just the opposite.) To avoid diverting the discussion into unrelated territory, I will not review the relevant arguments at this point. Suffice it to say that, in addition to semantic considerations, there are a number of syntactic effects as well that pertain to the ‘expletive negation’ debate, some of which I look at here.

Abels (2005) discusses Russian constructions that have been claimed to feature expletive negation. In Russian, there are two polarity-sensitive phenomena that require local licensing: “genitive of negation” (illustrated under (9) and *ni*-phrases (negative quantifiers) as shown in (10) (examples from Abels):

- (9) a. Ivan ne čitaet ✓žurnal/ ✓žurnala.  
Ivan NEG reads journal-ACC journal-GEN  
‘Ivan doesn’t read the journal/a journal.’
- b. Ivan čitaet ✓žurnal/ \*žurnala.  
Ivan reads journal-ACC \*journal-GEN  
‘Ivan reads the journal/a journal.’
- c. Ivan ne skazal, čto on čitaet ✓žurnal/ \*žurnala.  
Ivan NEG said that he reads journal-ACC \*journal-GEN  
‘Ivan didn’t say that he reads the journal/a journal.’
- (10) a. Ivan ničego ne znaet.  
Ivan NI-what NEG knows  
‘Ivan doesn’t know anything.’
- b. \*Ivan ničego znaet.  
Ivan NI-what knows
- c. \*Fedja ne skazal, čto on ničego znaet ob ètom.  
Fedja NEG said that he NI-what knows about that

The examples in (9) and (10) show that, in the majority of cases, genitive of negation (GoN) and *ni*-words pattern identically in that they both require a clause-mate licensing negation in order to be felicitous. More precisely, the environments where GoN is licensed constitute a proper subset of the ones where *ni*-words are acceptable (as GoN is not grammatical in all argument positions, see Abels for discussion). Accordingly, we do not

expect to find constructions where GoN is acceptable but *ni*-words are not licensed; however, as noted in Brown & Franks (1995), such environments exist, with so-called “polar questions” being one of them:

- (11) a. Ne/ \* $\emptyset$  kupil li Petr žurnala?  
 NEG bought Q Petr journal-GEN  
 ‘Did(n’t) Petr buy a journal?’
- b. \*Ne/ \* $\emptyset$  znaet li nikto iz vas, kak èto delaetsja?  
 NEG know Q NI-who of you how this is-done  
 intended: ‘Do(n’t) any of you know how to do this?’

In (11), where negation is clearly in the CP-domain as it occurs left of the particle *li*, GoN is licit (11a) but the *ni*-word *nikto* is ungrammatical (11b). Abels discusses a number of other examples but this one will suffice for our discussion here. Brown and Franks (1995) (among other authors; see Abels (2005) for references) propose for such constructions that negation here lacks negative force, so it is a case of expletive negation. These authors claim that GoN can be licensed by this formal instance of negation but negative quantifiers cannot, as these polarity items require local licensing by semantic negation. In contrast, Abels argues that expletive negation is an unnecessary and semantically unlikely complication to the syntactic model. Instead, he proposes an account that posits only one type of negation (the usual kind) that originates in the same designated functional projection in the TP-domain (call it NegP) in every case. Based on elaborate argumentation that I will not review here, he posits that *ni*-words are licensed at LF in a local relationship to negation, while GoN is subject to what he calls ‘on-line’ licensing (basically, licensing at any particular point in the derivation). This means that “If negation starts out clause internally, then it will be able to license GoN [on the object]. If it then moves to a position outside of TP and is prevented from reconstructing, *ni*-phrases will be disallowed” (*op.cit.*, 48). This is what happens, Abels argues, in cases like (11), where there is independent evidence that this high instance of negation does not reconstruct, and takes scope in the CP-domain. Since the *ni*-word needs to be in a local relationship with negation at LF, negation that is interpreted outside TP will not be able to license it, hence the asymmetry between GoN and *ni*-word licensing in constructions like (11) is derived.

The resulting account derives the fact that negation that is too high at LF does not license NPIs that require clause-mate licensing, a phenomenon that had previously been attributed to the “expletive” nature of negation in these contexts. Abels goes on to argue that the same explanation can

be extended to *until*-constructions in Russian, where negation inside the *until*-clause has the same odd properties as CP-level negation in polar questions – despite the presence of negation that, at least on the surface, appears to be inside the TP-domain of the *until*-clause, *ni*-words are out in these constructions:

- (12) Ja podoždu poka {✓kto-nibudʹ/ \*nikto} ne pridet.  
 I will-wait until who-NIBUDʹ NI-who NEG arrive  
 ‘I will wait until someone comes.’

Abels assimilates the ungrammaticality of the *ni*-word in (12) to (11b). The mechanism required for this to work is covert Neg-raising whereby, in a well-defined set of instances, negation can raise from its surface position and take a higher scope position at LF. Due to this LF Neg-raising, negation ends up in just the configuration that we witnessed in (11), namely, at LF it is too high to enter into a local licensing relationship with the *ni*-word in question. I return to the technicalities of covert Neg-raising in section 3. The point here is simply that there are syntactic alternatives to accounts that rely on positing expletive negation, and that, to the extent that they are tenable and cover the data, accounts that do not employ the concept of expletive negation are to be preferred on grounds of theoretical simplicity.

In general, there is no clear consensus on what exactly is “expletive” about seemingly spurious occurrences of negation. From a semantic perspective, negation that does not alter the truth conditions of the clause it appears in is usually claimed to be expletive. In this sense, if the truth-conditions of the sentence differ depending on the presence or absence of negation, then this instance of negation cannot be considered expletive. For example, if it can be shown that *until*-clauses featuring negation have different entailments from their unnegated counterparts, then such examples would not be instances of expletive negation for sure. Whatever the case may be, we can only evaluate whether or not negation makes its ‘usual’ contribution in a particular construction if we know what interpretive effect we expect negation to contribute and how to diagnose that effect. In turn, the interpretation we can reasonably expect from negation depends on its syntactic position – both in surface syntax and at LF. Thus, I focus on this question below.

## 2. Against “stativizing negation”, “expletive negation” and “NPI-*until*”

In MacDonald & Ürögdi (2011).<sup>5</sup> we outline a novel account of phenomena mentioned in the introductory section above, and which have been discussed under the labels *stativizing negation*, *expletive negation* and the licensing of *NPI-until* or *eventive until*. We argue that these concepts are theoretically undesirable as well as descriptively inadequate because (a) negation does not affect event structure, (b) duratives normally outscope negation (and thus cannot be NPIs), and (c) the properties ascribed to negation and/or *until* are observed in a wider variety of contexts (hence not lexical properties of either). Our account builds on the idea that *until*- and *for*-duratives take their scope in the topic field (outside TP-level operators) and can receive a contrastive interpretation on analogy with regular topics, yielding the **switch-reading**. As such, our account is a “single-*until*” account in the sense that we do not posit lexical duplication of *until*. The account is also related in spirit to Abels’s treatment of expletive negation since we attempt to derive “special” properties of negation such as its apparent stativizing effect and interactions with *until*-phrases (“licensing” and “switch-reading”) from independently relevant facts like LF-scope and focus structure.

The structure of the discussion below is the following. In section 2.1, I show that negation does not affect event structure, and in section 2.2, I argue that in examples that have been claimed to feature *NPI-until*, negation is in fact outscoped by the durative, and thus cannot be considered a licenser in the usual sense. In section 2.3, I show that the effects that are observed with *until*-clauses obtain with *for*-clauses equally, and that these effects are not related to the presence of negation in any relevant way since they also occur in the presence of *only*-focus, prosodically marked focus, and universal quantification. 2.4 discusses the implications of our account for the *until*-debate, and leads back to Hungarian *until*-clauses.

### 2.1. Negation does not stativize

Durative adverbials are generally taken to be incompatible with telic predicates, as shown in (13):

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

<sup>5</sup> Most of the discussion in section 2 comes from MacDonald & Ürögdi (2011), with modifications only where the current discussion requires.

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 – and this property holds the same way for *for* and *until* adverbials:

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

Recall from the discussion of *until*-constructions that examples like (14) with *until* have been at the center of the debate on the interaction of negation and *until*, with one camp claiming that this is an instance of expletive negation whose role is to license NPI-*until*, and the other camp arguing that negation here stativizes the punctual predicate *arrive*, rendering it compatible with a durative like *until*. Notably, the first explanation has, to the best of my knowledge, not been proposed for *for*-phrases, so no account has been put forward arguing that *for*-phrases are NPIs despite the fact that the two kinds of duratives behave more or less identically in every relevant respect, as we will see in what follows.

In event structure literature, one approach to the role of negation in (14) is that it turns eventive predicates into stative predicates (see de Swart 1996 and Verkuyl 1993). Support for **stativizing negation** builds on Dowty's (1979) observation that stative predicates are true down to instants; i.e., 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 (14): for any instant of the period of 10 minutes/until 2pm it is true that John didn't arrive. As I discuss above for *until*-constructions, the so-called stativizing effect of negation has been utilized in order to explain the compatibility of *until*-phrases with punctual predicates without having to posit two different kinds of *until* (see Mittwoch 1977).

However, convincing arguments have also been presented – both in event structure literature and works dealing specifically with *until* – that negation does not “stativize” the predicate or affect event structure in any way (see, among others, Csirmaz 2009; Giannakidou 2002; Karttunen 1974). Putting a new spin on arguments attempting to derive the relevant facts without positing stativizing negation, MacDonald & Ürögdi (2009a;b; 2011; henceforth M&Ü) argue that (14) features neither “stativizing negation” nor “expletive negation” acting as a licenser for the *until*-phrase. Before going into the details of the account, let me go through some simple arguments to show that, in a literal sense at least, negation does not stativize.

To start, observe a well-known contrast between eventive and stative predicates in the present simple in English in (15):

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

The eventive predicate in (15a) is only felicitous on a habitual interpretation, hence the infelicity of (15a) out of the blue. In contrast, statives do not require a habitual interpretation to be felicitous, as illustrated in (15b). As Csirmaz (2006; 2009) observes, when the eventive is negated, as in (15c), it is still only felicitous on a habitual interpretation, which is unexpected if negation creates a state out of eventives, since in this case we would expect a negated eventive to pattern with statives, which is not the case.

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

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

The eventive in (16i) advances the action: it is understood that the picture is taken after glancing at the car. In contrast, the stative in (16ii) 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 in that they advance the narrative in the same way:

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

If negation did turn eventive predicates into stative predicates, we would not expect this advancement of narration but it should be possible to understand the negated eventive as simultaneous with the first event.

Based on such examples (and others not cited here), M&Ü conclude that, at least in a literal sense, negation does not 'stativize', leaving the availability of durative adverbials with negated eventive predicates without an explanation. Or rather, the fact that negation does not actually create states out of eventives suggests that the generalization made about examples like *John didn't arrive until 5* is misguided, and needs to be re-examined. One option is to revert to the NPI-*until* analysis and assume that negation in these examples is expletive, and is only present in order to license the *until*-phrase. Apart from the obvious problems (the fact that we need to posit not only two *until*'s but also two *for*'s, given that *for*-adverbials are also licit with negated eventives), this position is untenable

also because of other reasons. Namely, arguments can be provided that negation actually scopes under the duratives in these cases.

