

NEG-shift in English: Evidence from PP-adjuncts*

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1. Introduction

Negative PP adjuncts can give rise to sentential negation (SN) as in (1), or constituent negation (CN), as in (2). Some PPs can trigger either SN or CN, as in (3).

- (1) On no account could she move to Paris. (SN)
- (2) In no time, Jules had stolen the money. (CN)
- (3) Mary looks attractive with no clothes. (SN/CN)

A fact that has so far gone unnoticed is that SN PP-adjuncts are generally poor with transitive verbs in clause position, i.e. to the right of the direct object or prepositional object:

- (4) *? She could move to Paris on no account. (SN)

This paper proposes to account for this restriction by assuming that there is always overt NEG-shift (Christensen 1986; Haegeman 1995; Christensen 2008) for SN PP-adjuncts in English. As such, this paper extends Kayne's (1998) claim that there is always overt NEG-shift of DP-objects in English and that scopal differences follow from overt movement of n-constituents to SpecPolP. The fact that CN PP-adjuncts do not have to NEG-shift whereas SN PP-adjuncts do, will be attributed to the feature composition of the noun and PP-internal differences. SN PP-adjuncts contain an extra functional projection, LocP (Koopman 2000; Den Dikken 2003; Svenonius 2008) and a [uSpace: _] on N°, both absent in CN PP adjuncts.

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In section 2 I discuss two tests to detect whether a constituent gives rise to SN or to CN. Section 3 gives an overview of the distributional differences between SN and CN PP adjuncts and discusses a semantic split that overlaps with the SN/ CN split. In section 4 I give an outline of what has been described as NEG-shift (Christensen 1986; Christensen 2008) or NEG-movement (Haegeman 1995; Kayne 1998) in the literature. In section 5 I sketch Kayne's NEG-shift account for English DP-arguments as a prerequisite for my own analysis in the rest of the section. Finally, section 6 discusses PP-internal structural differences between SN PPs and CN PPs in order to account for the fact that negation in CN PPs cannot scope out of the PP. Section 7 concludes.

2. Sentential negation or constituent negation: some tests

Two well-known tests to detect whether a PP involves SN or CN are the *neither/so*-tag-test (Klima 1964) and the negative preposing-test (Rudanko 1980; Haegeman 2000). When a sentence can be combined with a *neither*-tag it is negative (5)a and when it can be combined with a *so*-tag, it is positive (5)b.

- (5) a. John did not buy the book, and *neither/*so* did Jane.
b. John bought the book, and **neither/so* did Jane.

Applied to the data in (1)-(3), the tags in (6) show whether the negative constituent has sentential scope (SN) or constituent scope (CN):

- (6) a. On no account could she move to Paris, and *neither/*so* could Jane. (*CN/SN)
b. In no time, Jules had stolen the money, and **neither/so* had John. (CN/ *SN)
c. Mary looks attractive with no clothes, and *neither/so* does Jane. (CN/SN)

For the negative preposing - test the PP is put in sentence initial position. When the PP does not give rise to subject-auxiliary-inversion (SAI) the negative PP has CN. When it causes SAI the negative PP has sentential scope. Applied to the data in (1)- (3), the test confirms the scope behaviour already established by the *neither/so*-tag-test:

- (7) a. On no account could she move to Paris. (SN - SAI)

- b. In no time, Jules had stolen the money. (CN - no SAI)
- c. With no clothes, Mary looks attractive. (CN-no SAI)
- d. With no clothes could Mary look attractive. (SN- SAI)

I will use these two tests to determine whether negative PPs have SN or CN. Other tests and a critical discussion of these tests can be found in the literature (Klima 1964; Haegeman 2000; Klima 2000; Penka 2007), but will not be discussed here.

3. The data

3.1. The distribution of negative PP-adjuncts

In this section, I will present data showing that SN PP-adjuncts are generally ungrammatical in clause-final position and grammatical in mid-position, i.e. in between the auxiliary/ modal verb and the main verb. CN PP-adjuncts on the other hand are fine clause-finally but ungrammatical in mid-position. In this respect, SN PP-adjuncts contrast with PP-adjuncts in general, i.e. PPs that do not contain a PP-internal negative element¹, whereas CN PP-adjuncts pattern with them. PP-adjuncts are sometimes referred to as circumstantial PPs and they comprise adjuncts denoting place, time, manner, means, company, reason, purpose and so on (Cinque 1999: 28). PP-adjuncts without a PP-internal negative element typically occur in clause-final position in English, as in (8) and are also often used in clause-initial position. Sometimes PP-adjuncts are allowed in mid-position, though this position is usually open to AdvPs proper (Cinque 1999, Schweikert 2005) and is not common for PP-adjuncts in spoken English². It is often even ungrammatical, as in (8)b.

