Multidominance, ellipsis, and quantifier scope

Temmerman, T.M.H.

CHAPTER 3

NEGATIVE INDEFINITES & ELLIPSIS

1 Introduction*

This chapter focuses on the English negative indefinite determiner *no,* cf. (1) and (2):

(1) Vegetarians eat no meat.

(2) [Iatridou & Sichel 2011:611, (43)]
You must do no homework tonight.
Meaning: You are required to go without homework tonight. (□ > *no*)

In (2), the surface and scope position of the negative indefinite coincide: the universal deontic modal *must* precedes and outscopes *no*. Crucially, however, the interpretation of the negative indefinite does not always correspond to its surface position. In (3), for example, the negative indefinite scopes above the existential deontic modal *may*, even though it surfaces following the modal.[1]

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* This chapter is partly based on joint work with Jeroen van Craenenbroeck, cf. van Craenenbroeck & Temmerman (2010, 2011).

[1] The example in (3) is based on Rullmann (1995:195, (1)). For the time being, I abstract away from the distinction between wide scope and split scope readings of negative indefinites. For (3) this distinction could be represented as in (i).

(i) They may fire no nurse.
a. WIDE SCOPE: There is no nurse x such that: they may fire x. (¬ > ∃ > ◇)
b. SPLIT SCOPE: They are not allowed to fire any nurse. (¬ > ◇ > ∃)

What matters at this point is merely the observation that the scope position of (part of) the negative indefinite and its surface position do not always coincide.

(3) They may fire no nurse.
Meaning: There is no nurse x such that: they are allowed to fire x. (*no* > ◇)

The analyses of negative indefinites in the literature – discussed in more detail in section 6 of this chapter – can be roughly divided into two types. The traditional view is that negative indefinites are atomic lexical elements; more precisely, they are negative generalized quantifiers. The sentence in (4)a would then be analyzed as sketched in (4)b, where the meaning of *no* is the generalized determiner NO as in (4)c, cf. Sauerland (2000a).

(4) [Sauerland 2000a:416-7, (1)-(2)]
a. Andy has no enemies.
b. NO (⟦enemies⟧) (λ*x* Andy has *x*)
c. NO (*R*)(*S*) = 1 iff ∀*x* : *R*(*x*) ⇒ *S*(*x*)

The second view takes negative indefinites to be complex, decomposable lexical items. That is, while being spelled out as a single word, *no* contains two (syntactically and semantically) distinct ingredients: (sentential) negation and an indefinite (expressing existential quantification). This is sketched for sentence (4)a in (5)a and paraphrased in (5)b.[2,3] Note that the truth conditions of (5)a and (4)b are identical.

(5) [Sauerland 2000a:417, (3)]
a. NOT (∃*x* ∈ ⟦enemies⟧: Andy has *x*)
b. 'It's not the case that Andy has an enemy.'
'Andy doesn't have any enemies.'

[2] For the treatment of the quantifier word *any* as an existential (on a par with *a/some*) instead of a universal (on a par with *every*), see Klima (1964), Kamp (1973), and Sag (1976), among others (*pace* e.g. Quine 1960).

[3] As noted by Anikó Lipták (p.c.), the decomposition analysis raises questions with respect to NPI-licensing by negative indefinites: Does the scopal position of the negation-component matter, or the spell-out position of the negative indefinite? The former case would constitute an instance of NPI-licensing in which the scope position of negation is higher than the spell-out point of the negator: It remains to be seen whether there are other contexts in which this is the case. This obviously requires a detailed investigation of the interaction between negative indefinites and NPIs. Moreover, given that answering this question also depends on one's specific implementation of NPI-licensing, I set this issue aside. NPI-licensing is briefly addressed later on in this chapter and chapter 5.

In the latter account, that means that a sentence containing a negative indefinite is equivalent to a sentence containing a combination of a negative marker and an (NPI) indefinite, i.e. that (1) is equivalent to (6).[4]

(6) Vegetarians do not eat any meat.

The analysis in this chapter falls squarely in the 'decomposition camp', as I will take the English negative indefinite *no* to consist of a negative head and an indefinite DP.

The first 'lexical decomposition' analyses, proposed by Jacobs (1980) and Rullmann (1995) for German and Dutch, posit that an amalgamation/incorporation process combines a negative marker and indefinite into a negative indefinite.[5] As noted by Zeijlstra (2011:19), however, their proposals crucially rely on phonological string adjacency between the negation and the indefinite. Such an adjacency configuration is not possible for object negative indefinites in English: the (VP-external) position occupied by negation is never string-adjacent to the (postverbal) position where the indefinite appears. This is clear in (6), where sentential negation and (the determiner of) the postverbal indefinite object are separated by the verb. Thus, at first sight, it seems that a negative indefinite determiner of an English object DP cannot be the result of amalgamation/incorporation. This morphological relation requires a higher degree of locality than seems to exist between the negation and the determiner in English.

Nevertheless, in this chapter, I propose that an English negative indefinite in object position *is* the result of a (fairly superficial) process that morphologically combines a negative head and the indefinite determiner of the object DP. I argue that negative indefinites are the result of a PF-process, which I call Fusion (following Johnson 2010a, 2011a). In particular, I refer to this morphological process as Fusion Under Adjacency (FUA). I propose that the locality/adjacency required for Fusion of the negative head and the determiner is established under multidominance, in combination with cyclic Spell-Out/linearization. The analysis takes as a starting point Johnson's (2010a, 2011a) multidominant account of WH-movement and Quantifier Raising, and was inspired by an informal sketch on negative indefinites in an e-mail sent by Kyle Johnson (referred to here as Johnson 2010b). Throughout this chapter, the similarities and differences with Johnson (2010a,b, 2011a) will become clear.

[4] The choice between a *no*-form and an *any-form* (+negative marker) seems to be determined by the degree of formality in English. Negative indefinites are more formal than analytic forms; they tend to have a high register flavor in English (cf. Tottie 1991; Anderwald 2002; Svenonius 2002; Tubau 2008).

[5] For discussion of these analyses, see section 6.1.

The main topic of this chapter is the interaction between negative indefinites and ellipsis – both verbal and clausal – in English. The empirical basis for the discussion is the two empirical generalizations in (7) and (8):

(7) THE CLAUSAL/VERBAL GENERALIZATION

While in clausal ellipsis *any* can antecede the ellipsis of *no*, in verbal ellipsis this polarity switch is disallowed.

(8) THE VPE/NI GENERALIZATION

A negative indefinite in object position cannot scope out of a VP-ellipsis site.

Importantly, in this chapter, I argue that the PF-process of ellipsis can bleed the formation of negative indefinites. I also show that the generalizations in (7) and (8) are problematic for accounts that do not take negative indefinites to involve a morphological process (but rather QR or Agree/feature checking, cf. section 6).

This chapter is organized as follows. In the next section, I present the Clausal/Verbal Generalization (subsection 2.1) and the VPE/NI generalization (subsection 2.2). The latter generalization receives additional empirical support in subsection 2.3, which presents an extensive overview of the interaction between deontic modals, negative indefinites, and verbal ellipsis. In section 3, I present a multidominant, cyclic analysis of English negative indefinites. Because of remerge and cyclicity, the locality required for FUA is obtained, and a negative head and an indefinite determiner can fuse together. In section 4, I show how the interaction between negative indefinites and ellipsis in English (cf. generalizations (7) and (8)) is handled by this account. I argue that the PF-process of ellipis bleeds FUA. In section 5, the proposal is extended: this section presents a cyclic, multidominant analysis of *not…any* (the 'non-fused version' of *no*). In section 6, I consider previous analyses of negative indefinites and point out which aspects of those accounts are problematic in light of the empirical data under discussion here. Finally, section 7 concludes.

2 Negative indefinites and ellipsis: The data

This section discusses the behavior of English negative indefinites in verbal and clausal ellipsis, that is VP-ellipsis and TP-ellipsis (sluicing, fragment answers, and stripping), respectively.[6] Section 2.1 deals with the interchangeability of *any* and *no* in verbal and clausal ellipsis: *any* can only antecede the ellipsis of *no* in clausal ellipsis. In section 2.2, it is shown that negative indefinites in object position cannot take scope out of VP-ellipsis sites. Section 2.3 presents an extensive overview of the interaction of deontic modals, negative indefinites, and verbal ellipsis. The observations in this third subsection provide additional empirical support for the generalization in section 2.2.

2.1 The Clausal/Verbal Generalization

This section investigates the interchangeability of *any* and *no* in verbal ('low') and clausal ('high') ellipsis. It is shown that while *not…any* can antecede the ellipsis of *no* in clausal ellipsis, this switch is disallowed in verbal ellipsis. Before going through the relevant data (subsection 2.1.2), some background on polarity switches is given in the next subsection.

2.1.1 BACKGROUND: POLARITY SWITCHES UNDER ELLIPSIS

It has been observed in the literature that indefinites and polarity items are interchangeable under ellipsis (cf. Sag 1976; Ladusaw 1979; Hardt 1993; Fiengo & May 1994; Giannakidou 1998; Johnson 2001; Merchant 2011). Consider the VP-ellipsis examples in (9) and (10). In the example in (9), the antecedent VP contains *any*. The elided VP in (9) can, however, not be identical to its antecedent, i.e. it cannot contain the polarity item (cf. (9)a). This would violate the licensing conditions on polarity items, as *any* is not c-commanded by an appropriate licensor. Rather, the elided VP in (9) seems equivalent to (9)b, with the indefinite *some*. The meaning of the clause containing the ellipsis can be given the representation in (9)c,

[6] As pointed out by Iatridou & Sichel (2011:610), some speakers of English do not accept negative indefinites in object position. This is confirmed by some of my informants. Non-elliptical sentences with an object negative indefinite are degraded for these speakers, so questions about the acceptability of *no* in ellipsis sites are irrelevant in their case. The judgments concerning object negative indefinites in this chapter are those of the subset of English speakers for whom *no* in object position is acceptable.

as proposed by Merchant (2011:8). The reverse situation is shown in (10). Here, the antecedent VP includes the indefinite *some*, but the polarity item *any* is required in the ellipsis site (cf. (10)a,b). The meaning of the clause containing the ellipsis is represented by (10)c. As such, (9) and (10) show that the negative polarity item *any* can antecede the ellipsis of the indefinite *some* (and vice versa).

(9) From *any* to *some* in verbal ellipsis
John didn't see **any**one, but Mary did.
a. * … but Mary did ⟨ ~~see anyone~~ ⟩.
b. … but Mary did ⟨ ~~see **some**one~~ ⟩.
c. $\exists x.see(Mary,x)$ [Merchant 2011:8, (15)]

(10) From *some* to *any* in verbal ellipsis
John saw **some**one, but Mary didn't.
a. ≠ … but Mary didn't ⟨ ~~see someone~~ ⟩.
b. … but Mary didn't ⟨ ~~see **any**one~~ ⟩.
c. $\neg\exists x.see(Mary,x)$ [Merchant 2011:8, (16)]

A similar pattern has been observed for the negative indefinite *no*. Johnson (2001) and Merchant (2011) note that the elided VPs in (11) do not have a 'negative' meaning, although their antecedents contain the negative indefinite *no*.[7] The sentences in (11) illustrate that a VP-ellipsis site can include the indefinite *a* or *some* while its antecedent contains *no*. In short, *no* can antecede the ellipsis of *a* or *some* in verbal ellipsis.

(11) From *no* to *a/some* in verbal ellipsis
a. I could find **no** solution, but Holly might ⟨ ~~find *no/**a** solution~~ ⟩.
[Johnson 2001:468-9, (103)-(104)]
b. "There will be no Paradise for me. But if there were ⟨ ~~***no/a** Paradise (for me)~~ ⟩, I wouldn't expect to see you there…" [Merchant 2011:12, (25)]
c. Although John will trust **no**body over 30, Bill will ⟨ ~~trust *nobody/ **some**body over 30~~ ⟩. [Sag 1976:312, (4.1.23)]

According to Merchant (2011), *no* cannot antecede the ellipsis of *a/some* in clausal ellipses, unlike in verbal ellipsis: "clausal ellipses cannot 'ignore' negation"

[7] For Merchant (2011:12), it is not possible "at all" for the ellipsis sites in (11) to contain the negative indefinite *no*. For Johnson (2001:469), the elided VPs "only marginally" have the negative reading.

(Merchant 2011:19). Merchant provides examples such as the fragment answer in (12):

(12) [cf. Merchant 2011:20, (44b)]
Q: When was **no**-one at the shop?
A: Between 5 and 6 o'clock ⟨~~**no**-one was at the shop/*someone was at the shop~~⟩.

It is, however, quite easy to find examples of clausal ellipsis in which *no* antecedes the ellipsis of *a/some*. Example (13), a case of sluicing, shows that a change from *no* to *a/some* in clausal ellipsis is in principle possible. I therefore take Merchant's (12) example to be degraded on other grounds (cf. also footnote 14), which are not the primary concern here.