## 2.2. The HighDur effect: duratives scoping over negation

Karttunen (1974) and Mittwoch (1977; 2001) observe that negation and durative adverbials scopally interact, so in many cases they take scope freely with respect to each other. Consider the sentence in (18):

- (18) 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 (18) is atelic, and there are two interpretations depending on whether negation scopes over or under the durative. Now reconsider the datum from (14): the duratives are compatible with the predicate *arrive* in the presence of negation, but only one of these two scope relations is available:

- (19) 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~~

Only when the durative scopes over negation is there an available interpretation; this is what M&Ü label the HighDur effect or HighDur reading, a label that I adopt here. For now, let us take it simply as a descriptive observation that in the configuration we are interested in – the combination of a negated eventive and a durative adverbial – the durative scopes higher than negation. Mittwoch (1977) takes this as evidence that negation stativizes, since it combines with the predicate first, and only this negated (i.e., in her terms “stativized”) predicate can combine with the durative. M&Ü argue, however, that – in addition to the fact that negated eventives do not pattern with statives – the original observation, namely that punctual predicates cannot felicitously combine with durative adverbials, is also misleading and should be reevaluated. They show that the fact that the durative cannot combine first in examples like (19) is arguably because the particular telic predicate *arrive* disallows an iterative interpretation. Consider the two telic predicates in (20):

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

(20a) cannot be interpreted iteratively because it is pragmatically odd to arrive repeatedly for a period of time without contextual support. On the other hand, repeatedly missing the same note requires little contextual help (as it is easy to imagine the relevant situation), thus an iterative interpretation is readily available for (20b), and the durative is compatible without any problems. As expected, with *miss a note* negation and the durative show the same scopal interaction observed with atelic predicates, as shown in (21):

- (21) 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

Based on examples like (21), it appears that the “free scopal order” of duratives with respect to negation is more general, and available regardless of the telicity of the predicate. That is, negation need not stativize for the HighDur reading to obtain. Rather, with certain predicates (namely, eventives that do not allow an iterative interpretation) one scope relation is not felicitous – but this is due to the pragmatics of ‘arrival’, and not to the syntactic requirements of the durative, which can happily combine with a telic predicate (as shown in (20b)). Therefore, based on the arguments in the previous section that negated eventives do not actually become stative, and on the fact that we do not need to posit a stativizing effect of negation in order to explain the compatibility of durative adverbials with eventive predicate, M&Ü conclude that we can safely eliminate “stativizing negation” from the theory, and set out to explore the scope relations in (20a–b). Another outcome of the reasoning above is that we have no evidence for positing “eventive” and “durative” *until* as two separate lexical items since *until* can combine with eventives and duratives equally.

The first question is: when the durative outscopes negation, how does this happen and where exactly does the durative take scope? To start, *for* and *until* duratives clearly 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:



- (22) 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 (23), so the variable scope we saw in (18) does not obtain:

- (23) 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):

- (24) 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). Why should H-duratives be high in the structure, outscoping predicate negation, and L-duratives obligatorily low? M&Ü posit that H-duratives are referential in nature, identifying a subinterval of the reference time, while L-duratives are predicative in nature, measuring the run time of event (Morzycki 2004; Csirmaz 2009). First, observe that H-duratives allow deictic modification, while L-duratives do not:

- (25) 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, (26a) with the H-durative is infelicitous, while (26b) with the L-durative is perfectly fine.

- (26) a. #John studied for 2 hours yesterday afternoon.  
 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 (27).

- (27) The guests didn't arrive for two hours.

In the context of a party (whose duration provides the reference time), (27) 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 no guests arrived. 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 stretch of the same reference time, shown by the continuations of (27) in (28).

- (28) a. ... so we closed the doors and turned off the lights.  
 b. ... but then they started pouring in.

I return to the nature of the contrastive reading on the durative 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.

M&Ü conclude that 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.

### 2.3. HighDUR effect not specific to negation and *for/until*

Recall the implications of M&Ü's analysis for *until*-constructions. The results shown above are incompatible with both the "expletive negation/NPI-*until*" and the "stativizing negation" types of analyses. Negation cannot be claimed to license these duratives since the HighDUR effect is a configuration in which the durative outscopes negation. It has also been shown that the ungrammaticality of (13) is not due to the predicate's telicity because telic predicates that lend themselves to an iterative interpretation do not require negation to be combinable with a durative (e.g., *miss a note*). I now present M&Ü's semantic proposal, which is compatible with the HighDUR configuration, and accounts for the contrasts in (20) as well as the "switch-reading" observed with these constructions – without reference to stativizing or expletive negation. The main point of this section is to show that explanations building on special properties of negation or lexical features of *until* or duratives in general cannot be on the right track primarily because the particular interpretation associated with the interaction of negation and *until* actually obtains in a much wider set of contexts.

It has been noted that, in addition to negation, *only* focus can also “license” duratives with eventive predicates (i.e., yield the HighDUR effect) (see Csirmaz 2006; 2009). Consider (29).

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

While (29a), for one, clearly does not favor an interative reading, *only* may share some properties with negation (see, e.g., Heycock 2005), possibly suggesting an account of (29) in terms an element of negation in this operator (cf. Csirmaz 2006). Interestingly, however, unmarked (prosodically marked) focus (30a), universal quantifiers (30b), and *exactly* numerals (30c) also give rise to the relevant scope configuration:

- (30) 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, as these environments are not usually assumed to involve negation on any level (syntactic or semantic), and appealing to the subinterval property of the event description is also not going to help.<sup>6</sup> In (30a), for example, it is not the case that at every instant of the two-week period/until last night, John 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, 82–83) 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 (31).

- (31) 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. So *for the last five years* is evaluated

<sup>6</sup> Some of the data in this section contradicts Csirmaz’s (2006) observations. M&Û comment on this by saying that the reason for this discrepancy may be that Csirmaz failed to take into account the effects of focusing in her examples.

differently in the two cases. In the case of the HighDUR effect configuration, M&Ü propose that these relevant situations are not actually vaguely specified but are provided by the information structure of the sentence. For example, consider cases of unmarked (i.e., prosodically marked) focus. The information structure of the sentences in (32) is such that the focused element provides salient alternative scenarios, while the presupposition gives us the relevant situations where the proposition is evaluated.

- (32) 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).’

At each relevant situation, different for each sentence in (32a–c) due to different presuppositions, there must be a door-locking event by John for the sentences to be true. A very basic semantic formalization of the HighDUR configuration based on these facts is provided in (33).

(33) 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 M&Ü claim that the difference in acceptability comes down to whether or not the semantic structure in (33) is feasible. Contrast the examples (34)–(36) below.

- (34) 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.'
- (35) a. ?John arrived for a month/until yesterday.  
 '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.'
- (36) 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 (34a) and (34b) both, *on time* is the focus of the sentence and the relevant situations are *arrivals by John*, as indicated in their paraphrases. 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 (i.e., *arriving on time* is just as telic as *arriving*). Now, the infelicity of examples like (35a) appears to be the pragmatic difficulty in determining the relevant situations for evaluating the truth of the predicate. M&Û suggest 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 (37).

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

No DEI interpretation arises for (35b), however, since the relevant situations are readily available: John's attempt at playing the particular piece containing the note he misses. M&Û also claim that the same DEI is playing a role in the presence of negation in sentences like (36) 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, this DEI interpretation is precisely what gives us the sense of expectation noted in the literature (Karttunen 1974). So, for example, in (38) below, there is an understanding that John could have arrived at any moment of the subinterval denoted by the HighDUR. M&Ü propose that this is because of the DEI interpretation.

(38) John didn't arrive for an hour/until midnight.

When it comes to universals,<sup>7</sup> there is a gradation of acceptability based on how easy it is to deduce the relevant situations *s*:

- (39) 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, it is possible to argue 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 (39a), the context might supply a restriction on the quantifier (e.g., 'everyone who went on a daily dangerous mission threatening their arrival'), while in (39c), we either need alternatives to 'test' (which is difficult) or a restriction on the quantifier (which is provided explicitly in (39d) and implicitly in (39e). This explains the contrasts noted in (39) straightforwardly.

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

(40) (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 office hours – regard-

<sup>7</sup> Thanks to Chris Piñón (p.c.) for discussions of these examples.

less 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, the M&Ü proposal can be summarized as follows. HighDURs denote 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*. On this view, the unacceptable examples like #*John arrived until 5* 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 (13) and (14) is misleading and misinterpreted in much of the literature.

#### 2.4. Implications for the *until*-debate

Finally, returning to the *until*-debate, let us see what the implications are for this discussion. To recap, there are two competing analyses trying to account for the contrast in (41):

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

On one hand, it has been suggested that *until* is compatible with telic predicates only in the presence of negation because there is 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 go together, this line of analyses does eliminate the need for stativizing negation. On the other hand, “single-*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 shown by M&Ü, both accounts incur problems in the face of the discussion above. There is no motivation for NPI-*until* since the HighDUR effect holds without negation, as noted above for unmarked focus (30a), universal quantifiers (30b), and *exactly* numerals (30c). *Until* is also licensed in neutral contexts with an iteratively interpreted eventive (20b),

thus, in contexts where no operator element is present in the structure (especially not one that can be claimed to implicate negation somehow). Moreover, I have shown above that duratives outscope negation in the relevant environments, so it is unclear how NPI-*until* would be licensed anyway in this configuration. Lastly, *until* patterns exactly like *for* in the relevant respects, and *for* has not been claimed to be an NPI in the literature. With respect to scope relations, M&Ü's account finds itself closer to the 'single-*until*' line of accounts since the two share the insight that negation is within the scope of the durative in examples like the grammatical (41a). However, there is ample evidence (here and in papers cited above) that negation does not actually 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 M&Ü's 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 single-*until* accounts in general) is how the so-called switch-reading illustrated in (42) comes about:

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

The proponents of NPI-*until* have attributed this effect to the lexical item itself, which would then have three special and apparently unrelated properties: eventivity, NPIhood, and the switch-reading. The 'expletive' nature of negation (solely an NPI-licensor) is supposed to be supported by the switch-reading (so, on this view, (42) actually *means* the implicature below, i.e., in [John didn't arrive] negation is inert and does not affect the truth conditions). Discarding the NPI-*until* analysis clearly leaves open the question of how to account for the switch-reading. M&Ü propose that the reading is actually a straightforward result of the high durative being interpreted as a contrastive topic. Note the parallel interpretations of the two constructions:

- (43) 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.

(44) 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.

In the topic field, H-duratives can get a contrastive reading,<sup>8</sup> 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 (44) 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 strong intuition that the ‘switch’ between John being away and John arriving has to take place at or shortly after 9. This view is supported, once again, by the fact that the switch-reading obtains in all relevant environments – with *for* as well as *until*, and with operators other than negation in a similar fashion:

<sup>8</sup> While seems clear that HighDurs in fact pattern with topics semantically, in terms of syntax, M&Ü offer no arguments to show that these duratives scope not only outside vP (as shown above) but also outside TP. In particular, it is an interesting question where HighDurs are positioned with respect to D&UE’s reference time and assertion time. While I do not have much to say about this here, a potentially enlightening route of investigation would be to see if and how such high duratives create intervention effects. It appears that they are highly marked in factive complements, for example, when they are fronted but acceptable in situ:

(i) ?I resent that, until 5 John didn’t arrive.

(ii) I resent that John didn’t arrive until 5.

The non-fronted example in (ii) is perfect even with the switch-reading, which – according to M&Ü – requires a contrastive reading on the durative. While this might indicate that the relevant LF scope-position is lower than TP (where the event relative operator is supposed to start out), this may not be a conclusion we can draw from these facts because, as shown in (iii)–(iv), in situ focus also does not create intervention in English:

(iii) ?I resent that MARY John likes.

(iv) I resent that John likes MARY (and not JILL).

While (iii) is only acceptable with a strong contrastive reading on the complement clause (which, as argued in Haegeman & Ürögdi 2010a;b, results in featural enrichment of the operator), (iv) is fine with a neutral interpretation of the complement. As such, in situ elements (whether raised at LF or assuming scope via a different mechanism) are not interveners in English. At this point, therefore, I do not have conclusive evidence to prove or disprove the idea that HighDurs take their scope and receive their interpretation in the topic field, therefore, I will assume that M&Ü’s account is essentially right.