- (8) a. Mary visited her friend on a different day of the week.
 b. ?* Mary should on a different day of the week visit her friend.
 c. On a different day of the week, Mary visited her friend.

1. I do not refer to these PPs as affirmative PPs, because PPs that are negative, such as 'not under any circumstances' with the negative element outside of the PP, do not pattern with SN PP-adjuncts. They pattern with affirmative PPs. Therefore, I refer to this group of PPs as *PP-adjuncts without a PP-internal negative element*.

2. Mid-position with PPs is mostly considered ungrammatical in spoken English, but occurs often in journalistic prose in English (see Haegeman 2002).

However, SN PP-adjuncts³ are degraded or cannot occur in clause final position with transitive verbs, as illustrated in (9). This is unexpected considering the usual behaviour of PP adjuncts in English. SN PP-adjuncts are grammatical in mid-position (10), and in clause-initial position, giving rise to SAI (11).

- (9) a. *?She should reveal the secret at no time.
 b. *? You should move to Paris on no account.
 c. *They would reveal the problem under no circumstances.
- (10) a. She should at no time reveal the secret.
 b. You should on no account move to Paris.
 c. They would under no circumstances reveal the problem.
- (11) a. At no time did he reveal the secret.
 b. On no account should you move to Paris.
 c. Under no circumstances would they reveal the problem.

That the PPs in question are SN PPs is confirmed by (11), which shows that the negative constituent gives rise to SAI. Application of the *neither/so*-tag test yields the same result: (12) shows that only *neither*-tags are compatible with the sentences, which again confirms that the PP-adjuncts in (9) - (11) are negative PP-adjuncts that give rise to SN.

- (12) a. She should at no time reveal the secret, and neither/*so should he.
 (SN)
 b. You should on no account move to Paris, and neither/*so should he.
 c. They would under no circumstances reveal the problem, and neither/*so would she.

CN PP-adjuncts on the other hand, as in (13), are grammatical in clause final position. Application of Klima's *neither/so*-tag test indicates that the negative constituent does not give rise to SN. *No* only has scope over the constituent and gives rise to CN.

3. Kato (2000) considers these PPs *arguments*, rather than adjuncts. He needs this distinction to account for the different behaviour of SN PP-adjuncts and CN PP-adjuncts. However, I shall stick to the more orthodox assumption that these SN PPs are adjuncts and not arguments, as they are by no means selected by the verb.

- (13) a. Mary could be happy for no reason at all, and *neither/so could Jane. (CN)
 b. John had stolen the money in no time, and *neither/ so had Jim. (CN)
 c. She cooked them a bad meal at no charge, and *neither/ so did he. (CN)

The CN PP-adjuncts in (13) are ungrammatical or degraded in mid-position (14) and do not give rise to SAI in clause initial position (15), which is an extra indication of the fact that negation in these PPs can only have scope over the constituent:

- (14) a. ?*Mary could for no reason at all be happy. (CN)
 b. ?*John had in no time stolen the money. (CN)
 c. ?*She at no charge cooked them a bad meal.
- (15) a. For no reason at all, Mary could be happy. (CN)
 b. In no time, John had stolen the money. (CN)
 c. At no charge, she cooked them a bad meal. (CN)

However, with passive verbs and unaccusative verbs SN PP-adjuncts are acceptable in clause final position, i.e. immediately following the main verb, as illustrated in (16) for passives and (17) for unaccusatives. Mid-position and clause-initial position are also grammatical and even preferred over clause final position.

- (16) a. ?The secret should be revealed under no circumstances.
 b. The secret should under no circumstances be revealed.
 c. Under no circumstances should the secret be revealed.
- (17) a. ?The bomb should explode in no case.
 b. The bomb should in no case explode.
 c. In no case should the bomb explode.

Summarizing, PP-adjuncts lacking a PP-internal negative element can occur clause-finally and clause-initially. They are less common in mid-position in spoken English. SN PP-adjuncts cannot occur clause-finally with transitive verbs, but are grammatical in mid-position and clause-initial position, giving rise to SAI. With passive verbs and unaccusative verbs SN PP adjuncts are acceptable in clause-final position, mid-position and clause-initial position, giving rise to SAI. CN PP-adjuncts occur clause finally and

clause initially (without SAI), but are highly degraded in mid-position. An overview of the distribution of these PPs is in the table below.