(13) From *no* to *a/some* in clausal ellipsis:
This is a very serious problem and **no** solution has been posted yet. I wonder when/if ⟨ ~~**a** solution will be posted~~ ⟩?[8]

The examples in (9)-(13) leave us with an incomplete picture of the interchangeability of the indefinite *some/a*, the negative polarity item *any*, and the negative indefinite *no* under verbal and clausal ellipsis, as the table in (14) shows:

[8] http://www.wilderssecurity.com/showthread.php?t=284959
According to Anikó Lipták (p.c.), examples like (13) are actually degraded, because sluicing requires specific WH-remnants and *when* in (13) is non-specific (cf. also Schwabe 2003, who proposes that the antecedent of the remnant must allow for a specific interpretation, which is obviously not the case here). Some speakers do, however, allow for a remnant such as *when* in (13): it might be that "for some speakers you *can* force a specific reading on *when* here," as Anikó Lipták (p.c.) puts it. Note that the specificity requirement probably explains why examples like (i) are more plausible than the one in (13) for some speakers:

(i) a. Thank goodness, there are no pictures circulating out there. Or at least, I don't know where.
b. A: I'm staring at the side table and there are no keys here.
B: Then I don't know where.

But even given these caveats, it is still the case that the negative indefinite *can* antecede the ellipsis of its positive counterpart (and it is only this observation that I am interested in here).

(14)

antecedent	ellipsis site	verbal ellipsis	clausal ellipsis
any	*a/some*	✓	
no	*a/some*	✓	✓
a/some	*any*	✓	
a/some	*no*		
no	*any*		
any	*no*		

This section focuses on the bottom two rows of the table, i.e. on the interchangeability of *any* and *no* in verbal and clausal ellipsis. To make the picture complete, the examples (15)-(18) give illustrations to fill the blank cells in the upper four rows.

(15) From *a/some* to *no* in verbal ellipsis: *

a. The people said, "The servant has made **a** mistake." The servant replied, "The servant has made **no** mistake. It is her mistress who has made the mistake."[9]

a'. * The servant replied, "The servant has ⟨ ~~made **no** mistake~~ ⟩."[10]

(16) From *a/some* to *no* in clausal ellipsis: *

a. Will there be **a** change? "There are two reasons why there will be **no** change," Saul emphasized.[11]

a'. * "There are two reasons why ⟨ ~~there will be **no** change~~ ⟩."[12]

(17) From *a/some* to *any* in clausal ellipsis:

a. Will there be **a** change? "There are two reasons why not ⟨ ~~there will be **any** change~~ ⟩."

b. He might have drawn **some** votes from Clinton, but probably not Obama or McCain ⟨ ~~he might have drawn **any** votes from~~ ⟩.[13]

[9] http://www.netplaces.com/fairy-tales/princesses-and-princes/the-prince-and-the-fakir.htm

[10] The sentence in (i) is the grammatical counterpart of (15)a'.

(i) The servant replied, "The servant hasn't ⟨ ~~made **a(ny)** mistake~~ ⟩."

[11] http://www.cardiffstudios.com/kmzt-demise.html

[12] The sentence in (17)a is the grammatical counterpart of (16)a'. See Merchant (2011:19, fn.13) on *why (not)*.

[13] http://www.youtube.com/watch?v=dwP6PtjL2-I

(18) From *any* to *a/some* in clausal ellipsis:[14]

a. I also checked a Blockbuster today. They didn't have **any** [keyboards] and don't know when ⟨ ~~they will have (**some**) keyboards~~ ⟩.[15]

b. I still supported Arsenal even though they didn't win any silverware. But I always wonder: When ⟨ ~~will Arsenal win (**some**) silverware~~ ⟩?[16]

Summarizing, the table in (19) shows that a polarity switch from negative to positive polarity is in principle possible in both verbal and clausal ellipsis. Thus, quantificational force can be changed in both low and high ellipsis. The third and fourth row indicate, however, that an element with positive polarity can only antecede the ellipsis of negative polarity when the marker of negation is outside the ellipsis site, both in verbal and in clausal ellipsis. As pointed out to me by Anikó Lipták (p.c.), the fact that *a/some* cannot antecede the ellipsis of *no* (whether it is part of a verbal or clausal ellipsis site) follows straightforwardly from e-GIVENness (Merchant 2001). An expression E can be elided only if this E is e-GIVEN (where 'e' stands for ellipsis). Whether a constituent is e-GIVEN is determined by the presence of a salient antecedent (for a more precise definition, see Merchant 2001:26). *A/some* cannot antecede the ellipsis of *no* because negation cannot be part of the ellipsis site in case the antecedent does not contain negation (in compliance with e-GIVENness).

(19)

antecedent	ellipsis site	verbal ellipsis	clausal ellipsis
any	*a/some*	✓	✓
no	*a/some*	✓	✓
a/some	*any*	✓	✓
a/some	*no*	*	*
no	*any*		
any	*no*		

[14] Note that examples can be found where *any* to *a/some* interchangeability in clausal ellipsis fails, such as (i):

(i) I didn't get **any** result. I wonder why. [http://health.groups.yahoo.com/group/AlternativeAnswers/message/41302]
= I wonder why ⟨ ~~I didn't get **any** result~~ ⟩.
≠ I wonder why ⟨ ~~I got **a/some** result~~ ⟩.

The problem with (i) is that the interpretation with *a/some* in the ellipsis site does not make sense. Something similar might be going on in Merchant's (2011) example (12) discussed above.

[15] http://www.gamefaqs.com/boards/971478-/56986353

[16] http://gunnerockya.blogspot.com/2008_05_01_archive.html

Given this background, the next subsection makes the picture complete: it is investigated whether or not the negative indefinite *no* can antecede the ellipsis of the negative polarity item *any* and vice versa. It is shown that, while *no* can antecede the ellipsis of *any* in both verbal and clausal ellipsis, *any* can only antecede the ellipsis of *no* in clausal ellipsis.

2.1.2 *ANY/NO* INTERCHANGEABILITY UNDER ELLIPSIS

2.1.2.1 No *can antecede the ellipsis of* any *in verbal and clausal ellipsis*

As the examples in (20) and (21) show, clausal and verbal ellipsis sites can include the negative polarity item *any* when the antecedent contains the negative indefinite *no*.

(20) From *no* to *any* in verbal ellipsis

a. The press pulled **no** punches. Leaf didn't ⟨ ~~pull **any** punches~~ ⟩ either.[17]

b. Many people there have no idea who he was but apparently Obama didn't ⟨ ~~have **any** idea who he was~~ ⟩ either.[18]

c. "I have no idea how a hunter would have gotten his hands on it. It makes **no** sense." – "No, it doesn't ⟨ ~~make **any** sense~~ ⟩."[19]

d. The problem of morality for atheism is this: if atheism is true, then nature is all there is; nature has **no** values and as such can provide no grounding for good and evil. – Sure, nature doesn't ⟨ ~~have **any** values~~ ⟩, but human beings do.[20]

e. There was a pause again. Leoni's posture, lying back in the chair, was strained. He asked Starmer: "My authentication, what did you really think about it? You were the only one who made **no** comment." – "Elvira didn't ⟨ ~~make **any** comment~~ ⟩." – "Elvira." He shrugged. "The only one." He came forward in his chair. "Tell me what you thought. Honestly."[21]

f. Who here has **no** identification? – I don't ⟨ ~~have **any** identification~~ ⟩.[22]

[17] http://bleacherreport.com/articles/459031-ryan-leaf-quietly-returns-home-to-build-a-life

[18] http://www.newstatesman.com/blogs/the-staggers/2011/05/special-relationship-visit

[19] http://bleeding-muse.livejournal.com/92002.html

[20] http://www.atheismresource.com/2010/stalin-killed-for-political-reasons

[21] From *A Journey South*, a novelette by John Christopher (1991). Available at http://www.infinityplus.co.uk /stories/ journeysouth.htm

[22] http://www.godlikeproductions.com/forum1/message1124124/pg1

(21) From *no* to *any* in clausal ellipsis

a. If there are **no** bodies, people will wonder why not ⟨ ~~there are **any** bodies~~ ⟩.[23]

b. This is why the target's hardness has **no** importance, and the impactor's hardness neither ⟨ ~~has **any** importance~~ ⟩.[24]

c. There is **no**-one at strawweight, and probably not ⟨ ~~there is **any**one~~ ⟩ at junior flyweight either, who could live with him.[25]

d. This reversal-of-effect had **no** correspondence in the EEG changes and also not in self-reported hunger and voraciousness ⟨ ~~this reversal-of-effect had **any** correspondence~~ ⟩.[26]

2.1.2.2 Clausal ellipsis: any *can antecede the ellipsis of* no

Consider the example in (22). The antecedent clause of the fragment answer in (22)a includes *any*. The non-elliptical version of (22)b is an appropriate anwer to the question in (22). Based on this example, one might be inclined to conclude that the negative polarity item *any* can antecede the negative indefinite *no* in clausal ellipsis. For this example, it is however, unclear, whether the clausal ellipsis site indeed contains *no*, or whether it actually includes *any*, as the non-elliptical version of (22)c also constitutes an appropriate answer to the question in (22).

(22) Q: Who didn't eat **any** cookies?

A: a. Mary.

b. Mary ⟨ ~~ate **no** cookies~~ ⟩.

c. Mary ⟨ ~~didn't eat **any** cookies~~ ⟩.

In order to establish that *any* can indeed antecede *no* in clausal ellipses, it needs to be proven that the ellipsis site contains *no*. Hence, we need to find a grammatical instance of clausal ellipsis where *any* is excluded inside the clausal ellipsis site. Subject NPIs provide a means of testing if the ellipsis site contains *any* or *no*. Consider the example in (23). (23)a is the fragment answer to the question in (23); (23)b is the same fragment answer, followed by an embedded sluice.

[23] http://morleyevans.blogspot.com/2011/03/where-did-people-go.html
[24] http://lofi.forum.physorg.com/Nuclear-Power-Plants-As-Dirty-Bombs_27035-100.html
[25] http://www.goldengloves.co.za/boxing-news/berman-takes-aim-at-new-york/
[26] http://www.sciencedirect.com/science/article/pii/0031938479903743

(23) [context: the TV show *American Idol*]
Q: Which song didn't anyone like?
A: a. Katie's song.
b. Katie's song. Guess why!

As the sentences in (24) show, the non-elliptical variants of (23)a and (23)b with the subject *anyone* are ungrammatical: they are ill-formed due to violations of NPI-licensing.

(24) a. * Katie's song anyone didn't like.
b. * Guess why anyone didn't like Katie's song!

Negative polarity items must be c-commanded by negation at S-structure/Spell-Out in English (Giannakidou 1998; den Dikken et al. 2000). In (25)a, the subject NPI *a living soul* is licensed by the c-commanding *n't*. The example in (25)b, on the other hand, where the NPI is not c-commanded by *not*, is ungrammatical. (25)b also shows that this requirement has to be met at S-structure/Spell-Out, i.e. reconstruction of the subject into its vP-internal base position at LF cannot feed NPI-licensing.[27]

(25) a. Which college sports doesn't a living soul here in Seattle care about?
b. * Which college sports does a living soul here in Seattle not care about?

a'. $[_{CP}$ Which sports$_i$ $[_{C'}$ doesn't$_j$ $[_{TP}$ a living soul$_k$ $[_{TP'}$ t_j $[_{vP}$ t_k care about t_i]]]]]?
b'. * $[_{CP}$ Which sports$_i$ $[_{C'}$ does$_j$ $[_{TP}$ a living soul$_k$ $[_{T'}$ t_j $[_{vP}$ not t_k care about t_i]]]]]?

In the ill-formed (24)a and (24)b, the subject NPI *anyone* is not c-commanded by *n't* at S-structure/Spell-Out: these examples are ungrammatical because they constititute violations of NPI-licensing.[28] The negative polarity item *anyone* therefore seems excluded as the subject of the (grammatical) clausal ellipses in (23). It thus

[27] The bracketed structures in this section are simplified representations; see sections 3 and 4 of this chapter for a more detailed discussion of the clausal functional sequence. This does not change the argumentation, though. Note also that I make use of the traditional trace notation here and in the following representations for ease of exposition.

[28] Note that the (ungrammatical) sentences in (i) – with the negative auxiliary (+ negation *n't*) raising to C to license the subject NPI in Spec,TP – cannot be the non-elliptical counterparts of (24)a and (24)b either. Moreover, note that embedded *why*-questions do not license *anyone* either (cf. (ii)).

(i) a. * Katie's song didn't anyone like.
b. * Guess why didn't anyone like Katie's song.

(ii) * Guess why anyone liked Katie's song.

seems that (23) provides evidence that *any* can antecede the ellipsis of *no* in clausal ellipses like fragment answers and sluicing. The clauses containing the ellipsis in (23)a and (23)b would then have the structures in (26)a and (26)b, respectively:

(26) a. $[_{CP}$ Katie's song$_i$ $[_{C'}$ C $\langle [_{TP}$ ~~no one$_k$~~ $[_{T'}$ ~~T~~ $[_{vP}$ ~~t_k liked t_i~~]]] $\rangle$]].
b. Guess $[_{CP}$ why $[_{C'}$ C $\langle [_{TP}$ ~~no one$_k$~~ $[_{T'}$ ~~T~~ $[_{vP}$ ~~t_k liked Katie's song~~]]] $\rangle$]].