- (45) Only John arrived / Everyone failed the test **until last week**.
- (46) 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.

Given the parallels with contrastive topic constructions, as well as the observation that duratives in the relevant construction scope higher than negation, M&Ü conclude that the switch-reading is a derivative of the focus structure of the construction at hand,<sup>9</sup> and does not justify the introduction of a separate lexical item (a separate *until*) or a special (expletive) kind of negation. M&Ü's account is not the first one to tie the switch-reading to focus structure: e.g., Giannakidou (2002) notes that this special reading appears connected to focusing since in Greek, for example, so-called NPI-*until* is actually a focus particle; Declerck (1995) claims that 'not-until' is actually a different lexicalization of 'only-at'; and Mittwoch (2001) suggests that 'not-until' in English is on its way to becoming a focus particle. A shared drawback of these earlier accounts, however, is that

<sup>9</sup> A related issue, raised by Anikó Lipták (p.c.), is why *until*-phrases cannot be focused in sentences featuring negated eventives. Observe the following example from Hungarian:

- (i) János HÁROMIG aludt/ \*nem érkezett meg.  
 J. three-until slept not arrived PRT  
 'John slept until three/\*didn't arrive until three.'

As (i) shows, the focusing of the *until*-phrase is fine with a durative predicate but not so good with a negated eventive. While I do not have a definitive answer to this question, the issue seems related to the fact that the switch-reading appears to be obligatory (or at least highly preferred) with negated eventives while it is optional with duratives:

- (ii) a. I won't take a break until 5.  
 b. I'll (definitely) be working until 5 (and will probably continue after that as well).

If this generalization is correct, this would mean (on the account I propose here) that the *until*-phrase in (a) is obligatorily high up (in contrastive topic position), and thus it is higher than the focus position and cannot be focused. Why this correlation should hold, though, and whether it is absolute (or simply a preference) is unclear. One way to think about it is that the correlation actually holds in the opposite direction: *until*-phrases must take scope over TP but if there is negation in the sentence, the *until*-phrase must be an operator (i.e., contrastive) in order to escape the island created by negation. Hence, *until*-phrases that are raised over negation are always contrastive, while *until*-phrases that are raised out of non-negated VPs can be simply adjoined to TP or extracted in a similar fashion.

they all relate these focus properties to the lexical items of negation and *until* in some way, which simply misses the broader generalization that the contrastive topicalization of any durative will yield this reading, independently of the presence or absence of negation inside the clause, or the type of predicate present. Therefore, we can safely conclude that none of the auxiliary concepts that have been introduced to account for the ‘special’ properties of *until*-constructions (such as NPI-*until*, switch-reading, expletive negation or stativizing negation) are required or desirable since some of the observations that these concepts are supposed to explain are wrongly formulated, while others can be explained without them. I now return to the discussion of Hungarian *until*-constructions, which I will attempt to treat in this spirit.

### 3. Three *until*-constructions in Hungarian

In this section,<sup>10</sup> I discuss how the conclusions of the previous section regarding *until*-constructions in English carry over to the analysis of the Hungarian data. In particular, I will start out from the assumptions that (a) there is only one *until* in the lexicon, which takes one durative and one punctual argument (with the latter signifying the endpoint of the former), and (b) there is no such thing as “stativizing” negation (negation does not affect event structure) but rather, negation and duratives can take scope over each other, and when a telic predicate is in the scope of a durative, it must be interpreted iteratively. In what follows, I show that these simple assumptions, coupled with the structural distinction between temporal relativization (TR) and event relativization (ER) adverbial clauses, will be sufficient to explain the Hungarian patterns, which are more complex than the English ones due to the added complication of negation sometimes being present in the *until*-clause. Once again, though, I will argue that negation in *until*-clauses is not expletive (cf. Abels 2005) and is not a special kind of negation in any sense.

#### 3.1. How many *until*'s?

As pointed out earlier, “single-*until*” analyses typically rely on two key assumptions: (i) negation can influence aspect, in particular, a negated

<sup>10</sup> This section draws heavily on Ürögdi (2009) but the analysis is updated based on some recent research I have done on operator movements and scope relations in embedding constructions.

punctual predicate will be interpreted as durative; and (ii) various interpretational effects (semantic and/or pragmatic) result from scope relations between *until*, negation, and possibly other operators like focus. While I attempt to do away with assumption (i) above, the interpretation assigned to telic predicates in these constructions will still be a useful indicator of the scope relations in the sentence. As for (ii), I will suggest (following Abels 2005) that the LF position of negation is what counts for semantic interpretation, and that focus is the crucial factor influencing the pragmatics. Let us now see how we can detect scope relations in the three variants repeated under (47).

- (47) a. Itthon maradok, **ameddig** Emma haza-jön.  
 home I-stay dem-wh-until Emma home-comes
- b. Itthon maradok, **ameddig** Emma **nem** jön haza.  
 home I-stay dem-wh-until Emma NEG comes home
- c. Itthon maradok, **ameddig** Emma haza **nem** jön.  
 home I-stay dem-wh-until Emma home NEG comes  
 ‘I’ll stay home until Emma comes home.’

From the discussion in the previous sections, the reader may recall that I have argued for two different **distributions** of the suffix *-ig*. One instance of this suffix (patterning with the temporal relative class) occurs when the embedded clause features a durative (rather than punctual) predicate, for example:

- (48) Itthon maradok, **ameddig** Emma munkában van.  
 home I-stay dem-wh-until Emma work-in is  
 ‘I will stay home as long as Emma is at work.’  
 (= ‘Emma is at work until time  $t$ , and I’ll stay until time  $t$ .’)

In such cases, *-ig* forms a temporal relative clause, where the time periods covered by the embedded and the matrix events are in full overlap. The event relative use of *-ig* (as in (47a)), meanwhile, takes a time point (when the embedded punctual event takes place) and relates it to the duration of the matrix event, setting it as the endpoint of the latter. Schematic representations for these are as follows:

- (49) a. **Temporal relative construction with *until*** (cf. (48))  
 [I will stay home [until  $t_i$ ] [Emma is at work [until  $t_i$ ]]]
- b. **Event relative construction with *until*** (cf. (47a))  
 [I will stay home until  $t_i$  [ $t_i$  [Emma comes home]]]

At first glance, it seems that these two uses exemplify ‘durative’ and ‘punctual’ *until* since in (49a) the embedded clause must involve a durative or a stative in order to be felicitous (as the relativized element is the endpoint of the embedded eventuality), while in (49b) the *until*-clause must contain a punctual event (as the time specification of this event will constitute the endpoint of the time period described by the matrix clause). This, however, is not the right generalization. In fact, *-ig* – at least as far as the structures in (49) attest – always takes a durative event and a point in time as its two arguments. As suggested by (49a), a sentence like (48) involves relativization and thereby sharing of the endpoint of both events, resulting in a reading where the two periods overlap. Meanwhile, (49b) shows that the event relative use of the same suffix (as in 47a) results in a structure where a durative/stative matrix clause and a punctual embedded clause can felicitously be connected.

This means that, so far, we have no evidence for positing two different kinds of *-ig* (durative and punctual) in Hungarian, despite the fact that the distribution of the suffix is clearly of two kinds so *-ig* can take either a temporal expression or an event as its punctual argument. Of course, (49a) is not the only possible structure that can be assigned to sentences like (48), which could also be analyzed as an event relative involving a different lexical item that is homophonous with the one used in (47a) and whose meaning mirrors that of English *as long as*. Thus, so far we can only say that this pair of sentences *can* be analyzed without positing two argument structures for *-ig* (i.e., without lexical ambiguity). Still, if we were to abandon the structural difference between (47a) and (48), we would lose the explanation for why only the latter but not the former allows the “low reading” to surface:

(50) a. **Temporal relative construction – low reading is available**

Itthon maradok, **ameddig** mondod, hogy Emma munkában van.  
 home I-stay dem-wh-until you-say COMP Emma work-in is  
 HR: ‘I will stay home as long as you are uttering the statement that Emma is at work.’  
 LR: ‘I will stay home throughout the time for which you say Emma will be at work.’

b. **Event relative construction – low reading is not possible**

Itthon maradok, ameddig mondod, hogy Emma haza-jön.  
 home I-stay dem-wh-until you-say COMP Emma home-comes  
 HR: ‘I’ll stay home until the time when you utter the statement that Emma is coming home.’  
 LR: \*‘I will stay home until the time for which you say it will be the time of Emma’s arrival.’

Given the structures in (49), it becomes straightforward to account for the absence of the low construal in (50b): since this structure does not involve long operator movement, we do not expect the low reading to be available. (For a detailed discussion of the unavailability of the ‘low reading’ in event relatives – including temporals, conditionals and factives – I refer the reader to Haegeman & Ürögdi 2010a;b.) If we were to hypothetically entertain an account of (50a) that posits an event relative derivation featuring a lexical item similar to the English ‘as long as’, this would leave the availability of the low construal in this example without an explanation. The importance of positing a single lexical item with uniform selectional properties will become even clearer below, when I discuss the derivation of (47c). So I now turn to the issue of negation in *until*-clauses in Hungarian.

### 3.2. The role of negation

First, we now turn to the negated example (47b) to see whether the “single-*until*” approach can work here as well. In what follows, I will refer to this variant as the “predicate negation” type, as this example features negation in its normal position, left-adjacent to the tensed verb, which is in turn followed by the verbal particle – in contrast to the Prt–Neg–V order in (47c). (I return to the issue of the word order difference between the two variants below.) As background to the discussion, it should be noted that, just like in English, punctual predicates are normally compatible with adverbials like *egyszer csak* ‘all of a sudden’, while duratives do not easily tolerate such modifiers. Simple examples are given below:

- (51) a. János egyszer csak hasra-esett.  
 John all-of-a-sudden on-stomach-fell  
 ‘All of a sudden, John fell on his face.’  
 b. #János egyszer csak magas volt.  
 John all-of-a-sudden tall was  
 #‘All of a sudden, John was tall.’

Actually, to be more precise, the only way a durative can be interpreted when combined with such a temporal modifier is if it can be taken to denote one instance in a series of occurrences (henceforth “SoO”), as in:

- (52) a. Minden magas gyerek átment egy másik iskolába.  
 every tall child went a other school-into  
 ‘Every tall kid transferred to another school.’

- b. Aznap a tornaórán János egyszer csak magas volt.  
 that-day the P.E. class-on John all-of-a-sudden tall was  
 ‘That day in P.E. class, John was tall all of a sudden.’

Imagine a situation where kids are lined up according to height at the start of each physical education class. John, who is not very tall, is generally not considered tall at these line-ups, so he ends up standing somewhere down the line. On this day, however, with all the taller kids gone, he is all of a sudden evaluated as tall. This is, of course, a special interpretation that is not always available or preferred but it requires contextual help. I will not go into how this reading can be analyzed in terms of event structure, as this would lead this discussion too far off topic. The point is simply that, under special circumstances, durative (even stative) events can be modified by a punctual time adverbial, and this happens when some requirement dictates that only a punctual interpretation is acceptable. This means that punctual temporal modifiers like *egyszer csak* ‘all of a sudden’ do not lexically specify the type of predicate they can combine with. (See the analogous treatment of the combinability of duratives with telic predicates in M&Ü and above in the previous section.) Rather, the temporal specification of the eventuality in the scope of such a modifier must be a time point (rather than a time period), and to the extent that this is possible, the sentence is interpretable. Therefore, we can use this special SoO reading as a diagnostic to detect whether an eventuality (regardless of the type of predicate) is interpreted as describing a time point or a time period. First, observe that there is no difficulty in inserting ‘all of a sudden’ into the simple example where the embedded event is punctual:

- (53) A szobában beszélgettünk, **ameddig** **egyszer csak** kialudt a villany.  
 the room-in we-talked dem-wh-until all-of-a-sudden PRT-slept the light  
 ‘We talked in the room until, suddenly, the lights went out.’