Table 1: Distribution of PP-adjuncts: overview

Summary	Initial		mid	final
	No SAI	SAI		
PP-adjuncts without a PP-internal negative constituent	✓	*	?*	✓
SN PP-adjuncts with transitive verbs	*	✓	✓	?*
SN PP-adjuncts with passive/unaccusative verbs	*	✓	✓	?
CN PP-adjuncts	✓	*	?*	✓

The ambiguous PPs illustrated by a case like (3) do not conform to this pattern, as they can occur clause-finally in the SN-reading. I believe this is related to a possible alternative analysis of these PPs as arguments. However, I shall not discuss them any further in this paper for reasons of space.

3.2. Negative PP-adjuncts and the time/ place – manner/ reason split.

Progovac (2000) observes that PP-adjuncts triggering sentential negation in Serbo-Croatian and English are time¹place adverbials and negative PPs that do not give rise to SN are manner/reason adverbials. Since Serbo-Croatian is a negative concord language, n-words have to be accompanied by a negative marker *ne* on the main predicate in order to give rise to SN.

- (18) Marija *(ne) vidi nikoga.
 Maria not see nobody
 ‘Maria does not see anybody.’

Place and time PP-adjuncts cannot be used without also negating the predicate in Serbo-Croatian: in (19)a a place adverbial is used without negation on the main predicate and the sentence is ungrammatical, whereas in (19)b the same PP is used with negation on the main predicate and the sentence is grammatical. The same goes for the time adverbials. Manner and reason PPs on the other hand, as in (20), are grammatical both with and without negation on the main predicate. When there is negation on the main

predicate, this results in a double negation-reading, which is in most languages marginal for pragmatic reasons, as indicated by the %-sign.

- (19) a. * *Rekao je to na nijednoj konferenciji.*
 ?* He said that at no conference
 b. *Nije to rekao ni na jednoj konferenciji.*
 He didn't say that at any conference.
- (20) a. *On plače zbog ničega.*
He cries for n-what
 'He is crying for nothing.'
 b. % *On ne plače zbog ničega.*
He NEG cries for n-what
 'He is not crying for nothing'.

The same split, valid in Serbo-Croatian, can be applied to the data discussed above: the SN PP adjuncts in (21) denote time⁴, whereas the CN PP-adjuncts in (22) respectively denote reason and manner).

- (21) a. Under no circumstances should they reveal the secret.
 b. On no account should you move to Paris.
- (22) a. For no reason at all, Mary could be happy.
 b. In no time, Jules had stolen the money.

I follow Progovac's claim that SN PP adjuncts are place/time adjuncts, whereas CN PP adjuncts are manner/reason adjuncts. The relevance of this semantic split for my analysis of negative PP-adjuncts will be explained and worked out in section 6.

4. NEG-shift

In what follows I will analyse the positional distribution of negative PP-adjuncts in the clause in terms of NEG-shift, arguing that SN PP adjuncts must move leftward to get sentential scope, whereas CN PP adjuncts cannot

4. Also PP-adjuncts denoting place give rise to SN:

(i) In no town did he do that.

However, I do not focus on the SN PP-adjuncts denoting place in this paper, since their distribution is slightly deviant from time PPs: they only seem to be fully acceptable in clause-initial position. Clause final position is marginal and mid-position ungrammatical. I will look into this matter in future research.

move leftwards. I will elaborate on what NEG-shift is in this section and discuss its mechanisms in a few Germanic languages. In section 5 then, I will discuss how NEG-shifts works for SN PP-adjuncts, drawing on Kayne's (1998) analysis.

NEG-shift is defined as the syntactic displacement of a negative indefinite object to a NegP projection in order to give rise to sentential negation (Christensen 1986; Haegeman 1995; Haegeman & Zanuttini 1991; Kayne 1998; Haegeman 2000; Svenonius 2002; Christensen 2008). In the following sections I give an overview of some well-known cases of NEG-shift in some Germanic languages.

4.1. NEG-shift in Scandinavian

One of the most often discussed cases of NEG-shift in the literature is NEG-shift of negative objects in Scandinavian languages. Nonnegative lexical objects (DPs) have to follow the main verb in the Scandinavian languages, as illustrated for Swedish in (23).

- (23) a. Jag läser en roman. [Swedish]
 I read a novel
 'I am reading a novel.'
 b. Jag har läst en roman.
 I have read a novel
 'I have read a novel.'

By contrast, negative DP objects cannot occur to the right of the verb when it is non-finite (Christensen 2008: 183-184):

- (24) a. Jag läste inga böcker.
 I read no books.
 b. *Jag har läst inga böcker.
 I have read no books

Instead, the negative object can either shift to the left of the participle, as in (25)a or negation can be expressed by means of the negative marker and the indefinite pronoun (25)b:

- (25) a. %Jag har inga böcker läst.
 I have no books read
 'I have read no books.'
 b. Jag har inte läst några böcker.