As it stands, however, the argument is not yet airtight. Merchant (2001) has argued that clausal ellipsis suspends the requirement that the subject raise to Spec,TP (the *Extended Projection Principle*, EPP), based on the lack of Subject Condition effects under sluicing. In a nutshell, movement out of an elided subject is licit because the extraction proceeds from the base position of the subject in Spec,vP, not from its derived position in Spec,TP. Van Craenenbroeck & den Dikken (2006) present two additional arguments in favor of the hypothesis that EPP-driven subject raising to Spec,TP is bled in clausal ellipsis. One argument is related to pseudoclefts, the other to the absence of subject clitics and complementizer agreement on sluiced WH-phrases (cf. also den Dikken et al. 2000; van Craenenbroeck 2010). This means that the examples in (23) could also be represented as in (27):

(27) a. $[_{CP}$ Katie's song$_i$ $[_{C'}$ C $\langle [_{TP}$ ___ $[_{T'}$ ~~didn't~~ $[_{vP}$ ~~anyone like t_i~~]]] $\rangle$]].
b. Guess $[_{CP}$ why $[_{C'}$ C $\langle [_{TP}$ ___ $[_{T'}$ ~~didn't~~ $[_{vP}$ ~~anyone like Katie's song~~]]] $\rangle$]].

In these structures, the subject NPI *anyone* would be licensed in its vP-internal base position, as it is c-commanded by the negative auxiliary. Therefore, (23) is not the example that establishes that *any* can antecede the ellipsis of *no*, as there is still the possibility that *any* is licensed in Spec,vP. What we need is an example with an ellipsis site in which an NPI-subject is illicit both in its derived and in its base generated position.

In order to exclude a subject NPI in the clausal ellipsis site, we can resort to the *Immediate Scope Constraint* (cf. Linebarger 1980, 1987; Guerzoni 2006; Lechner 2007), which says that the licensing relation of NPIs and negation is subject to a locality condition. An NPI can only be licensed if it is in the 'immediate' scope of negation: No other 'logical' elements, corresponding roughly to propositional operators (e.g. quantificational NPs and adverbs), can intervene between an NPI and its licensing negation.

(28) *Immediate Scope Constraint (ISC)*

"An NPI is acceptable in a sentence S if in the LF of S […] the NPI is in the Immediate Scope (IS) of [NOT]. [i.e.] […] only if (1) it occurs in […] the scope of NOT, and (2) […] there are no 'logical' elements intervening between it and NOT." [Linebarger 1987:338, cited in Guerzoni 2006:360]

(29) [Lechner 2007:23, (61), referring to Linebarger 1987]

a. He didn't like anything. (¬ > NPI)
b. * He didn't always like anything. (* ¬ > ∀ > NPI)

(30) [Lechner 2007:23, (62), referring to Linebarger 1980]

a. I didn't want her to eat any cheese. (¬ > NPI)
b. * I didn't want every boy to eat any cheese. (* ¬ > ∀ > NPI)

The universal quantifiers *always* and *every boy* intervene between the negation and the NPI in (29)b and (30)b, triggering a violation of the Immediate Scope Constraint. Therefore, in these cases, the NPI is not licensed.

By including a 'logical' element such as *always* in the antecedent of the clausal ellipsis site, the Immediate Scope Constraint can ensure that a subject NPI is illicit in the ellipsis site, regardless of whether it occupies Spec,TP or Spec,vP. Consider the example in (31):

(31) [context: There is a contest to choose which song will represent the UK in the Eurovision Song Contest. There are several qualifying rounds, a semi final, and a final, and several judges choose their favorite song. When there is a tie in the final, the consistency of the votes given to the songs is taken into account. In particular, if a judge has consistently voted for a certain song in every round, this is considered a bonus. Now, we are in the final and there is a tie. We first want to eliminate the weakest song, i.e. we want to know if there is a song that no one consistently voted for. So we ask…]

Q: Which song didn't any judge always vote for?
A: Katie's song.

(31)A is a felicitous answer to the question in (31). It needs to be established then which (licit) structure is underlying this fragment answer. In determining what the syntactic structure underlying the ellipsis site looks like in (31)A, there are (at least) four options:

(32) **option #1**: *any judge* in Spec,TP

[$_{CP}$ Katie's song$_i$ [$_{C'}$ C ⟨ [$_{TP}$ ~~any judge$_k$~~ [$_{T'}$ ~~didn't~~ [$_{vP}$ ~~always~~ [$_{vP}$ ~~t_k vote for t_i~~]]]] ⟩]].

(33) **option #2**: *any judge* in Spec,*v*P

[$_{CP}$ Katie's song$_i$ [$_{C'}$ C ⟨ [$_{TP}$ ___ [$_{T'}$ ~~didn't~~ [$_{vP}$ ~~always~~ [$_{vP}$ ~~any judge vote for t_i~~]]]] ⟩]].

(34) **option #3**: *no judge* in Spec,TP

[$_{CP}$ Katie's song$_i$ [$_{C'}$ C ⟨ [$_{TP'}$ ~~no judge$_k$~~ [$_{T'}$ ~~T~~[$_{vP}$ ~~always~~ [$_{vP}$ ~~t_k voted for t_i~~]]]] ⟩]].

(35) **option #4**: *no judge* in Spec,*v*P

[$_{CP}$ Katie's song$_i$ [$_{C'}$ C ⟨ [$_{TP}$ ___ [$_{T'}$ ~~T~~ [$_{vP}$ ~~always~~ [$_{vP}$ ~~no judge voted for t_i~~]]]] ⟩]].

Option #1 in (32) is ruled out due to lack of NPI-licensing (the subject NPI *anyone* is not c-commanded by negation at S-structure/Spell-Out). Option #2 in (33) can be rejected because it violates the Immediate Scope Constraint (* ¬ > ∀ > NPI). Hence, both options containing *any* are excluded. The structure in option #3 in (34), which contains *no*, does not violate any principles and leads to a converging derivation. The same holds for option #4 in (35), if den Dikken et al. (2000), Merchant (2001), van Craenenbroeck & den Dikken (2006), and van Craenenbroeck (2010) are right that the EPP can indeed be suspended under clausal ellipsis.[29] For the present purposes, it does not matter whether the ellipsis site in (31)A has the structure in (34) or (35). What is relevant here is that the clausal ellipsis site cannot contain the NPI-subject *any judge*; only the subject *no judge* is allowed.[30] As such, the ISC-example in (31)A demonstrates quite clearly that in clausal ellipsis, *any* can antecede the ellipsis of *no*.

[29] See Merchant (2001) on covert phrasal A-movement leading to the correct scope inside sluicing sites. Covert A-movement of *no judge* to Spec,TP would explain the (only available) reading ¬ > NPI > ∀ in (35).

[30] Two other options include (i) short Quantifier Raising of the NPI *any judge* to a position in between T and *always*, and (ii) ellipsis 'repairing' the ISC violation or the NPI-licensing violation. The former would falsely predict (29)b and (30)b to be grammatical (with the NPI *anything* undergoing short QR to a position in between *didn't* and *always*). The latter is unlikely in light of the fact that both the ISC and the condition on NPI-licensing have a prominent LF-component (for NPIs, cf. Giannakidou 1998; Moscati 2006); it is well known that ellipsis cannot repair LF-violations (cf. e.g. Sauerland 1996).

2.1.2.3 Verbal ellipsis: any *cannot antecede the ellipsis of* no

While it was shown in the previous section that *any* can antecede the ellipsis of *no* in clausal ellipsis, this is not the case in verbal ellipsis. For example, in simple question-answer pairs with VP-ellipsis in the answer, *any* cannot antecede the ellipsis of *no*. This is shown in (36):

(36) [context: the Cannes Film Festival]

Q: Who didn't like **any** movie?

A: a. Quentin Tarantino didn't like **any** movie.
b. Quentin Tarantino liked **no** movie.
c. Quentin Tarantino didn't ⟨ ~~like **any** movie~~ ⟩.
d. * Quentin Tarantino did ⟨ ~~like **no** movie~~ ⟩.

Although both (36)a and (36)b are licit answers to the question, only the elliptical answer containing *any* in (36)c is allowed. The answer with *no* in the VP-ellipsis site in (36)d is ungrammatical.

One could argue that the ill-formedness of (36)d is due to the presence of a stressed auxiliary *did* (the idea being that a stressed auxiliary is an indication of positive polarity). This is, however, not the case, as the effect persists in infinitival VP-ellipsis with a focused subject, as illustrated in (37):

(37) I know PETER didn't offer **any** help …

a. … and I also don't expect JOHN to offer **any** help.
b. … and I also expect JOHN to offer **no** help.
c. … and I also don't expect JOHN to ⟨ ~~offer **any** help~~ ⟩.
d. * … and I also expect JOHN to ⟨ ~~offer **no** help~~ ⟩.

As such, the data in (36) and (37) show that in verbal ellipsis *any* cannot antecede the ellipsis of *no*.

At this point, we can complete the picture of the interchangeability of the indefinite *some/a*, the negative polarity item *any*, and the negative indefinite *no*:

(38)

antecedent	ellipsis site	verbal ellipsis	clausal ellipsis
any	*a/some*	✓	✓
no	*a/some*	✓	✓
a/some	*any*	✓	✓
a/some	*no*	*	*
no	*any*	✓	✓
any	*no*	*	✓

Based on the bottom row in (38), the Clausal/Verbal Generalization in (39) can be formulated:

(39) THE CLAUSAL/VERBAL GENERALIZATION
While in clausal ellipsis *any* can antecede the ellipsis of *no*,
in verbal ellipsis this switch is disallowed.

2.2 The VPE/NI Generalization

Consider the sentences in (40) and (41), cases of verbal ellipsis:

(40) Q: Who liked **no** movie?
A: ? Quentin Tarantino did ⟨ l~~ike **no** movie~~ ⟩.[31]

(41) I know PETER offered **no** help, and I also expect JOHN to ⟨ ~~offer **no** help~~ ⟩.

The sentences in (40) and (41) show that the negative indefinite *no* can be part of the antecedent of a verbal ellipsis site that contains *no* as well (in short: that *no* can antecede the ellipsis of *no*).

If, however, the negative indefinite outscopes an element outside of the ellipsis site, *no* cannot antecede the ellipsis of *no*. Or, in other words, the ellipsis site cannot include a high-scoping negative indefinite *no*.

A first case in point concerns 'Neg>Mod modals', i.e. modals that typically scope below sentential negation (cf. Cormack & Smith 2002; Butler 2003; Iatridou & Zijlstra 2010; Iatridou & Sichel 2011). As noted by Iatridou & Zeijlstra (2010) and

[31] The mild markedness of this example (cf. the ? judgment) could be due to the fact that some informants prefer a fragment answer to VP-ellipsis as the elliptical answer to the question (see also footnote 41). See footnote 100 for an alternative hypothesis.

Iatridou & Sichel (2011), the existential deontic modal *can* is such a 'Neg>Mod modal'. That is, for most speakers of English, the sentences in (42) only have a reading in which the negation outscopes *can*. Some speakers do, however, allow the modal *can* to scope over the negation (see Cormack & Smith 2002). I indicate this speaker variation with the percentage sign %.

(42) a. [cf. Cormack & Smith 2002:13, (29a)]

John can not eat vegetables.
= It is not the case that John is permitted to eat vegetables. (¬ > ◇)
= It is permitted that John not eat vegetables. (% ◇> ¬)

b. [cf. Iatridou & Sichel 2011:598,(4b)]

He cannot go to this party.
= It is not the case that he is permitted to go to this party. (¬ > ◇)
= It is permitted that he does not go to this party. (% ◇> ¬)

Iatridou & Sichel (2011) argue that the scope of a negative indefinite with respect to a modal correlates with the general interpretive position of sentential negation. That is, according to Iatridou & Sichel, the relative scope of a modal and a negative indefinite DP matches the relative scope of a modal and sentential negation.[32] This generalization is confirmed by my informants for the interaction of the deontic modal *can* and an object negative indefinite. Most speakers can only interpret the object negative indefinite DP in (43) as scoping over deontic *can*; a same smaller set of speakers also allows the reverse scope relation. [33]

(43) John can do no homework tonight.
= It is not the case that John is permitted to do homework tonight.
(¬ > ◇)
= It is permitted that John does not do homework tonight. (% ◇ > ¬)

Now consider the case of verbal ellipsis in (44), in which both the antecedent and the VP-ellipsis site licensed by *can* contain a negative indefinite *no*. This example is ungrammatical with the reading where negation outscopes the modal (¬ > ◇) for all speakers. It is only grammatical for those speakers who allow the negation to scope below the modal, and only with that reading (i.e. ◇ > ¬).

[32] This generalization sets aside some complications. See section 2.3.