This is less than surprising since in this case the embedded clause clearly features a punctual event. In this example, we are dealing with an event relative, where the two arguments of *until* are simply provided by the two eventuality descriptions in the two clauses, without any further complications, as discussed in the previous section with reference to the analogous example (47a). Now, let us look at a construction like (48) above – the one claimed to be a TR structure – in terms of modification:

- (54) A szobában beszélgettünk, **ameddig** (#**egyszer csak**) főtt a vacsora.  
 the room-in we-talked dem-wh-until all-of-a-sudden cooked the dinner  
 ‘We talked in the room while dinner was cooking.’

As shown above for a simple example, the combination of ‘all of a sudden’ with a durative or stative is only possible with a special context and interpretation, where the atelic event can be taken to be one in a series of similar occurrences (the SoO reading). Accordingly, (54) can actually be made sense of in a context where, for example, we are talking in the room and keep popping into the kitchen to check whether the dinner is cooking in there. Through a series of such checking events, we always find that the dinner is not cooking, so we keep talking. Finally, it happens that we check the kitchen once more and find that the dinner is cooking, so we stop talking. On this special interpretation, (54) is actually acceptable.

Now recall that we predict that:

(a) when the embedded eventuality is non-punctual, we are dealing with a TR structure, and we have operator movement from inside the adverbial clause > hence, the low reading is available, and

(b) when the embedded eventuality is punctual, we are looking at an ER structure, with no long operator movement > hence, the low reading is not available.

Above we saw that, in the case when the embedded eventuality is durative or stative, the low reading is normally available. This means that this reading should become unavailable when the punctual interpretation is enforced on the embedded clause, and this appears to hold. Compare (55) below:

(55) a. **Temporal relative construction (embedded clause non-punctual)**

– **Low construal OK**

A szobában beszélgettünk, ameddig mondtad, hogy főtt a vacsora.  
 the room-in we-talked dem-wh-until you-said COMP cooked the dinner  
 LR: ‘We talked in the room until time *t*. You said that dinner was cooking until time *t*.’

HR: ‘We talked in the room while you kept saying that the dinner was cooking.’

b. **Event relative construction (embedded clause punctual)**

– **Low construal out**

A szobában beszélgettünk, ameddig mondtad, hogy egyszer csak  
 the room-in we-talked dem-wh-until you-said Comp all-of-a-sudden  
 főtt a vacsora.  
 cooked the dinner

What this shows is that in the (a) example the embedded event is not interpreted as punctual – and hence the structure is a TR structure and the low reading is available. Meanwhile, when we force the punctual interpretation on the embedded clause, the only available derivation is the ER derivation, and the low reading disappears. This enforces the structural



difference between the two derivations for adverbial clauses, since the contrast above requires reference to the type of temporal modification that is available in a certain context. Whenever punctual modification is present, the event relative use of *until* becomes the only possible option, and this is supported by the absence of the low reading in this construction.

Now let us see what happens in the “predicate negation” variant (47b), illustrated once again below:

(56) Examples of the “predicate negation” type of *until*-construction

- a. Itthon maradok, **ameddig** Emma **nem** jön haza.  
home I-stay dem-wh-until Emma NEG comes home
- b. A szobában beszélgettünk, **ameddig** **nem** aludt ki a villany.  
the room-in we-talked dem-wh-until NEG slept PRT the light  
‘We talked in the room until the light went out.’
- c. **Ameddig** **nem** zárul le a választás, tovább él a kampánycsend.  
dem-wh-until NEG closes PRT the election further lives the campaign silence  
‘Until the elections are closed, the campaign silence [ban on campaigning] remains in effect.’
- d. **Ameddig** **nem** szólok be nektek, ti se tegyétek!  
dem-wh-until NEG I-tell PRT you-DAT you-PL neither do-2SG-IMP  
‘Until I insult you, you should not do it [insult me] either.’

Examples (a) and (b) above are constructed while (c) and (d) are attested examples. As mentioned in the introduction to this section, native speaker intuition about these examples is that they feature two simultaneously ongoing situations; e.g., in (a) above, the time period of staying home coincides with the time period of Emma not coming home, or in (b) the time of talking in the room matches the time during which the light is not out (i.e., while it is on). In this sense, these examples are analogous to the non-negated (48) featuring a durative in the embedded clause. As such, the prediction is that the structure of these examples is temporal relativization, as illustrated in the simplified structure in (57):

- (57) a. **Temporal relative construction with *until*** (cf. (48))  
[I will stay home [until  $t_i$ ] [Emma is at work [until  $t_i$ ]]
- b. **Temporal relative structure with an *until*-clause featuring predicate negation**  
(cf. (47b))  
[[I will stay home [until  $t_i$ ] [Emma does not come home [until  $t_i$ ]]]

There are two things that I want to briefly note about the structure in (57b). Firstly, the embedded clause closely resembles English examples like

*Emma didn't come home until 5.* in that it features negation of an eventive predicate, and we have the *until*-phrase raising over negation to the left periphery of the embedded clause (in this case, in a form of *wh*-movement). Second, in contrast to the English examples, this construction in Hungarian does not result in the “switch reading” (unlike the construction in (47c), featuring the unorthodox Prt–Neg–V word order, which I return to below). (56d), for example, carries no implication that the speaker has the intention of ever insulting the listeners. Rather, the natural interpretation is one where (s)he is civil to the listeners and is asking them to reciprocate with similar behavior. This means that the switch reading is not a direct result of negation being present in the relevant clause, and not even a simple derivative of *until* outscoping negation. Rather, what is required is a contrastive reading on the *until*-phrase, which does not obtain in examples like (57b) since the *until*-phrase raises because it is relativized, not because of contrastive topicalization that M&Ü posit in English. In fact, we do not expect contrastive topicalization to be allowed inside *until*-clauses in the default case. I return to the availability of the switch reading in Hungarian below, after the discussion of the predicate negation variant at hand.

If this is correct, we expect the low construal to be available for this type of construction, and it is:

(58) **Temporal relatives with *until* – low construal is available (with or without negation)**

- a. Itthon maradok, **ameddig** mondtad, hogy Emma munkában van.  
 home I-stay dem-wh-until you-said Comp Emma work-in is  
 LR: ‘You told me that Emma will be at work until time *t*. I will stay home until time *t*.’
- b. Itthon maradok, **ameddig** mondtad, hogy Emma **nem** jön haza.  
 home I-stay dem-wh-until you-said Comp Emma NEG comes home  
 LR: ‘You told me that Emma will not come home until time *t*. I will stay home until time *t*.’

In the examples above, the high reading has been excluded by the choice of verb tense in the middle clause in order to keep the examples simple. What we see, then, is that the negated eventive in the (b) example behaves the same as the stative in (a) in that it clearly makes the temporal relative construction possible, given that we take the availability of the low construal as indicative of long operator movement.

It would seem, then, that we have found evidence for the stativizing effect of negation, since negation appears to create a suitable non-punctual argument for *until* in the embedded clause (with its punctual argument

being the endpoint that is relativized in the construction). Recall, however, that the discussion of English *until*-constructions has shown that this effect is only apparent. Rather, when we have a negated eventive combining with durative modification (or, more precisely, in a configuration that enforces a durative interpretation, as in the durative complement of *until*) the interpretation defaults to every instant of the reference time, and we understand the example to mean ‘Until time *t*, in every instant it was true that X didn’t happen.’ Meanwhile, M&Û also show that durative modification does not in fact require the presence of negation with an eventive predicate, as on an iterative interpretation most telic predicates are fine with a durative temporal modifier. Duratives simply define the temporal dimension of the eventuality that is composed by the different elements (verb, arguments, operators) in the clause, and to the extent that the two can be made pragmatically compatible, the sentence will receive an interpretation. If this is true, then the same temporal relative structure should be available with a non-negated eventive predicate as well, as long as it is iteratively interpreted (59a) and this structure should also make the low reading possible (59b):

(59) **Temporal relativization with *until* and an iteratively interpreted eventive predicate**

- a. Izgultam a meccsen, ameddig Emma (folyton) hibázott.  
 I-worried the match-on dem-wh-until Emma constantly made-mistakes  
 ‘I was worried at the match while Emma kept making mistakes.’
- b. A nézők izgultak, ameddig mondtad, hogy Emma (folyton)  
 the spectators worried dem-wh-until you-said COMP Emma constantly  
 hibázott.  
 made-mistakes  
 HR: ‘The spectators were worried while you kept saying that Emma kept making mistakes.’  
 LR: ‘The spectators were worried until time *t*. You said that Emma kept making mistakes until time *t*.’

To the extent that complex examples like (59b) can be judged reliably, it seems to be the case that – if the iterative interpretation can be accessed – the low reading does become available even with a telic predicate, showing that the structure is a TR structure. This, once again, means that the choice between ER and TR does not directly correlate with the type of predicate featured in the *until*-clause. Rather, the two structures are freely available, and are interpreted whenever the reading dictated by the combination of *until*, negation or other operators and the predicate type is comprehensible.

Now, similarly to the other TR structures, the ones involving negation also do not easily admit modification by a punctual adverb. This is because the embedded clause is supposed to provide the durative argument of *until* (with the punctual endpoint argument being relativized). However, punctual modification is marginally possible on the more marked, series of occurrences (SoO) reading discussed above:

- (60) A szobában beszélgettünk, **ameddig** (#**egyszer csak**) **nem** aludt ki a villany.  
 the room-in we-talked dem-wh-until all-of-a-sudden NEG slept PRT the light  
 ‘We talked in the room as long as (#all of a sudden) the lights didn’t go out.’

Once again, the usual interpretation here is that the period of the lights not going out (i.e., being on) coincides with the period of talking in the room, and on this reading the punctual modifier is not possible for obvious reasons. When we do get the punctual reading (in a series-of-events context), the modification is acceptable, for example in a situation where, during our conversation in the room, one of us keeps switching the light on and off. When this person turns the light switch off, the lights go out. At one point, however, the switch breaks and the lights stay on. At this point, we stop talking (due to surprise, for example). As unlikely as this scenario is, it is possible to construct this context, and on this reading the punctual modification is possible. This, however, means that on this reading the embedded event is interpreted as punctual, and thus the structure must be an ER structure – and we should lose the low reading:

- (61) A szobában beszélgettünk, ameddig mondtad, hogy egyszer csak  
 the room-in we-talked dem-wh-until you-said COMP all-of-a-sudden  
 nem aludt ki a villany.  
 NEG slept PRT the light  
 HR: ‘We talked in the room while you kept saying that the lights all of a sudden did not go out.’  
 LR: \*‘We talked in the room until time *t*. You said that at time *t* the lights suddenly did not go out.’

As predicted, when we enforce a punctual reading on the most deeply embedded clause, the low construal becomes quite bad, evidence that this requires a derivation by event relativization.