I have not read some books
 ‘I have not read any books.’

All Scandinavian languages allow the negative indefinite object to shift, i.e. NEG-shift, over a non-finite main verb (Christensen 2005, 2008).⁵ The fact that negative DP-objects can occur to the right of a finite verb, as in (24)a, is explained on the hypothesis that Scandinavian has V2. The finite verb moves out of the VP to C°, allowing the DP-object to NEG-shift to SpecNegP, as illustrated in (26)a.

- (26) a. [_{CP} Jag [_C läste_j] [_{IP} t_i [_{tj}] [_{NegP} inga böcker_k [_{VP} t_i [_{VP} [_{vtj}] [_{DP} t_k]]]]].
 b. *[[_{CP} Jag [_C har_j] [_{IP} t_j [_{NegP} [_{VP} t_i [_{VP} läst [_{DP} inga böcker]]]]]]].

In (24)b string vacuous NEG-shift is impossible, because the main verb cannot move to C° due to the presence of the auxiliary, as illustrated in (26)b. Therefore, only NEG-shift across the main verb, as in (25)a, is possible or the construction with the negative marker and the indefinite pronoun (25)b.

4.2. NEG-shift of PPs in West-Flemish, Dutch and German

Nonnegative PP-complements in West-Flemish (and also in Dutch) can occur to the left and right of their adjectival head (Haegeman 1997: 117), as in (27).

- (27) a. da ze ketent van euren coiffeur
 was
that she pleased of her hairdresser was
 “that she was pleased with her hairdresser”
 b. da ze van euren coiffeur ketent was
that she of her hairdresser pleased was

5. Only in Faroese and Icelandic is this NEG-shift over the nonfinite main verb still generally accepted in spoken language. In Danish, and especially in Swedish and Norwegian (Svenonius 2002) it is considered formal and stylistically marked and is either almost extinct or on its retreat (for Norwegian, see Svenonius 2002; for Danish, see Christensen 2008). In Swedish, Norwegian and to a lesser extent in Danish the alternative option with the negative marker and the indefinite pronoun is preferred over NEG-shift.

Negative PPs, (28), must move to the left of the adjectival predicate to have sentential scope. (28)a is ungrammatical with the negative PP following the adjective, because the negative head *en* is a marker of sentential negation, typical of Negative Concord in the West Flemish dialect. The same sentence in Standard Dutch would not be ungrammatical, but would only trigger CN, as exemplified in (29).

- (28) a. *da ze ketent van niemand
 en-was(SN)
 that she contented of no one en was
 b. da ze van niemand ketent en-was. (CN)
 that she of nobody contented en-was
 “that she was pleased with nobody”
 (Haegeman 1997: 117-118)
- (29) a. Ik vernam dat ze tevredenover niets
 was. (CN)
 I heard that she pleased about nothing was
 ‘I heard that she was pleased with nothing.’
 b. Ik vernam dat ze over niets tevredenwas. (SN)
 I heard that she about nothing pleased was
 ‘I heard that she was pleased with nothing’

A similar pattern can be observed for German (Hamann 1993; Haegeman 1995): a nonnegative PP-complement can precede and follow the adjective, as illustrated in (30).

- (30) a. weil Peter zufrieden mit seinem Auto
 ist.
 because Peter pleased with his car is
 ‘because Peter is pleased with his car’
 b. weil Peter mit seinem Auto zufrieden ist.
 because Peter with his car pleased is
 (Haegeman 1995: 166)

Negative PP-complements, on the other hand, cannot have sentential scope or trigger SN in post-adjectival position. SN can only be triggered when the complement precedes the adjective, as in (31). In (31) the negative constituent does not have sentential scope (Haegeman 1995: 167).

- (31) a. weil Peter stolz auf niemanden/ nichts
ist. (CN)
because Peter proud of no one/ nothing is
'because Peter is proud of no one/ nothing.'
b. weil Peter auf niemanden/nichts stolz ist. (SN)
because Peter of no one nothing proud is

The generalization to be drawn from these NEG-shift data is that for negative constituents to acquire sentential scope, they must occupy a position to the left of the main verb as opposed to their affirmative counterparts. In the analysis to be developed below, I shall argue that the ungrammaticality of SN PP-adjuncts in clause final position and the grammaticality of the same adjuncts in mid-position with transitive verbs is an overt manifestation of NEG-shift in English. I claim that SN PP adjuncts, just like negative DP-objects, have to NEG-shift in order to give rise to SN. The fact that NEG-shift of SN PP-adjuncts is non-string vacuous with transitive verbs will be explained by the absence of remnant vP-movement. Before I embark upon my analysis of the SN PP-adjunct data, I shall first discuss a case of Neg-shift of DPs in English.