[33] Like Iatridou & Sichel (2011), I abstract away from split scope readings (¬ > modal > ∃) vs. wide scope readings (¬ > ∃ > modal) of negative indefinites here. See section 2.3 for a more extensive discussion.

(44) Q: Who can offer **no** help?
A: % Quentin Tarantino can ⟨ ~~offer **no** help~~ ⟩. (* ¬ > ◇, % ◇ > ¬)

Thus, a negative indefinite inside a VP-ellipsis site cannot scope out of the ellipsis site to scope over the licensing modal *can*.

A second representative pattern can be observed when considering negative indefinite DPs as complements of a preposition. Consider the classic example in (45). The sentence in (45) admits two different readings (cf. Jackendoff 1972, Rochemont 1978):

(45) Mary looks good with no clothes.
= Mary doesn't look good with any clothes. (*the unfortunate dresser reading*)
= Mary looks good naked. (*the nudity reading*)

Haegeman (1995) and Svenonius (2002) propose that these two readings correlate with two different scope positions for the negative indefinite *no*. In the 'unfortunate dresser' reading, the negative indefinite takes high scope and the negation bears on the entire clause. Under the 'nudity' reading, the negation ranges over a smaller domain with a narrower scope (i.e. the negative indefinite takes low scope).[34]

In (46), the PP *with no clothes* is part of an antecedent for VP-ellipsis, and it is contained within the VP-ellipsis site:

(46) You say Mary looks good with **no** clothes, …
… but I say Julie does ⟨ ~~look good with **no** clothes~~ ⟩.
(**unfortunate dresser*, ok*nudity*)

This example shows that under VP-ellipsis, only the 'nudity' reading survives. Hence, when the negative indefinite is part of a VP-ellipsis site, it can only take low scope (corresponding to the 'nudity' reading). High scope, corresponding to the 'unfortunate dresser' reading, is excluded for a negative indefinite in a VP-ellipsis site. This again leads to the conclusion that the negative indefinite *no* cannot take scope outside of a VP-ellipsis site.

Based on these examples, the following generalization can be established:[35]

[34] Svenonius (2002:14) proposes that the nudity reading involves "a kind of clause-like negation occurring at the level of the PP".

[35] To be precise, *with no clothes* in (45) and (46) is actually not an object. See section 4.1.2 for a more detailed analysis of these examples.

(47) THE VPE/NI GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

The following section offers an extensive empirical overview of the interaction of deontic modals, negative indefinites, and verbal ellipsis. These data provide additional support for the VPE/NI Generalization. It is shown that in all cases of verbal ellipsis licensed by a deontic modal, an object negative indefinite can only take narrow scope with respect to that modal, irrespective of the scopal possibilities in the non-elliptical counterpart.

2.3 Support for the VPE/NI Generalization: Deontic modals

2.3.1 INTRODUCTION: DEONTICS AND NEGATION

The modal verbs in English are *can/could, may/might, shall/should, will/would*, *have to, ought to, need (to), dare (to),* and *want to*. Modal verbs can get three different readings: deontic, epistemic, and dynamic.[36] Most modal verbs can express both deontic and epistemic modality. Dynamic modality can only be expressed by a limited number of modal verbs (for instance, *dare (to)* and *want to*). This section discusses the interaction of deontic modals, negative indefinites, and verbal ellipsis.[37] Deontic modality, discussed in this section, involves the giving of directives (by an external source, mostly the speaker, to another participant, mostly the subject), in terms of notions such as permission and obligation (cf. Platzack 1979; Barbiers 1995; McArthur 1998; Cinque 1999).

When a sentence containing a modal is negated, the negation may scope above or below the modal. For instance, in *He may not be there*, the modal can be negated (meaning, for instance, that he is not allowed to be there), or the sentence can mean that it is possible that he will not be there (in which case the modal outscopes the negation). As noted by Iatridou & Sichel (2011:597), in English, "the relative scope of deontic modals and sentential negation varies with the choice of modal" (cf. also Cormack & Smith 2002; Butler 2003; Iatridou & Zeijlstra 2010). Modals that express deontic possibility (i.e. permission) are the existentials *can* and *may*.

[36] The literature on the different flavors of modality is extensive. See, amongst others, Wright (1951), Lyons (1977), Coates (1983), Palmer (1986, 1990), Lew (1997), Cinque (1999), Papafragou (2002), Wurmbrand (2003), Gergel (2009).

[37] For the interaction of epistemic and dynamic modals, negative indefinites, and verbal ellipsis, see chapter 4.

According to Iatridou & Zeijlstra (2010) and Iatridou & Sichel (2011), these only appear under the scope of sentential negation. Modals that express deontic necessity (i.e. obligation) are the universals *must, ought to, should, have to, need to,* and *need.* Iatridou & Zeijlstra (2010) and Iatridou & Sichel (2011) argue that *must, ought to,* and *should* scope above sentential negation, while *have to, need to,* and *need* scope under negation. Modals scoping below sentential negation are called 'Neg>Mod modals', while modals scoping above negation are called 'Mod>Neg modals'.[38]

(48) [cf. Iatridou & Zeijlstra 2010:315-316, (1)-(2)-(3)]

<u>Existential deontic modals (Neg>Mod)</u>		
a.	John cannot leave.	¬ > ◇
b.	John may not leave.	¬ > ◇
<u>Universal deontic modals (Neg>Mod)</u>		
c.	John doesn't have to leave.	¬ > □
d.	John doesn't need to leave.	¬ > □
e.	John needn't leave.	¬ > □
<u>Universal deontic modals (Mod>Neg)</u>		
f.	John mustn't leave.	□ > ¬
g.	John oughn't to leave.	□ > ¬
h.	John shouldn't leave.	□ > ¬

It is well known from the literature (cf. Bech 1955/57; Jacobs 1980; Rullmann 1995; Penka 2011; Zeijlstra 2011) that a simple transitive clause with a modal and an object negative indefinite may give rise to three readings. First, the entire negative indefinite may be interpreted below the modal (the *de re* reading). Second, the entire negative indefinite can be interpreted above the modal (the *de dicto* reading). Third, the negative portion of the negative indefinite can scope above the modal while the indefinite part scopes below it (the split reading). According to Iatridou & Sichel (2011), a negative indefinite contains two separate semantic and syntactic ingredients, sentential negation and an indefinite/existential component. These two syntactically independent constituents may scope independently of each other: one may scope above, the other below, a third scopal element (e.g. a modal). Setting some complications aside, Iatridou & Sichel first observe that the scope of (the

[38] As the examples in (48) show, and as also noted by Iatridou & Sichel (2011:598), it is not linear order that determines the relative scope of deontic modals and sentential negation. Among the Neg>Mod modals, *can, may,* and *need* linearly precede negation, while *have to* and *need to* linearly follow negation. Similarly, Cinque (1999:122) mentions that "[w]hat is crucial for determining the scope of sentence negation is not its "surface" position (the one at "Spell-Out")."

negative component of) an object negative indefinite with respect to a modal correlates with the relative scope of sentential negation with respect to this modal. That is, Mod>Neg deontic modals can only scope above (the negative component of) a negative indefinite in object position, as shown in (49):

(49) Mod>Neg modal [Iatridou & Sichel 2011:611, (43)]
You must do no homework tonight.
= You must skip homework tonight. (□ > ¬)
≠ It is not required that you do homework tonight. (* ¬ > □)

The case of Neg>Mod deontic modals turns out to be more complicated, though, as pointed out by den Dikken et al. (1997) and Iatridou & Sichel (2011). Neg>Mod deontic modals (except for the NPI modal *need*) are ambiguous with respect to a negative indefinite in object position: they not only scope under (the negation inside) the object negative indefinite, they can also scope above it. In fact, "for several English speakers, [the latter] is the only reading that object NegDPs receive, including Neg>Mod modals" (Iatridou & Sichel 2011:615-616). Thus, while some speakers allow ambiguous readings for an object negative indefinite in a sentence with a Neg>Mod modal, others only allow for the Mod>Neg reading.[39,40] This is shown in (50). Speaker variation is indicated with the percentage sign %.

(50) Neg>Mod modal [cf. Iatridou & Sichel 2011:611, (44)]
You have to / need to do no homework tonight.
= You must skip homework tonight. (□ > ¬)
= It is not required that you do homework tonight. (% ¬ > □)

A summarizing picture is given in (51):

[39] Iatridou & Sichel (2011) do not distinguish between split and *de dicto* readings.

[40] Note that this is not the case for my informants when it comes to the interaction between the deontic Neg>Mod modal *can* and an object negative indefinite, as discussed in section 2.2. When deontic *can* co-occurs with an object negative indefinite, my informants either allow both a Neg>Mod reading and a Mod>Neg reading or only a Neg>Mod reading. This actually confirms Iatridou & Sichel's (2011) original observation that that the scope of (the negative component of) a negative indefinite with respect to a modal correlates with the relative scope of sentential negation with respect to this modal (which is also either Neg>Mod or both Neg>Mod and Mod>Neg in the case of *can*). See also section 2.3.2 for judgments that contradict Iatridou & Sichel's (2011) claim regarding the relative scope of Neg>Mod modals and object negative indefinites.

(51) [cf. Iatridou & Sichel 2011:613, Table 4]

type of modal with respect to sentential negation	interpretive possibilities of (negative component of) NegDP
Mod>Neg	Mod>Object$_{Neg}$
Neg>Mod	% Object$_{Neg}$>Mod
	Mod>Object$_{Neg}$

2.3.2 DEONTIC MODALS AND NEGATIVE INDEFINITES IN VERBAL ELLIPSIS

In this section, I show how verbal ellipsis licensed by a deontic modal influences the scopal possibilities of sentences containing an object negative indefinite. While in non-elliptical clauses, different scopal relations between modals and object negative indefinites are available (see above), only narrow scope of the negative indefinite (the *de re* reading) is attested in their elliptical counterparts. These observations are compatible with the VPI/NI Generalization of section 2.2, repeated here:

(47) THE VPE/NI GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

Below every (non-elliptical and elliptical) sentence, the three possible interpretations are given. 'Reading 1' corresponds to the *de re* interpretation (Mod > ¬ > ∃), 'reading 2' to the split interpretation (¬ > Mod > ∃), and 'reading 3' to the *de dicto* interpretation (¬ > ∃ > Mod).[41,42]

[41] Some of my informants do not allow for verbal ellipsis at all in the cases under consideration. Others only accept the elliptical sentence with a positive or contradictory interpretation, as for instance in (i).

(i) Who has to do no homework tonight? John has to.
Reading: John certainly *does* have to do homework tonight.

Moreover, as pointed out by Gary Thoms (p.c.), in the case of question-answer pairs, it could be that a preference for a fragment answer has a non-trivial influence on the acceptability of VP-ellipsis. This is reminiscent of proposals by Takahashi & Fox (2005) and Merchant (2008a) that ellipsis is subject to a constraint 'MaxElide', which prefers a larger elided constituent (e.g. TP) over a smaller one (e.g. VP), in particular environments. See also Hartman (2011).

Dealing with these judgments seems to concern ellipsis licensing. As I am not primarily concerned with the licensing of verbal ellipsis in English, but rather with different scope readings (of object negative indefinites with respect to modals) in *grammatical* verbal ellipsis, I disregard these judgments here.

For the universal deontic modal *have to* (a Neg>Mod modal) and its scope relative to an object negative indefinite in a non-elliptical sentence, the judgments of my informants show a considerable amount of variation. While some only allow narrow scope for the negative indefinite (i.e. only reading 1), others allow only readings 2 and 3, and still others allow all three readings.[43]

(52) John has to do no homework tonight.
Reading 1: John must skip homework tonight.
Reading 2: It is not required that John does homework tonight.
Reading 3: There is no homework that John is required to do.

Interestingly, though, in contrast to the variation found in non-elliptical contexts, VP-ellipsis licensed by *have to* only allows the *de re* reading (confirming the VPE/NI Generalization in (47)).[44] The percentage sign (%) preceding the sentence in (53) and the other elliptical examples in this section is meant to indicate that not all of my

[42] The universal modal *will* has a deontic use, expressing deontic necessity (i.e. obligation). The interaction of deontic *will* and negation is not discussed by Iatridou & Zeijlstra (2010) and Iatridou & Sichel (2011). A sentence with deontic *will* and a negative indefinite object is judged as only having the *de re* reading ($\Box > \neg > \exists$) by my informants. That is, for (i), only reading 1 is available:

(i) You will bring her no flowers.

Reading 1:	You must go without bringing her flowers.	($\Box > \neg > \exists$)	YES
Reading 2:	It is not required that you bring her flowers.	($\neg > \Box > \exists$)	NO
Reading 3:	There are no (specific flowers) that you are required to bring her.	($\neg > \exists > \Box$)	NO

The elliptical counterpart of (i) I tested was generally judged ungrammatical by my informants. As such, the elliptical case of deontic *will* does not give us any information about the scope possibilities of negative indefinites in verbal ellipsis. Therefore, I do not discuss deontic *will* any further here.