The discussion above shows that there is a clear correlation between (a) the punctual vs. non-punctual interpretation of the complex eventuality (meaning: the denotation of the predicate combined with various modifiers and operators) inside the *until*-clause, and (b) the availability of the low reading, which I take to be indicative of the structural distinction between

event relativization vs. temporal relativization. If this is so, then it is in fact possible to account for the non-negated ER (as in (47a)) and the ‘predicate negation’ TR (as in (47b)) variants in the Hungarian pattern without positing two kinds of *until*. We can make do with one *until* with a single selectional grid (taking one punctual endpoint and one non-punctual complement, where ‘non-punctual’ is taken to refer not to the type of predicate, as discussed above, but to the temporal specification of the event or series of events depicted in the given clause). So far, the picture presented can be summarized as shown in the following table:

(62)

Example number	Argument structure of <i>until</i>		Syntactic structure	Availability of low reading
	Time period	Endpoint		
<i>Itthon maradok, ameddig Emma munkában van.</i>				
(48)	matrix clause	endpoint of the embedded event through relativization	TR	yes
<i>Itthon maradok, ameddig Emma hazajön.</i>				
(47a)	matrix clause	event time of the punctual embedded event	ER	no
<i>Itthon maradok, ameddig Emma nem jön haza.</i>				
(47b)	matrix clause	endpoint of the embedded event through relativization	TR	yes

From the discussion above, we can safely conclude that the Hungarian data so far have not necessitated any special machinery – one *until* has been sufficient, and negation also has not played any role that is particular to this construction. We now turn to the question of how the third available construction (47c) bears on the issues, namely, the selectional properties of *-ig* and the role of negation. We will see that the diagnostics shown above yield very different results for the (47c)-type construction. I will claim, however, that this contrast does not warrant the introduction of a special type of negation, or of a special Neg position.

### 3.3. Two types of negation?

The last remaining variant in the set of Hungarian *until*-constructions is the one that features the Prt–Neg–V order (cf. (47c)), repeated below for convenience:

- (63) Itthon maradok, **ameddig** Emma haza **nem** jön.  
 home I-stay dem-wh-until Emma home NEG comes  
 ‘I’ll stay home until Emma comes home.’

This construction is interesting in a number of respects. The most striking characteristic of these examples is (as also discussed in Piñón 1991) that this word order is not the default ordering in Hungarian – run-of-the-mill predicate negation results in the order Neg–V–Prt, as also evidenced in the “predicate negation” type discussed in the previous section. I return to this unorthodox word order below. For now, let us look at how this construction fares on the diagnostics discussed above. The examples below both point in the same direction, namely that the negated eventive predicate here actually is interpreted as denoting a punctual event. On one hand, the insertion of the punctual modifier ‘all of a sudden’ does not result in the marked ‘series of occurrences’ reading but receives the usual interpretation, as shown by the English translation in (64). Also, the low reading is unavailable in this construction, which – according to the line of analysis pursued here – means that the example is derived via event relativization. Since ER structures are only compatible with *until* when the embedded clause denotes a punctual event (as this is required to provide the endpoint argument selected by *until*) (65) below also indicates a punctual reading of the embedded clause event. (Contrast these examples with (60) and (59) above, which feature the normal ordering of Neg.)

- (64) A szobában beszélgettünk, **ameddig egyszer csak** ki nem aludt a villany.  
 the room-in we-talked dem-wh-until all-of-a-sudden PRT NEG slept the light  
 ‘We talked in the room until, all of a sudden, the lights went out.’
- (65) \*Itthon maradok, **ameddig** mondtad, hogy Emma haza **nem** jön.  
 home I-stay dem-wh-until you-said COMP Emma home NEG comes  
 \*LR: ‘You told me that Emma will not come over until time *t*. I will stay home until time *t*.’  
 (The high reading is excluded via the tense of the middle clause.)

Thus, this construction patterns for all intents and purposes with the use of *-ig* in the non-negated (47a), which was analyzed as involving an event relative with the relative operator and the suffix originating high up in the clause. In accordance with the predictions of the earlier sections of this chapter, the low reading becomes unavailable in (65), suggesting that the Prt–Neg–V order surfaces in event relative configurations.

Given that in the construction at hand it appears that negation does not play its usual role (i.e., the negated eventive can be interpreted as punc-

tual without any special context being required, that is, without having to resort to the unorthodox SoO reading), the natural question is whether we are dealing with a kind of “special” negation here. Although I have argued above (especially based on English) that negation does not actually create states out of punctual events, and as such, the fact that a negated eventive can be interpreted as eventive is not, in and of itself, completely unexpected, the contrast between this variant and the ‘predicate negation’ type still requires an explanation. If we look at the interpretation of (64) vs. the corresponding example (61) also featuring negation, we find that in the construction (61) – where the negation and the particle are ordered in their usual way, and so presumably we are dealing with regular predicate negation – the punctual interpretation is the marked SoO reading, and the most natural reading is the one where during the time period in question the event denoted by the embedded predicate does not take place at any of the potentially relevant time points (points covering the time period at hand). Meanwhile, no such reading results in (64), and the interpretation is very similar to one where no negation is present. I will argue, however, that the difference between the two constructions is a simple question of scope, and that negation in the *Prt–Neg–V* order is generated in the same position as normal predicate negation but interpreted higher. Since it is not in the scope of *until*, negation does not contribute its usual semantics of negating the event denoted by the embedded predicate but rather participates in focus structure, yielding the switch reading associated with this construction in Hungarian. Below, I discuss the details of this proposal. Following Abels (2005) with some modifications, I will suggest that negation in this construction moves to an operator position high up in the left periphery. On this scenario, the P element originates outside the clause, so we have no long operator movement from inside TP, and the lack of the low reading is predicted in (65). For ease of exposition (and somewhat pre-theoretically) I will from now on refer to the event relative construction involving negation that is interpreted outside the TP domain (to be demonstrated below) as the ‘Neg-raising construction’ and the temporal relative variety (where we observe the normal effects of negation interpreted in its base position) as the ‘predicate negation construction’. The rough representations of the **surface structures** of the two constructions are given in (66):

- (66) a. (=47b) [<sub>NegP</sub> Neg V [<sub>PredP</sub> Prt ... ]]  
 b. (=47c) [<sub>FocP</sub> Prt [<sub>NegP</sub> Neg V ... ]]

Before going on to present evidence for the LF raising of negation from its base position shown in (66b) above, a note on the word order will be instructive. Given the fixed hierarchy of the functional projections dominating the VP in Hungarian (relevantly: FocP>NegP>PredP>VP),<sup>11</sup> the only way to get the Prt–Neg–V order without positing a special position for negation or for the particle is to assume that the particle is in focus in the Neg-raising construction. This is in fact what is suggested by Piñón (1991). Although the focusing of the particle and hence the Prt–Neg–V order are (contrary to Piñón’s claims) not obligatory (albeit preferred) in the Neg-raising construction, the schematic representation given in (66b) will suffice for the purposes of the main portion of this discussion. The question of why focusing some element (typically the particle) tends to go together with Neg-raising is an interesting one that I return to at the end of this section, where I discuss the relationship between focus and Neg-raising in some detail.

There are two main advantages to the Neg-raising approach, namely that it makes it possible to analyze the suffix *-ig* as having a single selectional grid (since we can derive a difference between the behavior of TR structures involving regular predicate negation and ER structures featuring Neg-raising), and it also does not require reference to expletive or semantically empty negation (which is a theoretically undesirable concept to begin with). In addition to these points, the Neg-raising analysis of (47c) also receives support from a number of syntactic observations. I discuss these below, before turning my attention to the issue of motivation for Neg-raising, and the particularities of the Prt–Neg–V word order.

The first observation concerns the licensing of negative quantifiers. Recall the Russian data from section 1. Arguing against the “expletive negation” analysis of Brown & Franks (1995; 1997), Abels (2005) discusses examples from Russian where negation inside *until*-clauses fails to license negative quantifiers that normally require clause-mate Neg ((67b) repeated from (12) above for convenience):

- (67) a. Ja podoždu poka ty ne prideš.  
 I will-wait until you NEG arrive  
 ‘I’ll wait for you until you arrive.’

<sup>11</sup> Whether or not FocP and NegP are distinct from TP (which, in a neutral sentence containing no focus or negation, will house the tensed verb in its head and attract the content of Spec,PredP to its specifier) or not is irrelevant here, and a much debated issue of Hungarian syntax. When there is both focus and negation in a sentence, the verb appears immediately after these, resulting in a Foc-Neg-V(-Prt) order, and it is only this order that is important for the purposes of this discussion.



- b. Ja podoždu poka {✓*kto-nibud*/ \**nikto*} ne pridet.  
 I will-wait until who-NIBUD' NI-who NEG arrive  
 ‘I will wait until someone comes.’<sup>12</sup>

The Russian data show that negation in the *until*-clause (which is claimed to be obligatory) does not license the negative indefinite *nikto*, and the negative pronominal *kto-nibud* is used instead, which is normally licensed by superordinate negation. While Brown and Franks take this example to show that the negation that occurs in *until*-clauses is expletive (they discuss a number of other contrasts between this negation and run-of-the-mill predicate negation which fall outside the scope of this discussion), Abels argues that expletive negation does not exist, and that what we witness here is LF-raising of negation into the matrix clause, which explains why this negation patterns with matrix negation in terms of NPI-licensing. Before outlining the technicalities of Abels’ analysis, a note on the data is in order here. Similar data can be duplicated in Serbian:

(68) **Serbian**

- a. Moraš da radiš dok **ne** zaposlimo **nekog/\*nikog**.  
 you-must COMP you-work until NEG we-hire someone/no one  
 ‘You have to work until we hire someone.’
- b. **Ne** zapošljavamo **nikog**.  
 NEG we-hire no one  
 ‘We are not hiring anyone.’

As seen in (68b), clausemate negation normally licenses the negative quantifier *nikog*. Meanwhile, the same is not available in *until*-clauses, on parallel with the Russian data. However, it is not entirely correct to say that negation here patterns with superordinate negation because NPI’s that are usually licensed long-distance in embedding constructions are also not available in *until*-clauses, as shown below:

(69) **Serbian**

- a. **Ne** mislim da će **iko** stići/da stigne.  
 NEG I-think COMP will anyone come-INF/COMP he-comes  
 ‘I don’t think that anyone will come.’
- b. Osta-ću dok **neko/\*iko/?niko** ne stigne.  
 I-stay-FUT until someone/anyone/no one NEG comes  
 ‘I will stay here until anyone comes.’

<sup>12</sup> The examples are from Abels (2005), who cites Brown & Franks (1995) for them.

It appears to be the case that negation in *until*-clauses, at least in Serbian (and in Hungarian, as shown below), does not license either type of *n*-word – *niko* requiring clausemate negation and *iko* requiring long-distance licensing are equally bad. This suggests that negation in these constructions occupies an intermediate LF position in the embedded CP-domain, too high to be a clausemate licenser but too low for long-distance licensing. This is interesting because there have been claims about Serbo-Croatian (e.g., Progovac 1994) that the two kinds of NPis in this language are in complementary distribution such that negation in any possible position will license one or the other. It seems that at least in this one construction this does not hold, with the possible explanation that negation here actually raises outside *until* but not as high as the matrix clause – remaining in the CP-layer of the temporal adverbial clause. While this may seem ad hoc at first, there is some evidence that negation in the CP domain shares some of the properties of negation in *until*-clauses argued to feature covert Neg-raising. For example, negation that is clearly in the CP domain also does not license either NPI type.

(70) **Serbian**

**Nije** li Jovan/\*iko/\*niko stigao danas?  
 NEG-AUX Q Jovan/NPI1/NPI2 arrived today  
 ‘Didn’t John arrive today?’ (‘Wasn’t John supposed to arrive today?’)<sup>13</sup>

In emphatic negated questions, Serbo-Croatian features a negative auxiliary in the CP layer that, unlike the same auxiliary when it appears lower in the clause, cannot license either NPI-type. Arguably, this is because it is in the relevant intermediate position. Similar examples can also be constructed in English.

(71) Didn’t John earn a fortune/\*a penny? (cf. He didn’t earn a penny.)