5. NEG-shift in English

5.1. NEG-shift of argument DPs in English

It has been claimed in the literature (Haegeman 1995; Christensen 2005, 2008) that there is no NEG-shift in English. Unlike the Scandinavian languages, English allows negative indefinites both with finite main verbs, (32)a, and non-finite main verbs (32) but it does not allow them to precede the main verb (32).

- (32) a. John read no book.
b. John has read no book.
c. *John no book read.
d. *John has no book read.

Haegeman (1995) accounts for the apparent absence of NEG-shift in English by postulating an empty operator in SpecNegP which is coindexed with the negative object. Christensen (2008) proposes that movement to SpecNegP is phonologically silent, i.e. there is movement, but no operator insertion.

Kayne's (1998) proposal deviates slightly from previous accounts by claiming overt (but string-vacuous) NEG-shift in English. For a sentence

with a negative indefinite, as in (33), with a main verb *read* that does not raise to I° and no apparent raising of the DP to Spec,NegP, Kayne proposes the derivation in (34). First, the negative object moves out of the VP to Spec,NegP, followed by remnant movement of the VP (now this would be remnant vP-movement) to a functional projection (FP) above NegP.

(33) John reads no novels.

(34) John [FP [VP reads [DP no novels]]] → (neg phrase preposing)
 John [FP [NegP [DP no novels]_i [VP reads t_i]]] → (remnant VP-preposing)
 John [FP [VP reads t_i]_j [NegP [DP no novels]_i t_j]]

Kayne's claim is based on the contrast in (35): in (35)a copula *be* raises to I° and the DP-object raises overtly to SpecNegP, whereas in (35)b the main verb *become* does not raise and the DP has to remain in situ and therefore cannot raise out of VP to Spec,NegP.

(35) a. John is no Einstein.
 [CP [IP John [_I is_i] [NegP [DP no Einstein]_j [VP t_i t_j]]]]
 b. *John became no Einstein.
 [CP [IP John [NegP [VP became [DP no Einstein]]]]]]

Kayne then explains that the derivation in (34) is not available for the sentence in (35)b due to the incompatibility between VP-movement and the negative predicate nominal *no Einstein*. Another example to support his claim is given in (36): the fact that (36)a is considered more neutral than (36)b is ascribed to the fact that there is raising of the verb to I° in (36)a and not in (36)b where there is remnant vP-movement.

(36) a. John has no car.
 b. John owns no car.

The neutrality contrast disappears when the sentence is negative and there is no difference with respect to the raising of the verb to I° :

(37) John doesn't have/ own a car.

5.2. SN PP-adjuncts: NEG-shift and the absence of remnant vP-movement

As discussed in section 3 on the distribution of PP-adjuncts in English, PP-adjuncts that give rise to sentential negation are ungrammatical or degraded in clause final position with transitive verbs, as in (38)a. PP-adjuncts that do not give rise to sentential negation, i.e. CN PPs, are grammatical in clause-final position (38)b.

- (38) a. *They would reveal the problem under no circumstances.
 b. Jules had stolen the money in no time.

Let us look at the SN PP-adjuncts first. SN PP-adjuncts acquire sentential scope through a relationship with a Polarity head (Pol°) (Laka 1990; Tubau 2008) in the clause, which projects a PolP. Following Tubau (2008) I assume that Pol° is endowed with an interpretable polarity feature, which is syntactically unvalued, i.e. [iPol:_] (see also Zeijlstra 2004; Pesetsky and Torrego 2007; Penka 2007). It will thus probe to get value. If it does not get value in the course of the derivation, it will get a default valuation as *affirmative* (Aff). Pol° also has an EPP feature that attracts negative constituents to its specifier. As far as n-words are concerned, these start off with an uninterpretable, but valued polarity feature for negation: [uPol: Neg].

As far as the position of circumstantial PP-adjuncts is concerned, I will adopt the structure proposed by Cinque (1999) and worked out by Baltin (2005), who put circumstantial PPs in the specifier of a VP-shell on top of VP. The usual clause-final position of circumstantial PP-adjuncts is derived by moving VP upwards to a functional projection, YP, above the VP-shells, as illustrated for a PP-adjunct without a PP-internal negative element in (39).