[43] Crucially, the paraphrases of reading 3 throughout should be read as 'there is/are no specific X that…'. If the paraphrases of reading 3 are interpreted as 'there is/are no X whatsoever that…', then this reading is indistinguishable from reading 2. Thanks to Jeroen van Craenenbroeck (p.c.) for pointing out this possibly confounding factor to me. In case of doubt, especially for the elliptical cases, informants were recontacted to clarify whether or not the intended (specific) interpretation was available.

[44] It should be noted that Parallelism (cf. (i)) is respected in the elliptical sentences under scrutiny here.

(i) *Parallelism (a consequence of)*
In an ellipsis construction, the scopal relationship among the elements in the antecedent must be identical to the scopal relationship among the parallel elements in the ellipsis site. [Fox 2000:32]

In principle, all scopal possibilities (of the modal and negation) allowed in the antecedent are allowed in the elliptical clause as well, as long as the sentence obeys Parallelism. The fact that the sentences discussed in this section only allow narrow scope of the negative indefinite cannot be due to Parallelism, as the non-elliptical sentence often allows for more scopal possibilities. See section 6.3 of this chapter and section 2 of chapter 5 for more on Parallelism.

informants accept the elliptical sentence with a negative reading (see also footnote 41).[45]

(53) % Who has to do no homework tonight? John has to.

Reading 1:	John must skip homework tonight.	YES
Reading 2:	It is not required that John does homework tonight.	NO
Reading 3:	There is no homework that John is required to do.	NO

Regarding the relative scope of the universal deontic modal *need to* (a Neg>Mod modal) and an object negative indefinite in a non-elliptical clause (cf. (54)), my informants give the exact same judgments as for the universal deontic *have to* (cf. (52)). When an informant allows for a negative reading of the elliptical sentence, he/she again only permits the *de re* interpretation (again supporting the VPE/NI Generalization).[46]

(54) a. The girls need to do no homework tonight.
b. % Mom said that the boys need to do no homework tonight,
but dad said the girls need to.

For the existential deontic modal *may* (a Neg>Mod modal) and its scope relative to a negative indefinite in object position, my informants' judgments again show quite some variation. Whereas some only allow the *de re* interpretation (i.e. only reading 1), others allow only readings 2 and 3, only readings 1 and 2, or all three readings.

(55) The teacher may give no clues.

Reading 1:	It is permitted that the teacher gives no clues.
Reading 2:	It is not permitted that the teacher gives clues.
Reading 3:	There are no clues that the teacher is permitted to give.

[45] As also pointed out by Anikó Lipták (p.c.), an example like (53) is only relevant if the question (*Who has to do no homework tonight?*) itself is not disambiguated for the narrow scope reading. This was taken into account.

[46] For the majority of my informants, the elliptical sentence can only get a positive/contradictory reading (i.e. the girls *do* need to do some homework), which seems to be forced by the presence of the conjunction *but*.

Those speakers who find the elliptical variant of (55) in (56) grammatical on a negative reading only permit permit the narrow scope *de re* interpretation (once again substantiating the VPE/NI Generalization in (47)).[47]

(56) % The TA may give no clues and the teacher may, too.

Reading 1:	It is permitted that the teacher gives no clues.	YES
Reading 2:	It is not permitted that the teacher gives clues.	NO
Reading 3:	There are no clues that the teacher is permitted to give.	NO

The judgments regarding the relative scope of an object negative indefinite and the universal deontic modal *must* (a Mod>Neg modal), as in (57)a, are the same for all of my informants: only narrow scope for the negative indefinite is allowed. Those informants that allow the elliptical variant in (57)b, also only permit the *de re* interpretation for this sentence.

(57) a. John must do no homework tonight.

b. % Who must do no homework tonight? John must.

Reading 1:	John must skip homework tonight.	YES
Reading 2:	It is not required that John does homework tonight.	NO
Reading 3:	There is no homework that John is required to do.	NO

The judgments for the other two universal deontic Mod>Neg modals, *should* and *ought to* and their scope relative to an object negative indefinite are identical, both in the non-elliptical and elliptical variant (cf. (58) and (59)).[48,49] That is, all my informants only allow for the *de re* interpretation of these two sentences, both in the elliptical and the non-elliptical variant (if they accept the latter in the first place).[50]

[47] Some of my informants note that they find the sentence (56) degraded and that this could be due to interference of (a preference for) the epistemic reading for the modal. As will be discussed in section 2 of chapter 4, epistemic modals do not easily license ellipsis.

[48] Only one of my informants allowed for *ought* instead of *ought to*. Therefore, only *ought to* is discussed here.

[49] Reading 2 of the sentences in (58) and (59) has a NEG-raising interpretation that is irrelevant for my purposes and that was controlled for.

[50] (58)b is degraded for some of my informants, which is probably due to the fact that *…and Mary should too* is a more standard rendering of this sentence. Thanks to Rachel Nye (p.c.) for pointing this out to me.

(58) a. John should read no books about witchcraft.
b. % John should read no books about witchcraft and Mary also should.
Reading 1: It is recommended that John go without reading books about witchcraft. YES
Reading 2: It is not recommended that John read books about witchcraft. NO
Reading 3: There are no books about witchcraft that J. is recommended to read. NO

(59) a. Saudi Arabia ought to buy no American planes.
b. % Who ought to buy no American planes? Saudi Arabia ought to.
c. % Yemen ought to buy no American planes and S.A. ought to, too.
Reading 1: It is recommended that S.A. go without buying American planes. YES
Reading 2: It is not recommended that S.A. buy American planes. NO
Reading 3: There are no American planes that S.A. is recommended to buy. NO

Summarizing, whatever the relative scope of a deontic modal with respect to an object negative indefinite in a non-elliptical clause, only the *de re* interpretation (where the modal outscopes the negative indefinite) is allowed in verbal ellipsis. It does not matter which deontic modal licenses verbal ellipsis. The modal can be a Mod>Neg universal deontic modal, only allowing for the *de re* reading, or a Neg>Mod universal or existential deontic modal, allowing for a range of possible readings – depending on the speaker – when combined with an object negative indefinite in a non-elliptical clause.[51] In all cases, the object negative indefinite can only get a narrow scope reading with respect to the modal in verbal ellipsis. All this is schematically represented in the table in (60), where 'full clause' stands for 'non-elliptical clause'.

[51] Note that the fact that the Mod>Neg modals *must, should,* and *ought to* can only outscope (the negative component of) an object negative indefinite (i.e. only the *de re* interpretation is allowed) confirms the generalization of Iatridou & Sichel (2011) regarding Mod>Neg deontic modals and negative indefinites (see section 2.3.1).

Similary, the fact that some of my informants only allow the *de re* interpretation with all deontic modals (whether Mod>Neg or Neg>Mod) also confirms one of Iatridou & Sichel's (2011) observations in section 2.3.1.

Not all my data confirm Iatridou & Sichel's (2011) generalizations concerning deontic modals and object negative indefinites, however. According to Iatridou & Sichel (2011), narrow scope of an object negative indefinite with respect to a Neg>Mod modal is always available (see section 2.3.1). Some of my informants, though, do not allow for narrow scope of an object negative indefinite in the case of Neg>Mod modals (as discussed in the main text). That is, some speakers only permit the Neg>Mod reading (whether wide or split) of an object negative indefinite, just as in sentences with regular sentential negation.

(60)

	Mod>Neg deontic modal		Neg>Mod deontic modal	
	full clause	VP-ellipsis	full clause	VP-ellipsis
de re allowed	YES	YES	YES	YES
split allowed	NO	NO	YES	NO
de dicto allowed	NO	NO	YES	NO

Concluding, the observations in this section substantiate the VPE/NI Generalization that a negative indefinite in object position cannot scope out of a VPE-site (cf. (47)).

2.4 Summary

This section investigated the behavior of English object negative indefinites in verbal and clausal ellipsis, that is VP-ellipsis and TP-ellipsis (sluicing, fragment answers, and stripping), respectively. Based on the data discussed in sections 2.1 and 2.2, the following two generalizations were introduced, respectively:

(39) THE CLAUSAL/VERBAL GENERALIZATION

While in clausal ellipsis, *any* can antecede the ellipsis of *no*, in verbal ellipsis this polarity switch is disallowed.

(47) THE VPE/NI GENERALIZATION

A negative indefinite in object position cannot scope out of a VP-ellipsis site.

Section 2.3 gave an empirical overview of the interaction of deontic modals, negative indefinites, and verbal ellipsis, providing additional support for the VPE/NI Generalization.

This chapter provides an account for these generalizations: in short, I argue that negative indefinites are the result of a morphological process (called Fusion Under Adjacency) that is bled by verbal ellipsis (a PF-process). It is also argued (cf. section 6) that syntactic analyses (such as Agree or Quantifier Raising) of negative indefinites cannot account for the generalizations in (39) and (47).

Section 4.1 of this chapter accounts for the VPE/NI Generalization; section 4.2 derives the Clausal/Verbal Generalization. First, however, I present an analysis of negative indefinites in the multidominant, cyclic framework developed in chapter 2.

3 A cyclic, multidominant analysis of negative indefinites

3.1 Introduction

In this section, I develop an analysis of English negative indefinites that has the following key components: decomposition of the negative indefinitive, multidominant phrase markers, cyclic Spell-Out and linearization, and Fusion under Adjacency.

Following the majority of proposals in the literature,[52] I take a negative indefinite to decompose into two independent elements. Although a negative indefinite is realized as a single lexical item, it consists of two parts, with each component representing part of the meaning. The negative indefinite *no* consists of a component with the meaning of negation (*not*) and a component with the meaning of an indefinite expressing existential quantification (*any* or *a*). Negative indefinites are neither syntactically nor semantically atomic: the two components enter the derivation as separate entities and occupy two different structural positions in narrow syntax and at LF. According to Klima (1964), Jacobs (1980), Rullmann (1995), Iatridou & Sichel (2011), and Zeijlstra (2011), these independent components amalgamate at PF into a single unit.

Iatridou & Sichel (2011) argue that the scope position of (the negative part of) a negative indefinite correlates with the general interpretive position of sentential negation. They take this to be an indication that the negative indefinite contains or is associated with sentential negation: the negation within the negative indefinite is formally identical to ordinary sentential negation.[53] That is, the negative indefinite has sentential scope (cf. also Cornilescu 2004, Tubau 2008, Penka 2011, Zeijlstra 2011, among many others).

Before presenting the derivation of some relevant examples containing object negative indefinites, I would like to make more precise my assumptions about the structural position of modals in the clause (3.1.1), the structural position of negation in the clause (3.1.2), and the status of English negative markers (*not* and *n't*) as specifiers or heads (3.1.3).

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[52] See Klima (1964), Jacobs (1980), Ladusaw (1992), Rullmann (1995), den Dikken et al. (1997), Sauerland (2000a), Penka & Zeijlstra (2005, 2010), Tubau (2008), Iatridou & Sichel (2011), Penka (2011), and Zeijlstra (2011), among many others. See section 6 of this chapter for more details.

[53] To be more precise, they argue that the scope position of the negative ingredient of the negative indefinite is identical to the scope position of sentential negation.

3.1.1 MODALS ARE BASE GENERATED IN T

It is standardly assumed in the literature that in English, "the main modal position is fixed" (Gergel 2009:174). English modals are traditionally considered instantiations the inflectional head, i.e. they are base generated in I/T (cf. Chomsky 1957; Jackendoff 1972; Fiengo 1974; Akmaijan et al. 1979; Gergel 2009). English modals differ from regular verbs and auxiliaries in a number of ways. First, English modals cannot be inflected: they can, for instance, not occur in the past tense (cf. (61)a) or with present tense inflection (cf. (61)b).[54] This property is accounted for in the literature by positing that English modals are base generated in the inflectional head I/T, blocking the insertion of inflectional affixes. Moreover, English modals cannot occur as participles or infinitives (cf. (61)c and (61)d). Considering modals to be inflectional heads also accounts for this observation: as the modal is base generated in the head I/T, it is merged in a position higher than the base position of the verb, and higher than functional projections such as VoiceP, PassP or AuxP (positions occupied by participles and infinitives).

(61) a. * Chandler {mayed/might} not pick up the phone.
INTENDED: 'Chandler was not allowed to pick up the phone.'
b. Joey {*musts/must} keep his cool.
c. * Rachel has never {could/canned} that.
INTENDED: 'Rachel has never been able to do that.'
d. * Monica will not must cook.
INTENDED: 'Monica will not have to cook.'