The right account, therefore – in accordance with Abels (2005) but with some modification to accommodate the NPI-licensing data – seems to be that negation in Slavic *until*-clauses raises just outside *until*, possibly left-adjoining to it, analogously to English negative preposing examples with *until* such as:

(72) a. Not until John/\*anyone comes home will I start dinner.  
 b. I won’t start dinner until anyone comes home.

<sup>13</sup> Thanks to Nataša Miličević for the example. Also see Miličević (2007) for discussion of this construction.

As (72a) shows, ‘not-until’ is a possible surface ordering in English (while in Slavic it seems to only obtain in LF) but negation in this position also does not license NPIs. Therefore, I will assume that LF Neg-raising fronts the negative element to the left of the complementizer (or preposition, as the case may be) heading the adverbial clause. I return to the relationship between the combination of ‘not-until’ and focus structure below. For now, assume that LF Neg-raising combines these two elements in some way in the embedded CP domain.

Returning to Hungarian, we find data that are similar to the Slavic facts discussed. Unlike in Russian, however, in Hungarian there are two different *until*-constructions that involve negation. Without going into the details of *n*-word licensing, it is sufficient to note here that negative quantifiers are only licensed in the ‘predicate negation’ construction, and disallowed in the ‘Neg-raising’ construction:<sup>14</sup>

- (73) a. **Ameddig** **nem** veszünk fel senkit, többet kell dolgoznod.  
 dem-wh-until NEG we-hire PRT nobody-ACC more-ACC must you-work-INF  
 ‘Until we hire someone, you have to work more.’
- b. \***Ameddig** fel **nem** veszünk senkit ...  
 dem-wh-until PRT NEG we-hire nobody-ACC

As shown by the contrast in (73), run-of-the-mill predicate negation has no trouble licensing the negative quantifier *senkit* ‘nobody-ACC’ in object position inside an *-ig*-clause, while the same configuration is ungrammatical in the Prt–Neg–V order. In this, the negation in the (a) example behaves exactly like regular predicate negation in a monoclausal structure. If we want to maintain that negation is always generated in the same position (cf. (67)) and cannot be generated in other places (see Abels 2005 for the same point), it seems like an obvious step to relate this fact to the posited Neg-raising in this construction, and claim that (just like in Russian) this instance of negation is unable to license negative quantifiers because these require a clausemate licenser but negation is too high at LF for this. In accordance with the Slavic examples, the same pattern obtains for Hungarian, and NPIs that are usually licensed by superordinate negation are

<sup>14</sup> In fact, the situation is somewhat complicated by the fact that negative quantifiers in Hungarian can appear in a number of different positions (inside VP, in a higher position to which they QR, and potentially in focus; see Olsvay (2006) and Surányi 2006 for discussion) and they receive different interpretations in these positions. Preliminary findings indicate that the position (and hence interpretation) of the *n*-word also plays a role in the acceptability of the data discussed here. I leave this question open for future research.

also not acceptable in this construction. Observe the following (cf. (69) for Serbian above):

- (74) a. **Nem** hiszem, hogy **valaki is** el-jön.  
 NEG I-believe COMP anyone PRT-comes  
 ‘I don’t think anyone will come.’
- b. Itt maradok, ameddig **valaki is** el **nem** jön.  
 here I-stay dem-wh-until anyone PRT NEG comes  
 Intended: ‘I will stay here until someone/anyone comes.’

As (a) shows, *valaki is* is the type of NPI in Hungarian that is licensed long-distance, just like *iko* in Serbo-Croatian, and, as (b) attests, it is also not grammatical in *until*-constructions. Therefore, I will carry on under the assumption that negation raises to the same left-peripheral position in Hungarian and Slavic.

Now, the data and generalizations above are certainly compatible with a Neg-raising analysis but, as Brown & Franks (1995, 1997) argue for Russian, an alternative (although perhaps not very attractive) account is also possible, namely that negation in *until*-clauses simply lacks “negative force”. That is, it is not real negation, and therefore cannot be expected to license NPIs. This line of analysis would face the obvious objections that positing such an empty instance of negation adds unnecessary and implausible complications to the grammar (negation, being a basic logical operator, is unlikely to have a semantically vacuous counterpart), and that positing such unconstrained lexical duplication, especially of functional items, is not a desirable course of action in general. There is, in addition, evidence that negation in the Neg-raising constructions is actually active, can take scope over other operators, and interacts with focus structure. Let us turn to these data.

Some evidence for the LF raising of negation in the *Prt–Neg–V* order comes from scope facts. To start, observe the scope relations between the sentence adverb *biztosan* ‘surely, certainly’ and negation:

- (75) a. Itt maradok, **ameddig** Emma **biztosan nem** alszik el.  
 here I-stay dem-wh-until Emma certainly NEG sleeps PRT  
 Adv>Neg: ‘I will stay during the time period for which it is certain that Emma will not fall asleep.’
- b. Itt maradok, **ameddig** Emma **biztosan** el **nem** alszik.  
 here I-stay dem-wh-until Emma certainly PRT NEG sleeps  
 Neg>Adv: ‘I will stay as long as it is not certain that Emma has fallen asleep.’

- c. Emma **biztosan nem** alszik el.  
 Emma certainly NEG sleeps PRT  
 Adv>Neg: ‘Emma will certainly not fall asleep.’

As (75c) indicates, the relative scopes of the adverb and negation normally reflect the surface order (cf. Egedi 2009 for extensive discussion of sentence adverbs and their scope properties). This extends to the predicate negation construction in (75a), which is a case of regular predicate negation being interpreted in its surface position. (75b), at the same time, presents a non-linear scope order that is not attested in non-raising contexts. The Neg-raising analysis accounts for this fact straightforwardly, while positing semantically empty negation in this example would not be helpful. This use of *biztosan* is actually predicative, as the adverb is a predicate that takes the entire proposition as its complement. (75c) means something like ‘It is certain that [Emma will not fall asleep].’ The English translations of (a) and (b) show that this is in fact the interpretation that we get in the examples with *until*-clauses as well, which causes no problem in (a) because this is a temporal relative construction, where both clauses denote durative/stative propositions. Therefore, there is no difficulty with construing the two arguments of *until* as two time periods: the matrix clause scenario, and the period of certainty. This also works in the (b) example, showing that negation in this case is able to modify the sentence adverb *biztosan*, which is clearly outside the surface position of negation, and which is therefore not an option in the usual predicate negation structure (where negation takes surface scope). This means that the reading we get in the (b) example should be distinct from the one we get without negation, so compare (75b) to (76) below:

- (76)<sup>??</sup>Itt maradok, **ameddig** Emma **biztosan** el-alszik.  
 here I-stay dem-wh-until Emma certainly PRT-sleeps  
 Intended: ‘I will stay as long as it is certain that Emma has fallen asleep.’

This example is marginal, and in my view this is because it is difficult to imagine the reversal of the situation at the time point relativized in the construction. While a transition from uncertainty to certainty is plausible (that is, waiting until we have certainty that Emma is fast asleep), the converse is hard to imagine (waiting while her sleeping is certain, and leaving or doing something else once it is no longer certain). This means that negation in (75b) is certainly not semantically empty but real negation that scopes higher than usual. The implicit assumption made in this

argumentation is that the Neg-raising construction is neatly tied together with the switch reading, an assumption I will make explicit later on.

Similar scope data can be obtained by looking at interactions between focus and negation in *until*-constructions. What we find is that the instance of negation that LF-fronts to a position outside the temporal/aspectual domain in the “Neg-raising” construction also takes scope over focus in the temporal clause – and, conversely, that when the wide scope of negation over focus is observed, that reading is only compatible with the event relative diagnostics. The data are complicated by the fact that focus neutralizes the word order difference between the “Neg-raising” and the “Neg-as-stativizer” constructions, given that we always have the surface order given in (77), with the focused element preceding negation:

(77) [<sub>FocP</sub> XP [<sub>NegP</sub> Neg V ... ]]

What this shows, actually, is that – contrary to what is claimed by Piñón (1991) – it cannot be the case that in the Neg-raising construction the particle is obligatorily focused. This assumption is problematic anyway because in these constructions we do not see post-focal deaccenting on the VP, which is incompatible with a constituent focus account, at least without auxiliary stipulations. Rather, the right generalization is that Neg-raising constructions obligatorily involve focus, and this role is fulfilled by the particle in the default, most common case, but the focusing of another element is equally acceptable, so – as we will see below – we can find examples with some XP in focus and negation inside the *until*-clause that match the diagnostics for event relativization, which in turn means that they feature Neg-raising. One way to account for this is to say that what is focused in these constructions is in fact the entire complex VP, and, as is standard in Hungarian, VP-focus is realized by the overt fronting of some element inside the VP but not accompanied by post-focal compression. Without going into the technicalities, similar instances of VP-focus are discussed, among others, by Kenesei (1998) based on examples like this (his (19)):

(78) Péter a **Hamletet** olvasta fel Marinak,  
 Peter the Hamlet-ACC read PRT Mary-DAT  
 míg János **az autót** szedte apró darabokra.  
 while John the car-ACC took small pieces-SUB  
 ‘Peter was reading out Hamlet to Mary, while John was taking the car apart into small pieces.’

Kenesei notes that such constructions, with only one argument fronted into the syntactic focus position but each VP-internal argument carrying stress (instead of being subject to post-focal deaccenting) is interpreted as (contrastive or non-contrastive) VP-focus, meaning that such sentences can be uttered as replies to VP-questions like *What did Peter do?* or can be contrastively read, as suggested by the example in (78). This means that, structurally, the analysis positing the focus-fronting of the particle (or, in less common examples, of another VP-internal element) in Neg-raising constructions is essentially correct, and the observation that the intonation of these examples is not the one that is typical for focus constructions would be explained by the fact that they involve VP-focus rather than constituent focus. While this idea clearly needs to be worked out in more detail, below I will provide some evidence that Neg-raising constructions actually involve focus on the event that is being relativized. For now, let us return to the scope facts.

Evidence to support the Neg-raising analysis can be found in examples demonstrating that negation takes scope over focus in these cases. To start, witness the ambiguity in (79):

- (79) Itt maradok, **ameddig** JÁNOS nem lép fel.  
 here I-stay dem-wh-until John Neg steps PRT  
 Focus > Neg: ‘I will stay as long as the following holds: It is John (and not someone else) who is not performing on stage.’  
 Neg > Focus: ‘I will stay as long as the following does not happen: It is John (and not someone else) who steps out on stage.’

The Foc>Neg reading is interpreted in a scenario where there is always a single person who is not on stage (but sitting in the back) and the *until*-clause refers to the time period while this person is not John. The Neg>Foc reading, on the other hand, is the more likely scenario where there is always one person on stage, and the adverbial clause picks out the point in time when this one person is John. While the surface scope order is not surprising (Hungarian is well-known for displaying scope relations overtly in most cases), the Neg>Focus scope order is arguably derived via Neg-raising. This example illustrates that, for Neg-raising, it need not be the particle that is in focus – it can be another element – if in fact the inverse scope in (79) is derived via the same covert Neg-raising that I have suggested derives the scope of negation over sentence adverbs like ‘certainly’, and fronts the negation into a position from which it cannot license negative quantifiers. There are a number of distinct predictions if the reasoning above is on the right track, that is, if the Neg>Focus

reading of (79) involves a Neg-raising construction (while the Foc>Neg reading is a (47b)-type “predicate negation” temporal relative). First, to the extent that a negative quantifier is licensed in the ambiguous (79), it should only be compatible with the non-Neg-raising (Focus>Neg) reading (see (80)). (Recall that negative quantifiers are not licensed in the Neg-raising configuration.) Second, to the extent that the low reading can be constructed with (79), it should also enforce the Focus>Neg interpretation (see (81)). (Once again, recall that low readings are out with event relative constructions, of which the Neg-raising examples are a subtype.) Third, if we insert *egyszer csak* ‘suddenly’ into the example, we should end up with the Neg>Foc scope order on the single-event, unmarked reading, and the Foc>Neg scope order should only be compatible on the marked, series-of-occurrences reading, since this adverb enforces a punctual reading on the event in the relative clause (see (82)).