- (39) [_{CP} [_{IP} I [_{I°} could] [_{PolP} [_P iPol:aff] [_{VP} [_{YP} [_{VP} reveal the secret]_i [_{VP} [_{PP} under these circumstances] t_i]]]]]]]

The structure for the ungrammatical (38)a is illustrated in the derivation below:

- (40) [_{CP} [_{IP} they [_{I°} would] [_{PolP} [_P iPol:_] [_{VP} [_{YP} [_{VP} reveal the problem]_i [_{VP} [_{PP} under no circumstances] t_i]]]]]]]

To derive the grammatical mid-position for SN PP-adjuncts, as in (41), the polarity head Pol°, which carries [iPol:_], agrees with the negative indefinite within the PP. Negative indefinite *no* carries [uPol:Neg], value Pol°, turn it into a negative head and delete its own uninterpretable feature. This gives

rise to sentential negation. Attracted by the EPP on Pol°, the PP moves to SpecPolP, i.e. it NEG-shifts.

- (41) [_{CP} [_{IP} I [_{I°} would] [_{PolP} [_{VP} [_{YP} [_{VP} [_{PP} under no circumstances] [_{VP} move to Paris]]]]]]] → (VP-preposing, Cinque 1999)
 [_{CP} [_{IP} I [_{I°} would] [_{PolP} [_{VP} [_{YP} [_{VP} move to Paris]_j [_{VP} [_{PP} under no circumstances] t_j]]]]]]] → (NEG-shift to SpecPolP)
 [_{CP} [_{IP} I [_{I°} would] [_{PolP} [_{PP} under no circumstances]_k [_{VP} [_{YP} [_{VP} move to Paris]_j t_k t_j]]]]]]]

The structure above parallels Kayne's (1998) derivation, but unlike Kayne's derivation there seems to be no remnant vP-movement (which Kayne called remnant VP-movement) after NEG-shift to a FP on top of PolP. Remnant vP-movement would lead to the ungrammatical clause final SN PP. A closer look at the data in (42) and (43) sheds light why there is no remnant movement with SN PP adjuncts. With passive verbs, in (42), or unaccusatives, in (43), the ungrammaticality of the same SN PPs in clause final position disappears. Nevertheless, mid-position and clause-initial position are still to be preferred.

- (42) a. ? The secret should be revealed under no circumstances.
 b. The secret should under no circumstances be revealed.
 c. Under no circumstances should the secret be revealed.
 (43) a. ? The bomb should explode in no case.
 b. The bomb should in no case explode.
 c. In no case should the bomb explode.

What I would like to suggest is that the movement of a DP-object out of vP, as in (42)-(43), or as in the examples involving a negative object DP (exemplified here by (44)), correlates with remnant vP-movement to FP on top of PolP.

- (44) John reads no book.

When the direct object leaves vP to end up in SpecPolP, remnant vP-movement is obligatory, as in (44). However, when the internal argument moves to SpecIP, as in the passive example in (42) and the unaccusative example in (43), remnant vP-movement is optional, thus deriving sentences with SN PP adjuncts in clause final position (42)a/(43)a. Since mid-position is also allowed it must be concluded that remnant vP-movement is not obligatory when the internal argument moves to SpecIP. In the case of SN

PP-adjuncts with transitive verbs, there is no preposing of the remnant vP because the object does not leave vP. NEG-shift of adjunct PPs thus becomes non-string vacuous due to the lack of remnant vP-movement. The correlation between object-movement and remnant vP-movement suggests a link with Holmberg's Generalisation (Holmberg 1999), but for reasons of space I shall not discuss this parallel any further here.

5.3. Corroborating evidence for NEG-shift in English

More independent evidence for NEG-shift in English, supporting Kayne's 1998 claim, comes from Late Middle English (15th C; Paston data). In Late Middle English OV-word order co-occurred with VO-word order, but OV-word order was more productive when the object was an n-indefinite. Ingham (2000) analyses the data in (45) as movement of the n-indefinite to SpecNegP.

- (45) for I may no leysour haue PL 182, 48 (1465)
for I may no leisure have
 (Ingham 2000:21)

The pattern discussed for English SN PP-adjuncts is also found in Norwegian (Svenonius 2002), for which it has been convincingly argued in the literature that there is overt NEG-shift with negative indefinite objects (cf. section 4.1). (46)a shows an SN PP-adjunct in between the main verb and the direct object: since the finite verb moves out of VP to C° (V2), stranding the direct object, the SN PP must be located in a NegP or PolP projection on top of vP. (46)b shows that SN PP-adjuncts cannot occur in clause final position.

- (46) a. Han synger på ingen måte visesanger.
He sings on no way folksongs
 'In no sense does he sing folk songs.' (Svenonius 2002: 126)
 b. *Han synger visesanger på ingen måte.