The structure for English modals (based on Wurmbrand 2003:240; Aelbrecht 2009:42; Gergel 2009:174) is given in (62). Note that there is only one functional head (T) that represents three properties (modality, tense, inflection).[55]

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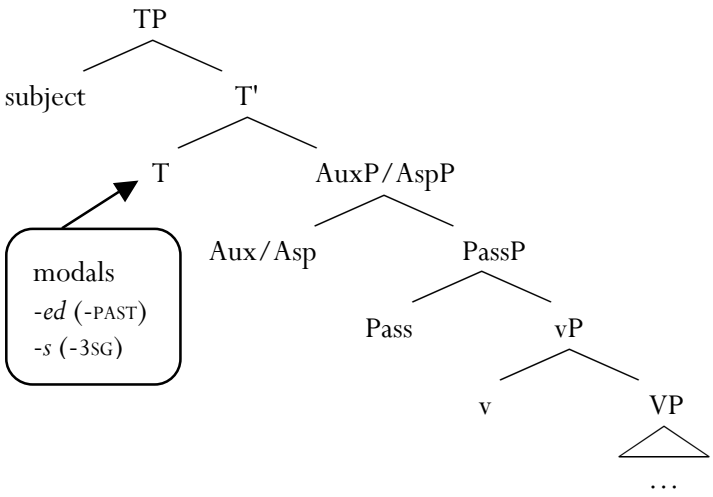
[54] See Gergel (2009), who argues that although English modals can occur with past tense morphology (cf. *could, should, might* vs. *can, shall, may*), these modals do not usually get a past tense interpretation.

[55] In more recent proposals, (different types of) modals are considered to head their own functional projection (see Cinque 1999; Wurmbrand 2003; Barbiers 2005; Gergel 2009). It has been argued that different modal interpretations are realized in dedicated functional heads. An example is given in (i):

(i) [cf. Cinque 1999:130]
… $Mod_{epistemic}$ > T_{past} > T_{future} … > $Mod_{volition}$ > $Mod_{obligation}$ > $Mod_{ability/permission}$ … > $T_{anterior}$ …

In this dissertation, I take deontic and epistemic modals to be base generated in T. Epistemic modals move further on to a higher functional head, Mod. See chapter 4 for discussion. Given that the current chapter only deals with deontic modals, this is not a vital issue at this point.

(62)



3.1.2 NEGATION IN THE CLAUSE STRUCTURE

I adopt the proposal that negative indefinite DPs are decomposed into two separate semantic and syntactic entities, an indefinite DP and a negative marker, and that the negation within the negative indefinite is formally identical to sentential negation (cf. Iatridou & Sichel 2011). Therefore, I need to make my assumptions regarding the status and structural position of negation in the clause explicit.

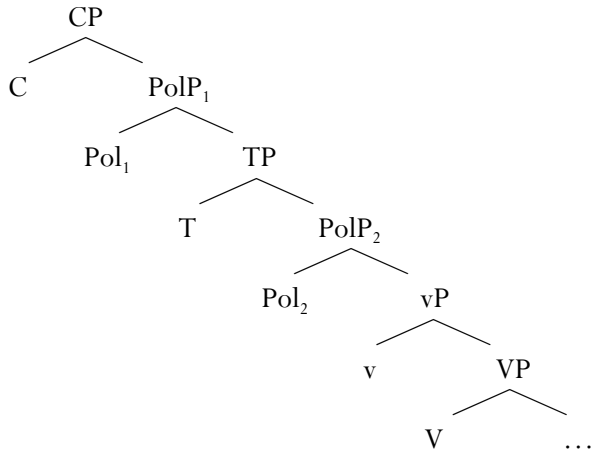
Semantically, negation is a logical operator, a scope-taking element. As Butler (2003:983) notes, a fairly large portion of the literature is devoted to the proper characterization of sentential negation as a propositional or a predicate operator (cf. Horn 1989:Ch.2 and Ch.7). Butler (2003:983) illustrates this issue on the basis of a sentence like the one in (63)a, which has two possible logical interpretations. The interpretation in (63)b negates a proposition *my Blackberry is working* (the propositional reading); the interpretation in (63)c affirmatively relates the subject *my Blackberry* to a negated predicate *not working* (the predicate reading).

(63) a. My Blackberry is not working.[56]
b. ¬ [my Blackberry is working]
c. my Blackberry is [¬working]

[56] http://www.youtube.com/watch?v=kAG39jKi0lI

For Butler, this shows that clauses contain two scope positions dedicated to the semantic interpretation of negation. Lasnik (1972) was the first to suggest that negative markers can occupy more than one position in the clause structure. This idea was later adopted and extended by quite a number of researchers (cf. Robbers 1992; Zanuttini 1997; Van Kemenade 2000; Barbiers 2002; Cormack & Smith 2002; Haegeman 2002; Butler 2003; Holmberg 2003; Schwarz & Bhatt 2006; Tubau 2008; van Craenenbroeck 2010). The proposal can be implemented by means of two functional projections dedicated to negation (e.g. NegPs) in the clausal structure, i.e. the sentential negative marker is analyzed as a functional category. Since Laka (1990), negation has often been assumed to be just one of the possible values of a broader syntactic category, labeled here as Pol(arity)P. PolP is an independent functional projection where polarity is expressed (with negative or affirmative value), and which has gone by a variety of names in the literature (NegP, PolP, ΣP, AstP, etc., cf. Pollock 1989; Laka 1990; Culicover 1991; Zanuttini 1997; Holmberg 2003; Zeijlstra 2003; Tubau 2008). The tree structure in (64) is an abstract, schematic representation of the clause structure I adopt. It comprises two PolPs, one dominating and one dominated by TP.[57,58]

(64)



[57] As noted by van Craenenbroeck (2010:157), in simple sentences like the one in (63), the different contribution of the two separate scope positions (two PolPs) is not very prominent, as the representations in (63)a and (63)b have identical truth conditions. For discussion on when the difference between the two PolPs becomes vital, I refer the reader to van Craenenbroeck (2010:Ch.12.3) and the other aforementioned authors.

[58] The tree structure in (64) is a schematic representation in that it it pays no heed to the possibile existence of projections like AgrSP, AgrOP, AspP, ModP, AuxP, etc. Similarly, it abstracts away from the possibility of further splitting up TP and/or CP.

For the semantic characterization of these two PolPs, I follow Butler's (2003) proposal, also adopted by van Craenenbroeck (2010): the low $PolP_2$ (NegP in Butler's terminology) operates on the predicate, whereas the high $PolP_1$ negates the entire proposition. My syntactic implementation is closer to van Craenenbroeck's (2010) proposal than to the one in Butler (2003). Butler (2003) links the two scope positions of negation to the vP-phase and the CP-phase, identifying the high position as Rizzi's (1997) FocP. Van Craenenbroeck (2010), on the other hand, takes the high PolP to be part of the IP-domain (in particular, dominated by AgrSP and dominating TP). Holmberg (2003) also proposes that a high PolP is dominated by CP and dominates TP.[59]

As the negative part of a negative indefinite is to be identified with sentential negation, the presence of two positions for negation in the clausal structure entails that this negative component can be formally identical to either of these positions. Hence, the negative entity inside a negative indefinite will be either part of $PolP_1$ or of $PolP_2$.

As noted by Iatridou & Sichel (2010:62, fn.17), an account "allowing multiple interpretive positions for negation has to "ensure that some of the positions are (de)activated in the presence of certain modals." I take the different scopal relations between modals and sentential negation (and, thus, between modals and (negation inside) negative indefinites) to correlate with different syntactic base-generated positions for sentential negation, either below or above the merge position of the modal, that is, either in $PolP_2$ below T (Mod>Neg) or $PolP_1$ above T (Neg>Mod).[60] I assume that in general, only one of the two PolPs is filled (or activated), the choice depending on the scopal relation of the negation with respect to quantificational

[59] Other proposals linking the high position of negation to the CP-domain are, for instance, Lasnik (1972) (expanding on Klima 1964), Rizzi (1997), and Haegeman (2000). As noted by van Craenenbroeck (2010:158), the proposal that a high PolP is situated above TP and below CP (maybe even below AgrSP) is compatible with Belletti (1990), Holmberg et al. (1993), López (1995), Haegeman (1995), and Zanuttini (1997), who propose identical or highly similar configurations. For my present purposes, the choice of positioning $PolP_1$ in the TP- or the CP-domain is not crucial, as these two positions would play no different role in the formation of negative indefinites in the framework proposed here. In this dissertation, I take $PolP_1$ to be inside the TP-domain.

[60] Other proposals also take the scopal possibilities to derive from a universal syntactic template, but take the different relative scopes to correlate with different syntactic base-generated positions for modals, with the interpretive position of sentential negation in between them (cf. Cormack & Smith 2002; Butler 2003). Iatridou & Zeijlstra (2010), on the other hand, consider the scopal behavior of modals to result from their lexical semantic properties. They take modals to be polarity-sensitive items, and the relative scope of modals and sentential negation derives from the polarity status of the modal. Negative polarity items (*need*) must scope below negation, while positive polarity items (*must, should, ought*) must scope above negation. Polarity-neutral modals (*have to, need to, can, may*) are argued to scope below negation because they are base-generated (and interpreted at LF) in a position below sentential negation. For similar ideas, see Homer (2009) and Israel (2011).

operators such as modals.[61] In a modal-less sentence, I take the choice for $PolP_2$ or $PolP_1$ to be free (as the different interpretive contibution of the two scope positions is not very prominent (van Craenenbroeck 2010), cf. footnote 57).

3.1.3 ENGLISH *NOT* AND *N'T*: SPECIFIER AND HEAD

The status of the English negative markers *not* and *n't* needs to be established with respect to the two polarity projections that were assumed in the previous section.

English sentential negation emerges in two distinct shapes: the full form *not* and the contracted form *n't*. It is generally assumed that both forms spell out the content of PolP (or NegP, ΣP, … cf. supra). In particular, the mainstream view in the literature is that *n't* is an instantiation of the functional head (Pol), while it is often proposed that *not* is a phrasal (adverb-like) element, merged in the specifier of a PolP with a null head (cf. Belletti 1990, Zanuttini 1991, Haegeman 1995, Haegeman & Gueron 1999; Cornilescu 2004, Zeijlstra 2004).[62,63,64]

The syntax of *n't* and *not* has been argued to be considerably different (cf. Haegeman 1995; Cornilescu 2004:13-16; Zeijlstra 2004:164; Haumann 2007). First, unlike *not*, *n't* is affixed or cliticized to auxiliaries. When auxiliaries move to C past the subject, *n't* raises along with the auxiliary as a complex head, while *not* is left behind (cf. (65)-(66)) This is a clear indication in favor of the head status of *n't*, and of the phrasal status of *not*.

(65) a. Couldn't you stay awake with me for one hour?
b. * Could you n't stay awake with me for one hour?

[61] But see the next subsection (3.1.3) for some cases where both PolPs are overtly realized.

[62] Languages differ with respect to the realization of sentential negation as the head and/or the specifier of PolP, cf. Pollock (1989), Belletti (1990), Ouhalla (1990), Zanuttini & Haegeman (1991, 1996), Haegeman (1995, 2002), Schafer (1995), Vikner (1995), Błaszczak (2001), Barbiers (2002), Zeijlstra (2004), Haumann (2007), van Craenenbroeck (2010) for discussion.

[63] *Pace* Laka (1990), Ouhalla (1990), Chomsky (1991), Zanuttini (1991), Williams (1994a), Potsdam (1997), and Tubau (2008), who take *not* to occupy a head position. So does Pollock (1989), but he also hypothesizes that a "possibly preferable solution would be to analyze these adverbs as specifiers of a NegP with an empty head" (Pollock 1989:405, fn.36).

[64] The negative adverb *not* has also been considered to be a purely adverbial element, occupying adverb positions (cf. Baker 1991, Ernst 1991, Williams 1994a, Zanuttini 1996). That is, *not* has been taken to be a negative adverb such as *hardly, scarcely, barely,* etc. As noted by Cornilescu (2004:15), however, the analysis of *not* as a pure negative adverb such as *hardly* is undermined by the fact that *not* triggers *do*-support, whereas other negative adverbs do not. Therefore, I follow the mainstream view in the literature in considering *not* as a phrasal element occupying the specifier of PolP. Having said that, the analysis in the next sections can be made compatible with an account that takes *not* to be a true adverbial phrase.

(66) a. Could you not stay awake with me for one hour?
b. * Could not you stay awake with me for one hour?

Note, moreover, that if *not* is a specifier, it is expected that head movement of auxiliaries can skip it, as in (66)a, without violating the Head Movement Constraint (Travis 1984). More data showing that verb movement across the negative marker *not* is not blocked in English can be found in Zeijlstra (2004):

(67) [Zeijlstra 2004:164, (30)]
a. John has not been ill.
b. John is not ill.

The example in (67)a shows that copular *be(en)* is base generated in a position to the right of *not*, presumably inside VP. In (67)b, the form of the verb *be* surfaces to the left of *not*, showing that *not* does not block head movement of the verb across it.

Another piece of evidence is provided by Merchant (2001) (cf. also Zeijlstra 2004). In the *why not* construction, *why* is analyzed as a form of phrasal adjunction to *not,* cf. (68). It is predicted that this construction is only allowed in languages in which the negative marker is not a syntactic head. Hence, English *not* cannot be analyzed as a head.