- (80) Itt maradok, **ameddig** JÁNOS nem nyer meg semmit.  
 here I-stay dem-wh-until John NEG wins PRT nothing-ACC  
 Focus>Neg: ‘I will stay as long as it is JÁNOS who wins nothing.’  
 \*Neg>Focus: ‘I will stay as long as it is not true for anything that John has won it.’
- (81) Itt maradok, **ameddig** mondtad, hogy JÁNOS nem lép fel.  
 here I-stay dem-wh-until you-said COMP John NEG steps PRT  
 Focus>Neg: ‘You told me that up until time *t* it will be John who is not performing on stage (but sitting in the back). I will stay until time *t*.’  
 \*Neg>Focus: ‘You told me that until time *t* it will not be the case that it is John who is performing on stage. I will stay until time *t*.’
- (82) Unatkoztam, **ameddig** egyszer csak JÁNOS nem lépett a színpadra.  
 I-was-bored dem-wh-until suddenly John NEG stepped the stage-onto  
 i. ‘I was bored until it happened that, suddenly, it was John who stepped out on the stage.’  
 ii. ‘There was a series of events when the actors stepped out onto the stage and one of the actors was always absent from the group. I was bored until the moment when that person was John.’

All three predictions above are borne out, suggesting that the Neg>Foc scope order in (79) is in fact a result of the Neg-raising posited in the ER examples involving negation. Given the claims presented here, the absence of the low reading in (81) furnishes evidence that *-ig* in this case originates outside the adverbial clause, and the construction is an event relative. Once again, the scope facts demonstrated above make the expletive negation analysis implausible, and the Neg-raising analysis a viable solution.



### 3.4. Neg-raising and focus

Before summing up, I would like to briefly reflect on the relationship between Neg-raising in *until*-constructions and focus. I have suggested above that the ‘switch reading’ is not a lexical property of (one kind of) *until*, or directly related to the presence of negation in a sentence. Rather, it is the result of a contrastive reading on the *until*-phrase or -clause, which brings out the said entailment. In what follows, I will attempt to make this idea more explicit, as well as provide some evidence for it.

In terms of syntactic evidence, we have seen that there is indication from Hungarian that Neg-raising *until*-clauses feature focusing (in particular, VP-focus or similar wide focus) inside the *until*-clause. This does not necessarily mean, however, that the clause itself is read contrastively, since VP-focus is available in matrix clauses, which are clearly not contrastive themselves. I want to suggest, however, that these *until*-clauses acquire a contrastive reading precisely via the posited Neg-raising. The idea that the interaction of negation and *until* results in a focus reading is not entirely novel. Mittwoch (1977) suggests that this is what happens in *Not until... fronting* in English, which are obligatorily contrastive (i.e., they necessarily have the switch reading). This, in her view, is supported by the fact that – as discussed by Giannakidou (2002) – the *until* that results in the switch reading in Modern Greek is actually a focus particle. The most explicit proposal along these lines comes from Declerck (1995), who claims that (even in English) the combination of *not+until* lexicalizes the same meaning as *only+at*, as illustrated in (83):

(83) John didn’t arrive until 3.

Presupposition: John arrived at 3.

Assertion: P holds only at 3.

Meaning: John only arrived at 3 (and not earlier).

This proposal by Declerck diverges from the usual debate about the switch reading, which normally treats the switch reading as either a pragmatic implicature or as a strict semantic entailment. In Declerck’s proposal the actualization is part of the presupposition since it is derived from the focus structure of the sentence, which in turn is lexically encoded in the item derived from *not+until*. While I agree that the switch reading is related to focus structure, I would argue that it is not down to the lexical items involved but to the syntactic structure. There are two reasons to believe this. One, the switch reading can, in certain contexts, be canceled out, as

shown by Mittwoch (2001). For example, observe the following attested example from English:

(84) She's in jail and probably **won't** get out **until Monday, if then.** (from the internet)

According to Mittwoch, the addition of *if then* cancels out the implicature that the person will get out of jail on Monday. Obviously, if this implicature was part of the presupposition, this cancelation would lead to presupposition failure, and the sentence would be uninterpretable. Perhaps more importantly, however, it is simply not the case that the combination of *not* and *until* is required for the switch reading to surface. As discussed for English earlier on, the effect is not limited to negation but also arises with *only*-focus, unmarked focus, and universals, and is not particular to *until* either since a contrastively interpreted *for*-phrase can also yield the same interpretation. Nevertheless, setting aside the issue of lexicalization, it seems correct to say that the interaction of negation and *until* does influence focus structure.

Pursuing a semantic account of the interaction of negation and *until* in what he analyzes as covert Neg-raising constructions, Abels (2005) suggests that the presence of negation in the *until*-clause in Russian is actually inherently required for the derivation of the switch-reading. The implementation goes roughly as follows. *Poka* – the Russian *until* – takes three arguments: two propositions and a truth-functional operator which is negation by stipulation. Basically, this third argument (negation) ensures that the values of the two propositions connected by *poka* have opposite values at all times, which is basically another way of formulating the switch reading. So while the matrix clause has a positive value, the embedded clause is false, and when the matrix proposition becomes false, the embedded one switches to true. In this sense, on Abels' account the presence of negation is inherently tied to the switch reading, so we can see why it is crucial to have negation inside these *until*-clauses. Meanwhile, Neg-raising is motivated by the fact that negation is taken to be an argument of *poka*, so they presumably need to be in a local relationship at some point in the derivation. Since, according to Abels, the base position of negation is highly restricted, so that it can only be introduced into the structure in its standard position, the way to meet this requirement is via Neg-raising.

While once again relying heavily on the presence of negation to derive the switch reading, the basic spirit of Abels' account applies to the current discussion quite well. What we observe is that, in addition to the two temporal arguments of *until*, there is a third element, an element of

contrast, that is necessary for the switch reading to obtain – although it appears that the contrast can result from various elements and configurations. Still, to keep to the current discussion, the Neg-raising construction is one of the ways to get this contrast.

If it is true that it is Neg-raising that yields the contrastive reading in the construction at hand, the question becomes whether such contrastiveness is encoded formally on the clause, that is, whether “featural enrichment” of the event operator takes place of the sort that is discussed with regard to explicitly focused event relatives in Haegeman and Ürögdi (2010a;b). The relevant examples are given below:

- (85) a. János AZT       nem tudja, hogy Péter tegnap   kit       látogatott meg.  
 John DEM-ACC NEG knows COMP Peter yesterday who-ACC visited PRT  
 ‘What John doesn’t know is whom PETER visited yesterday.’
- b. John resents that THIS BOOK Mary read from cover to cover, while THE OTHER  
 (his favorite) she didn’t even open. (cf. ??John resents that this book Mary  
 read.)

As observed and discussed by Haegeman and Ürögdi (2010a; b), contrastive elements can only occur in the left periphery of what they label referential CP’s (or RCPs for short; subsuming factive embedded clauses, conditionals, and other event relatives) only when the clause itself (i.e., the event that is relativized in the clause) is read contrastively. This observation counters the received generalization that focus is not acceptable at all in these contexts, and suggests that, given the operator movement derivation Haegeman and Ürögdi suggest for these clauses, i.e., event relatives, contrastive elements are not allowed on the left periphery of event relatives in the default case because they would intervene with the movement of the event operator. Meanwhile, when the event that is relativized is itself contrastive, this intervention effect seems to be obviated. This is implemented by Haegeman and Ürögdi via positing featural enrichment of the event operator that derives these clauses such that in addition to the [*wh*] feature it also has a D-linking (or delta) feature, which allows it to overcome intervention by a contrastive element between its base and target positions. For the intricate details of the relevant data and the analysis, I refer the reader to Haegeman & Ürögdi (2010a;b). Interestingly, however, contrastive topics (or contrastive elements in the CP domain) are not allowed inside *until*-clauses in Hungarian or in English, regardless of whether we are dealing with a Neg-raising structure, evidence that the contrast here is not encoded on the relative operator:

- (86) a. \*Esett az eső, ameddig PÉTER haza nem ment ernyőért.  
 fell the rain dem-wh-until Peter home NEG went umbrella-for  
 ‘It rained until PÉTER went home for an umbrella.’  
 b. \*It rained until Peter we sent for an umbrella.

If the analysis outlined here is on the right track, there are two operator chains crossing the position where the high contrastive element [PÉTER] is located, and therefore either of these could potentially cause intervention leading to ungrammaticality. One possibility is that Neg-raising across this contrastive topic is not possible. This is unlikely because negation in its base position is lower than the canonical focus position that, in the example at hand, houses the focused particle *haza*. As argued extensively in Haegeman & Ürögdi (2010a;b), focus has only an operator feature while contrastive topics also carry a D-linking feature in the default case. However, it is unclear why a D-linking ( $\delta$ ) feature should create intervention for Neg-raising. Therefore, if the focused particle does not cause a problem for Neg-raising, then neither should a contrastive topic. The other possible movement that could be disrupted by the fronted contrastive topic is the movement of the event operator. As mentioned above, non-focused event relative clauses normally do not allow contrastive topics to surface on their left periphery, and this is presumably due to the fact that these contrastive elements (being [+wh] and [+ $\delta$ ]) block the movement of the event operator (which, in the default case, has only an operator [+wh] feature). If this is the reason behind the ungrammaticality of (86a), however, then it seems that the “contrastivity” of Neg-raising *until*-clauses is not derived via the featural enrichment of the event operator but is related to the Neg-raising operation. As we might expect, such high contrastive elements do, in fact, become available once there is explicit focusing of the clause, which is evidenced by the presence of the clausal expletive in the matrix clause:

- (87) a. (Csak) Addig esett az eső, ameddig PÉTER haza nem  
 only dem-until fell the rain dem-wh-until Peter home NEG  
 ment ernyőért.  
 went umbrella-for  
 ‘It only rained until PÉTER went home for an umbrella.’  
 b. It only rained until Peter we sent home for an umbrella.

As such, these *until*-clauses pattern completely with other event relatives such as factives and conditionals when it comes to the availability of high contrastive elements in their left periphery. This means that the contrastive reading of *until*-phrases – which, according to the discussion above, is re-

sponsible for the switch reading – is distinct from the explicit syntactic focusing of the entire clause illustrated in (87) (which is presumably derived via featural enrichment of the event operator). This explains why the switch-reading does not render an *until*-phrase an intervener, so, for example, (88) shows that there is no featural interaction between the *until*-phrase (interpreted as contrastive) and the event operator used to derive the clause:

(88) I remember that John didn't arrive until 5.

The sentence above can easily be read as having the usual entailment that ‘John arrived at or shortly after 5’, even though I have claimed above that in order to derive this reading, the *until*-phrase must be taken to take high scope and be interpreted contrastively. It seems that this is semantic scope, though, and does not result in LF movement of the *until*-phrase, otherwise it would be an intervener to the movement of the event operator, and thus would be incompatible inside an event relative. A related issue is that, in English, in situ focus is also not an intervener, and is perfectly fine in event relatives such as factives:

(89) I resent that you chose JOHN (and not MARY).

This sentence can be read with ‘John’ taking wide scope, where I would posit that the entire clause is read contrastively. But it can also be read with narrow scope focus on ‘John’, where it is the identity of your choice that I resent. Note that the same reading is not possible with fronted focus:

(90) <sup>?</sup>What John regrets is that THE PENSION FUND Mary chose.