This section provided support for Kayne's 1998 claim that there is overt NEG-shift in English and it analysed the distribution of SN PP-adjuncts as the consequence of an interplay between NEG-shift and (the absence or presence of) remnant vP-movement. Section 6 will explore how the distributional differences between CN and SN PP-adjuncts come about by looking at PP and DP-internal differences between the two kinds of adjuncts.

6. PP-internal structure and Agree with Pol°

SN in the analysis developed in section 5 here reduces to an Agree relationship with a Pol°-head. Conversely, there is no such Agree relationship in the case of CN. In this section, I would like to tie the different behaviour of the SN and the CN adjunct PPs in this respect to a difference in their internal structure: SN PPs possess an extra functional layer which allows a negative PP contained in them to escape the PP-phase and bring them into a higher domain, where they become accessible for probing by the Pol° head of the clause, giving rise to SN. CN PP-adjuncts lack this extra functional layer and are therefore inaccessible for probing by Pol°. Consequently, no SN can arise.

Support for the introduction of more functional structure comes from the semantic split between the two types of adjunct PPs, discussed in section 3.2. SN PPs can be categorized as place/ time adverbials, whereas CN PPs can be categorized as manner/reason adverbials. Progovac (2000) speculates on the reason for the different behaviour of SN PPs and CN PPs and suggests an analysis in terms of a different position for time/place adverbials on the one hand and manner/reason adverbials on the other. Time/place adverbials would then be located in the specifier of a functional projection, whereas manner/reason adverbials would be adjoined to VP. A problem for such an approach is that a difference in attachment site of the PP cannot explain why *no* can Agree with Pol° when the PP is located in the Specifier of an FP, but not when it is in a PP adjoined to VP. I would therefore like to take a different approach, which assigns a different internal structure to both types of PPs

It has been suggested that locative PPs have more functional structure than other PPs (Koopman 2000; Den Dikken 2006; Svenonius 2006; Rooryck&Vanden Wyngaerd 2007; Aboh, 2010)⁶. Moreover, place and time

6. I abstract away in this paper from the discussion how extended the functional projection line of P° is in English. Svenonius (2006) uses PlaceP to refer to a few projections for locative adpositions: pP-DegP-LocP-AxPartP-K-DP. Den Dikken's (2006) and Koopman's (2000) account for Dutch PPs is similar in many respects: they both use PlaceP, though with a slightly different function. The LocP I use here is based on Koopman's PlaceP, but differs from it in that this functional projection is

are often considered to be part of one continuum, referred to as *spacetime*. Adopting this idea, I assume that SN PPs have an extra functional projection *LocP* to host prepositions that express location in spacetime, whereas CN PPs lack this *LocP*. I locate the n-word in a QP⁷ (Penka 2007; Cirillo 2009) inside DP, as illustrated in (47).

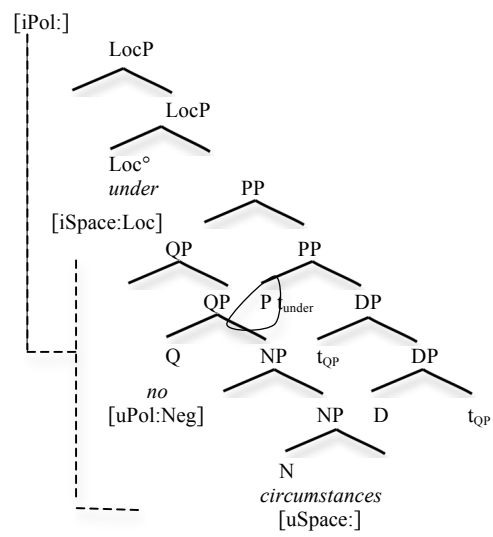
- (47) a. [_{LocP} [_{PP} [_{DP} [_{QP} *no* [_{NP}]]]]]
 b. [_{PP} [_{DP} [_{QP} *no* [_{NP}]]]]