(68) a. [YP [XP why] [YP *not*]]
b. *Morpheus*: Do you believe in fate, Neo?
Neo: No.
Morpheus: Why not? [*The Matrix*, 1999]

As argued by Cormack & Smith (2002) and by Holmberg (2003, 2011) and largely also by Tubau (2008), the low PolP ($PolP_2$) can only be realized by the negative marker *not*; *n't* can never be associated with the low PolP. For the realization of the contents of the high PolP ($PolP_1$), *not* alternates with *n't*. Holmberg (2011:8, (33)) supports this claim with the following data:

(69) a. You ca*n't*/can*not not* go to church and call yourself a good Christian.
b. You must*n't*/must *not* ever *not* address him as 'Sir'.
c. The moments of insight and literary grace that could*n't not* occur in Funder's writing will be a very welcome pleasure.

The sentences in (69), with two negation markers co-occurring in one clause, show that English has two negations *not*. The low negation is considered to be associated with a low projection (for Holmberg (2011), it is an adjunct to vP/VP). This low negation can only be realized as *not*. For the realization of the high negation (associated with PolP above TP in Homberg (2011)), *not* can alternate with *n't*.

Cormack & Smith (2002:13) discuss the scopal interaction between negation (realized by *not* and *n't*) and the deontic modal *can*.

(70) John can not eat vegetables.
= 'It is not the case that John is permitted to eat vegetables.' ($\neg > \Diamond$)
= 'It is permitted that John not eat vegetables.' ($^{\%}\Diamond > \neg$)

(71) John can't eat vegetables.
= 'It is not the case that John is permitted to eat vegetables.' ($\neg > \Diamond$)
≠ 'It is permitted that John not eat vegetables.' ($*\Diamond > \neg$)

As also discussed in section 2.2, the sentence in (70), with *can* and the full negative marker *not*, is ambiguous: the negation may outscope the modal, or vice versa.[65] The sentence in (71), on the other hand, with *can* and the contracted negative marker *n't*, is unambiguous: the negation necessarily outscopes the modal *can*. Cormack & Smith (2002) take these data to indicate that the modal *can* is merged in a position that is 'sandwiched' between two positions for negation. The high negation, which results in the reading $\neg > \Diamond$, can be realized by *not* or *n't*.[66] The low negation, which results in the reading $\Diamond > \neg$, cannot be instantiated by *n't*, only by *not*. Cormack & Smith (2002:14-15) also report the same set of data for deontic *may*.

(72) Cyril may not go to the party.
= 'It is not the case that Cyril is permitted to go to the party.' ($\neg > \Diamond$)
= 'It is permitted that Cyril not go to the party.' ($\Diamond > \neg$)

[65] According to Iatridou & Zeijlstra (2010) and Iatridou & Sichel (2011), the interpretation $\Diamond > \neg$ is, however, not available when deontic *can* or *may* co-occurs with negation (*not* or *n't*). Therefore, I added the percentage sign % to the reading $\Diamond > \neg$ to indicate that not all English speakers allow deontic *can* and *may* to outscope the negation (cf. also section 2.2).

[66] Note that while the deontic modal *can* is inside the scope of negation (*not* or *n't*), it surfaces to the left of the negative marker. Cormack & Smith (2002) therefore take the modal to be displaced over the negation at PF, at least in the case of *not*. For details, I refer the reader to the original paper. For arguments in favor of PF head movement, see Chomsky (1995, 2001), Boeckx & Stjepanović (2001), Hale & Keyser (2002), Harley (2004), Schoorlemmer & Temmerman (2012), and Platzack (to appear). See also footnote 38.

(73) Cyril mayn't go to the party.
= 'It is not the case that Cyril is permitted to go to the party.' ($\neg > \Diamond$)
≠ 'It is permitted that Cyril not go to the party.' ($* \Diamond > \neg$)

When deontic *may* is combined with a contracted negative marker (73), this modal can only be inside the scope of negation. For those speakers who reject *mayn't*, and allow only *may not*, the modal can be inside or outside the scope of negation. This again shows that *not* realizes both $PolP_1$ and $PolP_2$, while *n't* is only associated with $PolP_1$.

Summarizing, the two English negative markers *not* and *n't* show differences both in their syntactic status and their distribution. While the former realizes a maximal projection occupying the specifier of either $PolP_1$ or $PolP_2$, the latter realizes a syntactic head (only Pol_1).

3.2 Deriving negative indefinites

In this section, I discuss and illustrate the analysis of the English negative indefinite *no* on the basis of two sample derivations, i.e. the derivations of the modal-less sentence in (74) and the sentence in (75), with the existential deontic modal *can*.

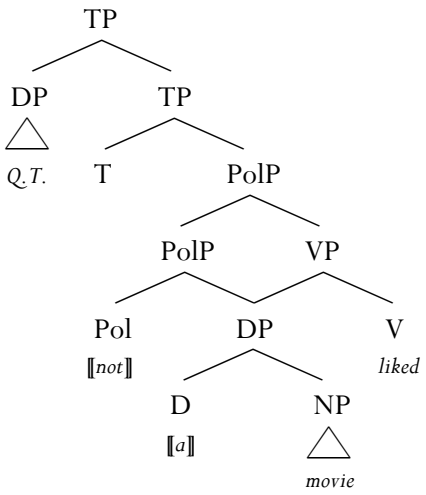
(74) Quentin Tarantino liked no movie.

(75) Quentin Tarantino can offer no help.

The analysis is inspired by Johnson (2010b), who proposed to include negative indefinites in the general multidominance approach he developed for Quantifier Raising and WH-movement in Johnson (2010a, 2011a). His analysis contains two crucial ingredients. First, in line with the decomposition approach discussed above, determiners can spread across distant syntactic positions but are mapped onto one word. The single lexical item *no* is thus syntactically composed of an element with the meaning of *not* and one with the meaning of *a(ny)*. Second, the analysis of negative indefinites involves remerge (giving rise to multidominant phrase markers): the indefinite DP merges with the verb and later remerges with sentential negation. The multidominant phrase marker proposed by Johnson (2010b) for a sentence like (74) is (76):[67]

[67] Johnson (2010b) gives a phrase marker for the sentence *She likes no spiders,* which is almost identical to sentence (74) discussed here.

(76) [cf. Johnson 2010b:1, (1)]



The gist of Johnson's (2010b) proposal (that is, the two crucial ingredients of decomposition and multidominance) is adopted here, but the implementation is substantially different. For discussion and comparison of my proposal with Johnson's account of negative indefinites (Johnson 2010b), see section 6.4 of this chapter.

3.2.1 THE DERIVATION OF A MODAL-LESS SENTENCE WITH *NO*

Recall (see chapter 2) that in the minimalist program (Chomsky 1993, 1995 *et seq.*), the computational system C_{HL} executes a derivation and hands over that derivation to the PF- and LF-components. The syntactic derivation starts out with a collection of terminals in a numeration N. The primitive, recursive structure building operation Merge constructs phrase markers (in a bottom-up fashion) by taking two (possibly complex) syntactic objects and combining them into a new complex syntactic object. Merge applies until one single phrase marker is constructed from the terminals in the Numeration. Merge is External, Internal or Parallel Merge, depending on the objects it combines. Internal and Parallel Merge give rise to structures in which a single node has two mothers, i.e. to multidominant phrase markers. Let us consider the derivation that arises from cyclic applications of Merge in forming the sentence in (74), repeated here.

(74) Quentin Tarantino liked no movie.

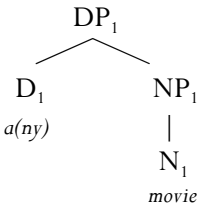
The derivation starts out from the numeration in (77), which contains the necessary grammatical formatives (terminals).[68] Recursively applying Merge will eventually produce one syntactic representation for the sentence in (74).

(77) $N = \{D_1, N_1, Neg, V, D_2, N_2, v, Pol_2, T, C\}$

I use the label Neg for the terminal that is usually lexicalized as the negative adverb *not* in English. The reader should be careful not to confuse this terminal with the polarity head Pol (which is often labeled Neg in the literature). As *not* occupies the specifier of PolP (cf. section 3.1.3), Neg wil project (NegP) and have phrasal status.

The first applications of Merge form the object DP in (78):[69]

(78)



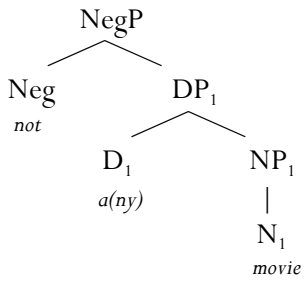
I then take Neg to Merge with DP_1.[70]

[68] Actually, for the sentence in (74), either Pol_2 or Pol_1 could be chosen, as the different contribution of these two scope positions in a modal-less sentence is not very prominent (cf. section 3.1.2). For the derivation here, I have chosen Pol_2.

[69] Recall (section 4 of chapter 2) that I adopt Late Insertion, i.e. lexical items are only inserted in the PF-branch of the grammer (cf. Distributed Morphology, Halle & Marantz 1993). Thus, there is actually no lexical/morphophonological information available in the narrow syntax, only formal features are. Nevertheless, for clarity's sake, in the tree structures discussed here, I indicate the lexical content of the various nodes.

[70] Similar ideas regarding the ordering of the applications of Merge are present in Johnson (2008) and Johnson (2009) for a (to be QR'ed) phrase containing the quantifier *every* and a (to be WH-moved) WH-phrase, respectively. See section 6.4 of this chapter for Johnson's analysis of WH-movement and chapter 5 for his proposal for QR.

(79)



I follow Penka & Zeijlstra (2005) and Zeijlstra (2011), who take sentential negation and the indefinite to enter the derivation as a single constituent. According to these authors, there is some syntactic device, "some grammatical mechanism that *forces* [my italics, TT] [negation] to enter the derivation along with the indefinite" (Zeijlstra 2011:118), see also Penka & Zeijlstra (2005:5).[71] I do, however, not adopt the – rather vague – proposal that merger of Neg and DP_1 is *forced* at the stage of the derivation in (79).

Merging Neg with DP might seem strange, as negation must semantically combine with a clause or a predicate (cf. the discussion in section 3.1.2). Merging Neg with D(P) is not unprecedented, though. It has been argued in the literature (beside Penka & Zeijlstra 2005 and Zeijlstra 2011) that negation/NegP can be merged with (or as part of) DP. Leu (2008) argues that negation originates as part of DP in the case of negative indefinites (in particular, in the case of German negative indefinite DPs with *kein*).[72] Importantly (contra Penka & Zeijlstra 2005 and Zeijlstra 2011), he argues that the negation and the indefinite determiner do not form a constituent together. Leu also takes negation to start out as part of DP in the case of West-Flemish negation doubling (partly adopting Haegeman's (2001) proposal) and adopts Troseth's (2009) 'Neg in DP' account for English negative intensifiers. Troseth (2009) argues that negation can be base generated in DP, more specifically, as the head of a DP-internal NegP. Moreover, the negation can extract out of the DP and travel up into the clause to become sentential negation (its landing site being a clausal NegP between TP and VP). Aelbrecht (to appear) discusses how data from the Belgian Dutch dialect Asse Dutch show that there is a NegP inside the DP (with

[71] I diverge from Penka & Zeijlstra (2005) and Zeijlstra (2011), however, in taking the negation to merge with the DP (following Johnson 2010b) instead of the D-head. Penka & Zeijlstra (2005) and Zeijlstra (2011) take negative indefinite determiners to be syntactically complex lexical items, a proposal which I do not adopt. See section 6.3 for a brief discussion of Zeijlstra's (2011) proposal.

[72] Specifically, Leu (2008) argues that (abstract, silent) negation starts out as part of an adjectival constituent inside the negative indefinite DP to license the negative indefinite determiner and can possibly move out of the DP (see Postal 2000 and Troseth 2009).

the negative marker *nie* 'not' as its head). Finally, Wiltschko (2006) argues that the German negative marker *nicht* 'not' can select for a DP. For Wiltschko (2006:448), German *nicht* 'not' does not function as a functional category NEG, but rather as a modificational particle (which does not project its category label). Although (parts of) these proposals are more compatible with my account than others, it should be clear that merging Neg(P) with or inside DP can hardely be called controversial. It has even been proposed in the literature that negation can merge with any category (see, for instance, Williams 1994a,b; Wiltschko 2006). Thus, it might be that there is no restriction whatsoever on the merger of the negative marker with another element. This is perfectly in line with the idea that Merge is free and that syntax is blind with respect to the interfaces (whether semantics or phonology), see for instance Krivochen (2011). If Merge is free, merger of Neg and DP is simply allowed in narrow syntax. If this is the case, the question is not "why should the negation and the indefinite form a syntactic unit to begin with," but rather, "why shouldn't they?".