This shows that what we are dealing with in the fronting examples is syntactic intervention, and also suggests that in situ contrastive elements do not actually front at LF in English. The implications of this observation are far-reaching and potentially interesting but I do not have sufficient evidence or research to say anything conclusive about it at this point. The relevant point that pertains to the discussion at hand is simply that a contrastive reading does not necessarily involve syntactic movement, and that the contrastivity of *until*-phrases apparently does not interact with D-linking of the event operator used to derive them.

#### 4. A note on dialectal variation

As mentioned in the introduction to the Hungarian data, not all Hungarian dialects allow all three of the constructions discussed above. While there are a number of complex patterns, one striking tendency is that there are a number of speakers (as far as I can tell, primarily in Eastern Hungary and Transylvania; henceforth the “Eastern Hungarian” dialect) who reject both the non-negated and the predicate negation variant, and allow only what I have referred to above as the Neg-raising construction, repeated below:

- (91) Itthon maradok, **ameddig** Emma át **nem** jön.  
 home I-stay dem-wh-until Emma over not comes  
 ‘I’ll stay home until Emma comes over.’

While this is perhaps less than surprising since in Slavic it has also been reported that some speakers consider negation in *until*-clauses obligatory, what is interesting is that Hungarian speakers who only accept this one variant of *until*-constructions also do not agree with a number of the judgments listed above. One point of similarity is that even for these speakers, the embedded clause appears to describe a punctual event, as shown by the fact that they accept the following judgments (from (64)–(65)):

- (92) A szobában beszélgettünk, **ameddig egyszer csak** ki **nem** aludt a villany.  
 the room-in we-talked dem-wh-until all-of-a-sudden PRT NEG slept the light  
 ‘We talked in the room until, suddenly, the lights went out.’
- (93) Itthon maradok, **ameddig** mondtad, hogy Emma haza **nem** jön .  
 home I-stay dem-wh-until you-said COMP Emma home NEG comes  
 \*LR: ‘You told me that Emma will not come over until time *t*. I will stay home until time *t*.’  
 (The high reading is excluded via the tense of the middle clause.)

(92) shows that punctual modification is permissible with an unmarked interpretation in these *until*-clauses, and the unavailability of the low construal in (93) furnishes evidence (as noted also by Lipták (2005), who analyzes this restricted dialect) that we are dealing with an event relative construction. So far, therefore, the two dialects behave identically with respect to this construction. When we look further, however, we find that there are likely to be differences between the structures assigned to (91) by speakers of the two dialects, meaning that it is not simply the case that Eastern Hungarian speakers are less liberal when it comes to the variants

they accept but there is some deeper reason why they only allow one out of the three options.

Firstly, let us recall that I have argued above that the “less restrictive” dialect utilizes completely productive, run-of-the-mill syntax in *until*-constructions where negation is generated in its usual position; the particle in the Prt–Neg–V order was analyzed as being in focus, while negation was claimed to be interpreted in a higher position (via LF Neg-raising). One reason for assuming that the particle is in focus in (91) was that (as pointed out by Piñón (1991)) speakers of the non-restrictive dialect do not allow focus before the particle (repeated from (86a)):

- (94) %Esett az eső, ameddig PÉTER haza nem ment ernyőért.  
 fell the rain dem-wh-until Peter home NEG went umbrella-for  
 ‘It rained until PÉTER went home for an umbrella.’  
 Non-restrictive dialect: \*  
 Eastern Hungarian dialect: OK

This fact is explained, obviously, if the focus position is filled by the particle. Meanwhile, speakers of the Eastern Hungarian dialect have no problem with this example, as also shown by the following datum (provided by Katalin É. Kiss (p.c.)):

- (95) Addig maradunk, ameddig JÁNOS fel nem lép.  
 dem-until we-stay dem-wh-until John Prt NEG steps  
 ‘We will stay until JÁNOS steps out on stage.’  
 Non-restrictive dialect: \*  
 Eastern Hungarian dialect: OK

This shows that the structure assigned to this construction for the dialect discussed in the previous section (repeated below) cannot be the right one for the Eastern Hungarian dialect – even though, as (92) and (93) show – this dialect also appears to treat this *until*-construction as an event relative.

- (96) **Structure of the Prt–Neg–V order in the non-restrictive dialect:**  
 [FocP Prt [NegP Neg V ... ]]

Interestingly, there is another difference between the two dialects in terms of data judgments, namely, that Eastern Hungarian speakers have no problem with negative quantifiers in this construction (from (73b)):

- (97) %**Ameddig** fel **nem** veszünk senkit ...  
 dem-wh-until PRT NEG we-hire nobody-ACC  
 Non-restrictive dialect: \*  
 Eastern Hungarian dialect: OK

This, in turn, shows that – if we accept the analysis of the dialect dealt with in section 3 – the Eastern Hungarian dialect not only does not feature the particle in focus in *until*-constructions but it also does not have LF Neg-raising. Therefore, while it seems on the surface that the difference between the two dialects is one of quantity (so that the “more restrictive” dialect does not allow all of the structures permissible in the “less restrictive” one) the difference is in fact a deep structural one, and the structures assigned to the same example (91) must diverge for the two groups of speakers. The question that I want to address briefly, then, is what structure we can assign to (91) in the Eastern Hungarian dialect and what are the consequences.

É. Kiss (2010) argues that certain Modern Hungarian constructions (including *until*-clauses) preserve one of the possible word orders available for negated sentences in Old Hungarian. In particular, the following examples are given for the default and for the PRT–NEG–V order (her (6); the glosses are mine):

- (98) a. **Nem** mondom **meg**.  
 NEG I-tell PRT  
 ‘I will not tell.’ (standard ordering for predicate negation in Modern Hungarian)
- b. Amíg<sup>15</sup> **meg nem** mondod, ...  
 dem-wh-until PRT NEG you-tell  
 ‘Until you tell, ...’
- c. Ha azonnal **meg nem** mondod, ...  
 if at-once PRT NEG you-tell  
 ‘Unless you tell at once, ...’
- d. **Meg ne** mondd!  
 PRT NEG you-tell-IMP  
 ‘Don’t even think about telling!’
- e. **Meg nem** mondom!  
 PRT NEG I-tell  
 ‘I will not tell (emphatic)!’



É. Kiss analyzes these structures as artefacts of the Old Hungarian word order, which is not productive in Modern Hungarian but only preserved in a few, at times marginal constructions. While all of these structures are more or less accepted in all dialects of Modern Hungarian, it is interesting to note that (b) (as discussed above) and (c) alternate with the default predicate negation order (at least in the Budapest dialect), while (d) has an alternative that overtly features negation in a high position:

- (99) **Ne**-hogy **meg**-mondd.  
 NEG-COMP PRT-you-tell-IMP  
 ‘Don’t even think about telling!’ (cf. (98d))

The structural alternations between these constructions and other possible word orders show that, in some dialects, the Prt–Neg–V order has been re-analyzed as a productive word order (with the particle in focus) and it alternates with other logical options. One of the correlates of the Prt–Neg–V ordering in the Budapest dialect is LF Neg-raising, which is supported by the fact that in that dialect negative quantifiers are ungrammatical in examples (b)–(d) above. (To my ear, (98e) sounds distinctly archaic, so I find it hard to judge whether NPI-licensing would work in this sentence.) I take examples like (99) to be an overt Neg-raising variant of the covert Neg-raising posited for the Prt–Neg–V order in *until*-constructions, and, by extension, possibly in the examples (b)–(e) above. Meanwhile, in accordance with É. Kiss’s claim, we can say that in the dialect that only accepts the Prt–Neg–V order in these constructions, this non-default ordering is an idiom of sorts, and as such has not been re-analyzed as a focus construction. (Recall that in Modern Hungarian, the only way the particle can end up left-adjacent to negation is if it is focused, so the absence of re-analysis in this case would mean that the speakers treat this order as a “syntactic idiom”.) As such, these structures preserve the Old Hungarian ordering where negation does not project but it adjoins to the predicate, so the verb and negation form a constituent in T, and the particle is in its usual, neutral position. Given that this construction does not involve focus for these speakers, it becomes clear why constituent focus in (94)–(95) is grammatical for them. For É. Kiss, the structure yielding this word order is the following:

- (100) [<sub>TP</sub> Prt [<sub>T'</sub> [<sub>T</sub> Neg V] VP ]

<sup>15</sup> *Amíg* is a phonological variant of *ameddig*, which I have used in my examples because of its morphological transparency. The two forms are interchangeable for most speakers.

While arguing for or against the structure above falls outside the scope of this discussion, it becomes clear that – accepting É. Kiss’s argument that for Eastern Hungarian speakers, the Prt–Neg–V ordering is a historic remnant that is not productively analyzed – this proposal works for the focus data. Meanwhile, the licensing of negative quantifiers (acceptable for Eastern Hungarian speakers in all of the structures in (98b–e) but out for speakers of the dialect utilizing the Neg-raising construction) is plausibly related to the fact that, as É. Kiss shows, in the relevant version of Old Hungarian, in which the Prt–Neg–V order was at least as common as the currently default Neg–V–Prt ordering, negative quantifiers still had negative force and did not require licensing by negation. It is possible that speakers that retained some portions of this old grammar allow negative quantifiers to surface without c-commanding negation in these archaic structures, although it is unclear how such an analysis should be properly constrained in order to predict that even these speakers do not permit negative quantifiers to surface in sentences completely lacking negation. It is also possible that negation in T is a possible licenser for these speakers. (We do not have a minimal pair to test if NPI-licensing from this position is possible for the speakers of the Budapest dialect since these speakers do not have the adjunction structure given in (100).) One clear outcome of (100) is that (covert or overt) Neg-raising is predicted to be impossible because negation attaches to the tensed verb by head-adjunction, so it can presumably not move out of this constituent. It is also a question why it should be these particular constructions (the ones listed under (98)) that kept the Old Hungarian structure. And finally, it is less than obvious how these speakers differentiate ‘normal’ predicate negation (the Neg–V–Prt order) from this archaic order in their grammar so that structures involving this adjoined negation are interpreted as denoting punctual events, as evidenced by the fact that they allow modification by punctual adverbs without yielding the marked SoO reading, and can supply the endpoint argument in an *until*-construction as shown by the fact that they facilitate the low construal. I do not have anything enlightening to say about these questions at this point, so I leave them open for future research.

In conclusion, let me sum up the findings of this section. Despite its complexities, the least restrictive dialect of Hungarian – the one that displays the three-way contrast illustrated under (47) – can be accounted for without reference to lexical ambiguity of the *-ig* suffix, or having to evoke a special type or position of negation. Rather, it has been argued that there is only one lexical item *-ig* involved in all three constructions. This suffix takes two arguments (one durative and one punctual), fixing the latter

as the endpoint of the former. This strict view of the suffix’s selectional properties necessitates a covert operation (raising negation from its usual position in NegP to a position outside the temporal domain of the embedded clause) in configurations where the P element originates outside the adverbial clause as a connective (the event relative derivation). This raising of negation at LF was evidenced by a number of diagnostics (scope relations between negation and sentence adverbs or focus, the inability of this negation to license negative quantifiers inside the adverbial clause, etc.). Thus, the account I have outlined for the examples in (47) – the non-negated ER construction, the “predicate negation” TR variant, and the “Neg-raising” ER structure – supports the “single-*until*” line of approaches. In addition, it shows that the three distinct occurrences of *-ig* can be analyzed in terms of structural ambiguity (that is, this P element can form both temporal relatives and event relatives), whereas the rest of its properties (particularly, its interaction with negation) are explained by and in turn influence the semantics of each construction.

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