The head of *LocP* has an interpretable *spacetime* feature (abbreviated to *space*) that is valued for location [*iSpace:loc*], implying that *Loc*^o allows the preposition to refer to a point/ location on the space-time continuum. Nouns denoting place or time have an uninterpretable and unvalued space feature on *N*^o, i.e. [*uSpace: _*] that percolates up to QP. Following Bošković (2007), I will assume that a probe, if it doesn't find a goal in its c-command domain, may move upward to find one. In this manner QP propels itself up out of DP, to SpecDP and then further to the edge of *P*^o, i.e. to SpecPP where it is close enough to [*iSpace:loc*] to be checked and valued. CN PPs denoting manner or reason do not have this extra *LocP* projection: they only have the lexical *P*^o. In addition, the noun in CN PPs does not have a [*uSpace: _*] which prevents the QP from moving upwards. I adopt the Phase Impenetrability Condition II and I consider *P*^o (Truswell 2008, Abels 2003) a phase head. (48) illustrates how the internal structure of SN PP-adjuncts allows *Pol*^o to Agree with the n-indefinite inside DP and (49) shows how the internal structure of CN PP-adjuncts prevents Agree between *Pol*^o and the n-indefinite. Under PIC II *Pol*^o can Agree with the n-constituent in SN PPs, but not with the n-constituent in CN PP-adjuncts. Attracted by the EPP on *Pol*^o (Tubau 2008) SN PP-adjuncts shift to Spec*PolP* in the middle field. Depending on the kind of verb, i.e. transitive, passive, unaccusative, NEG-shift can be followed by remnant vP-movement (cf section 5). Since there is no Agree between *Pol*^o and the n-constituent in CN PP-adjuncts, the EPP cannot attract the adjuncts, thus explaining why CN PP adjuncts occur clause finally and not in mid-position.

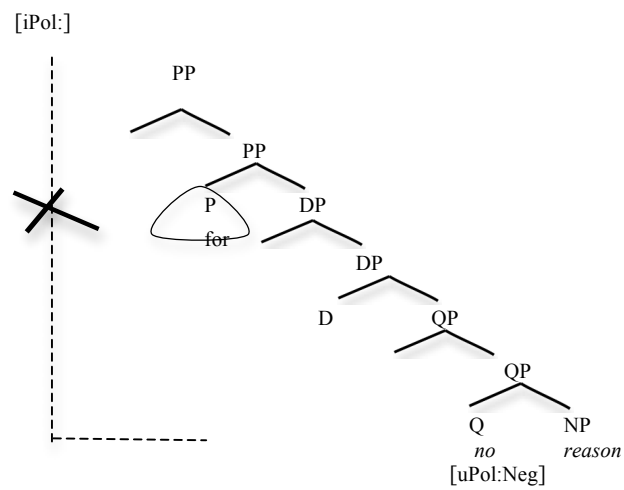
not only present with prepositions referring to place, but also with prepositions referring to time.

7. I locate the n-words in a QP and I follow Penka (2007) in treating them as existential quantifiers. However, I do not want to make any important claims about the quantificational status of n-indefinites at this point. It is far from clear how indefinites in general should be analyzed and this is not the main issue of the paper. Crucial is that I believe that n-words are semantically non-negative, but syntactically valued for negation.

(48)



(49)



7. Conclusion

In this paper I looked at the distribution of negative PP-adjuncts. Negative PP-adjuncts can be subdivided into two groups: PPs that give rise to SN and PPs that give rise to CN. SN PP adjuncts are time/place adverbials, whereas CN PP-adjuncts are manner/reason adverbials (Progovac 2000). The behaviour of SN PP-adjuncts in clause-final and mid-position had not yet been discussed in the literature and turned out to offer support for Kayne's (1998) claim that there is overt NEG-shift in English. Kayne's analysis for negative DPs was extended to SN PP-adjuncts: not only negative objects have to NEG-shift, also PP-adjuncts that give rise to SN shift to SpecPolP. The SN PP-adjunct data showed that remnant vP-movement (a crucial final step in Kayne's analysis of negative DPs) to an FP on top of PolP is dependent on object movement out of vP. Remnant vP-movement is obligatory when a negative DP-object shifts to SpecPolP (as in Kayne 1998), but optional with NEG-shift of SN PP-adjuncts in passive and unaccusative sentences when the internal argument moves to SpecIP. NEG-shift of SN PP-adjuncts with transitive verbs is not followed by remnant vP-movement, because the object does not move out of vP. This explains why SN PP-adjuncts are ungrammatical in clause final position and grammatical in mid-position. Finally, the paper explores why CN PP-adjuncts do not have to NEG-shift, whereas SN PP-adjuncts do. For SN PP-adjuncts to NEG-shift Pol^o has to Agree with the n-indefinite. When this Agree-relationship cannot be established the n-indefinite gives rise to CN. PP-internal and DP-internal differences lie at the origin of the differences between SN and CN PP-adjuncts. Only SN PP-adjuncts, which are place/time adjuncts, have an extra functional projection, LocP, and a [uSpace:_] feature on N which allow the n-constituent to escape from the P-phase, from where it can be probed for by Pol^o. CN PP-adjuncts lack this LocP and this [uSpace:_] feature on N, preventing the n-constituent to move upwards. The n-constituent is then too deeply embedded for Pol^o to Agree with it.

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