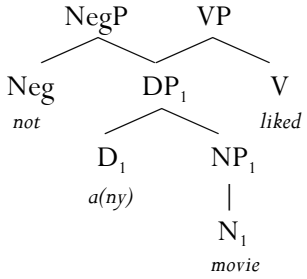
Note, however, that although the sentential negation merges with the indefinite object DP to form a syntactic constituent, they do not form a semantic constituent (Penka & Zeijlstra 2005; Johnson 2010b; Zeijlstra 2011).[73] It was established in section 3.1.2 that negation semantically combines with a clause or a predicate (only propositions and predicates can be negated, cf. also Williams 1994a,b). The DP with which Neg merges is neither of these. Thus, there can be no semantic connection between the two (Neg and DP). The negative component of the negative indefinite can only combine semantically with the clause (or the predicate), not with the indefinite DP.[74]

Hence, the semantics will require the phrase in (79) to be merged in the functional sequence of the clause to form a negative sentence. The clause, in turn, will have to include the object DP, which is selected by the verb. Note that verbs are generally not taken to select NegPs. The merger in (80), combining V and its DP-complement, is thus the next step in creating the clausal phrase marker.

[73] The proposal here is in line with Williams' (1994b:198) claim that "there is no intrinsic connection between where the negation is generated and what scope it ultimately has. The negation in [(79)] is what might be ordinarily termed *constituent negation* in Klima's (1964) terms; however, the configuration determines that it has sentential scope."

[74] As a result, the phrase that is the outcome of merger of the negation and the indefinite will have the same meaning as negation does: NegP will have "the same meaning as *not*" (Johnson 2010b:1).

(80)



Note that this is a case of Parallel Merge (cf. section 2 of chapter 2), i.e. a syntactic object (the DP) that is a subpart of one root object (NegP) is remerged as a subpart of another root object (VP). The result is a structure in which a single node (DP) has two mothers (NegP and VP). As such, the phrase marker transits through a representation in which the tree has more than one root. This is necessary because of the double requirement of creating a VP that consists of the verb and its object DP, and making that DP part of a NegP that has to Merge with a phrase that is larger than VP (which will be $PolP_2$ in this case).

Next, v merges with the VP. After this, the subject DP is merged to form Spec,vP.[75] Recall from section 3.3 in chapter 2 that complex (i.e. branching) left branches (specifiers and adjuncts) need to be spelled out (and hence linearized) before merging to the phrase marker under construction (following Uriagereka 1999). That implies that the subject DP needs to be constructed as an independent phrase, which will undergo Spell-Out. After this, Merge will bring the two independent phrases (the subject DP and the vP) together, placing the DP within the vP (i.e. a case of External Merge).[76] In this dissertation, I mark spelled out phrases in a box, e.g. $\boxed{XP}$.[77]

[75] The internal structure of phrases containing proper names is orthogonal to my purposes. On proper names, see for instance Partee (1987), Zwarts (1992), and Matushansky (2008).

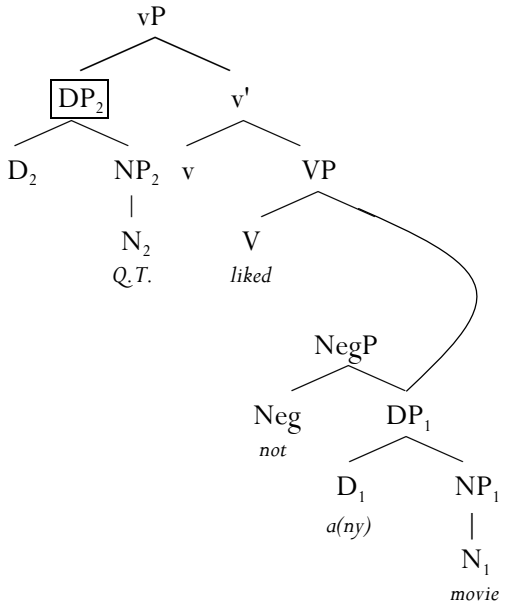
[76] As already mentioned in section 3.3.1 of chapter 2, I abstract away from the questions of whether (i) the two phrase markers (the subject and the vP) are assembled simultaneously in separate derivational spaces or sequentially in the same derivational space and (ii) whether (and if so, how) the Spelled-Out subject is renumerated.

[77] The A, the maximally small disambiguated subset (A'), and d(A) for the spelled-out subject DP are:

(i) $A = \{ \langle D_2, N_2 \rangle \}$

(ii) a. $A' = \{ D_2 < N_2 \}$
b. $d(A) = \{ D_2 < N_2 \}$

(81)



As vP is a phase, the PIC requires that the domain of the phase head v be spelled out, i.e. transferred to PF (cf. chapter 2, section 3.3.1). Importantly, NegP is not spelled out at this point. Spell-Out targets the VP-complement of the phase head v, that is, VP and all the material dominated by this node. Neg(P) is not dominated by VP and hence will not be spelled out. Note that DP_1 *is* part of the material dominated by VP. As discussed in section 3.3.2 of chapter 2, each phasal domain targeted by Spell-Out constitutes a linearization domain and forces the linearization scheme to apply. Hence, the linearization algorithm will produce ordering statements for the terminal elements dominated by the VP node (but not for NegP). Recall that the ordered pairs that correspond to the asymmetric c-command relations in the A in (82) need to be disambiguated (in terms of precendence and subsequence). That is, a disambiguated subset has to be selected, which meets the language-particular requirements of English and which will result in a total linearization (i.e. one that puts all of the terminals in a relative ordering with respect to each other). In this case, the heads will be linearized preceding their complement. After this, a linearization d(A) is produced that has to meet Kayne's (1994) well-formedness conditions. The (maximally small) disambiguated subset is given in (83)a, and the linearization in (83)b.

(82) $A = \{ \langle V, D_1 \rangle, \langle V, NP_1 \rangle, \langle V, N_1 \rangle, \langle D_1, N_1 \rangle \}$

(83) a. A' = { V < D_1, V < N_1, D_1 < N_1 }
b. d(A) = { V < D_1, V < N_1, D_1 < N_1 }

After this, Pol_2 is merged with vP and NegP is merged as the specifier of $PolP_2$. Recall that the sentential negation usually realized by *not* occupies the specifier of one of the two PolPs (as discussed in section 3.1.3). As there is no scopal element such as a modal that needs to be outscoped by negation, I take the negative element to merge with the low PolP, i.e. $PolP_2$ (although $PolP_1$ is in principle possible as well, cf. section 3.1.3 and footnote 68). From this position, NegP can semantically combine with the clause and take sentential scope.

As NegP will merge as a complex specifier (i.e. a complex left branch) in the clausal spine, it has to undergo Spell-Out before merging with $PolP_2$ (following Uriagereka 1999). Hence, NegP is transferred to PF. The linearization scheme applies to the linearization domain NegP. The ordered pairs corresponding to the asymmetric c-command relations in the A in (84) are disambiguated by language-specific requirements for English. A maximally small disambiguated subset is given in (85)a and the linearization in (85)b.

(84) A = { ⟨Neg, D_1⟩, ⟨Neg, NP_1⟩, ⟨Neg, N_1⟩, ⟨D_1, N_1⟩ }

(85) a. A' = { Neg < D_1, Neg < N_1, D_1 < N_1 }
b. d(A) = { Neg < D_1, Neg < N_1, D_1 < N_1 }

At this point, the PF-branch contains three spelled-out phrases and their linearizations: those of the phasal domain VP and two complex left branches, the subject DP_2 and NegP. These relevant d(A)s are listed in (86):

(86) a. $d(A)_{NegP}$ = { Neg < D_1, Neg < N_1, D_1 < N_1 }
b. $d(A)_{VP}$ = { V < D_1, V < N_1, D_1 < N_1 }
c. $d(A)_{DP_2}$ = { D_2 < N_2 }

I argue that this is the point in the derivation where the negative indefinite *no* is created. Morphological processes can combine two terminals into one terminal, which is realized as a single lexical item. The relevant process here is the one that Johnson (2010a, 2011a) labels 'Fusion'. According to Johnson (2010a, 2011a), Fusion imposes a locality condition on the two terminals that are to be combined: the two terminals must be adjacent. Johnson (2011a:23) takes this to be a well-formedness condition on Fusion:

(87) *The Adjacency condition on Fusion*
X and Y can fuse only if the linearization algorithm assigns them adjacent positions.

Importantly, Johnson (2011a) has a specific definition of 'Adjacency' (cf. (88)), which I adopt here, adding (89) (in which '<' again indicates (linear) precedence):

(88) *Adjacency*
Two terminal items α and β are adjacent if the linearization algorithm puts nothing in between them. [cf. Johnson 2011a:25,fn.22]

(89) $\neg\exists x.(\alpha < x \ \& \ x < \beta)$ (and vice versa)

To avoid possible confusion with different (Distributed Morphology and non-DM) approaches to 'Fusion', I will refer to 'Johnson-type' Fusion as *Fusion Under Adjacency* (FUA).[78]

Let us take a look at the derivation under consideration. The linearization in (86) puts nothing in between Neg and D_1. That is, there is no element that precedes D_1 and follows Neg (or vice versa) in these linearizations. Following Johnson's (2011a) definition of Adjacency in (88), this means that Neg and D_1 are adjacent at this point in the derivation. Hence, the terminals Neg and D_1 can fuse under adjacency: they can be brought together in a single terminal. Once Neg and D_1 have fused, the terminal onto which Neg and D_1 are jointly mapped will occupy the positions assigned to Neg and D_1 in the linearization in (86). The result of FUA applying to the terminals Neg and D_1 in (86), repeated here, is given in (90). Note that the result of FUA, the joint mapping of Neg and D_1 (represented as Neg = D_1), will ultimately be spelled out as the negative indefinite *no*.

(86) a. $d(A)_{NegP} = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$
b. $d(A)_{VP} = \{ V < D_1, V < N_1, D_1 < N_1 \}$
c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

[78] Johnson's (2010a, 2011a) proposal is inspired by processes described in, amongst others, Pranka (1983), Marantz (1988, 1984), Halle and Marantz (1993), Bobaljik (1995), Embick & Noyer (2001), and Matushansky (2006). For comparison of 'Johnson-type' Fusion under Adjacency with other (DM) morphological processes, see section 6.1.

(90) a. $d(A)_{NegP} = \left\{ \begin{array}{r} Neg = D_1 < Neg = D_1 \\ Neg = D_1 < N_1 \\ Neg = D_1 < Neg = D_1 \end{array} \right\}$

b. $d(A)_{VP} = \left\{ \begin{array}{r} V < Neg = D_1 \\ V < N_1 \\ Neg = D_1 < N_1 \end{array} \right\}$

c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

Recall (chapter 2, section 3.4) that d(A) is tolerant: superfluous, inconsistent ordering statements can be discarded. As such, on the basis of Kayne's (1994) well-formedness conditions (cf. chapter 2, section 3.1), $d(A)_{NegP}$ is 'filtered' and the result is (91):[79]

(91) $d(A)_{NegP} = \{ Neg = D_1 < N_1 \}$

After all this, the (spelled-out) NegP is merged as the specifier of $PolP_2$, yielding the structure in (92):

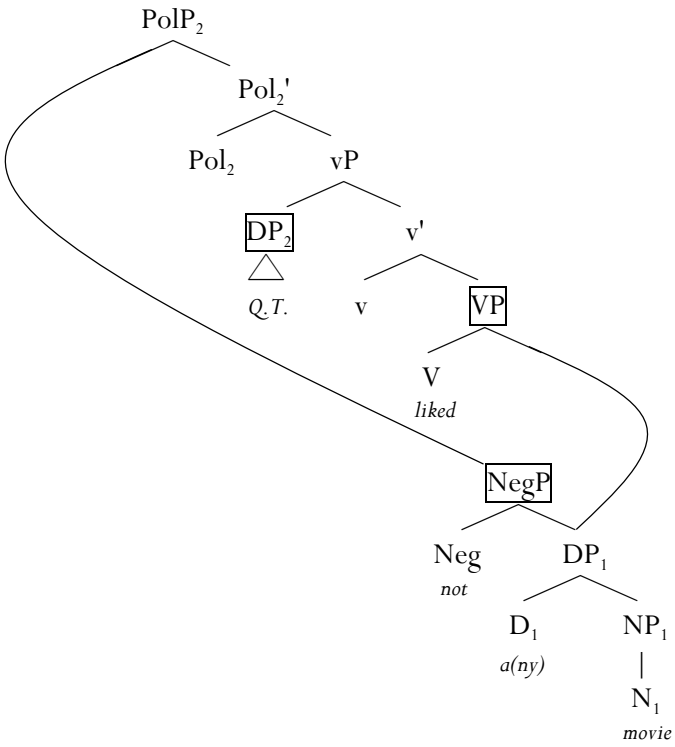
[79] For Kayne's (1994) well-formedness conditions on linearizations (see chapter 2, section 3.1), it is crucial that, after FUA (between Neg and D_1), Neg and D_1 are no longer considered 'distinct' terminals. Otherwise, the d(A) in (91) would violate Totality as neither Neg < D_1 nor D_1 < Neg. That is, Neg and D_1 are 'looked at' as one terminal by the well-formedness conditions. Therefore, I chose the notation Neg = D_1, to indicate that Neg and D are to be considered 'one position' for (the well-formedness conditions on) linearization.

In dealing with similar issues, Nunes (1999, 2000) and Johnson (2010a, 2011a) suggest a slight modification of Kayne's well-formedness constraints. They propose that the well-formedness conditions do not operate on terminals, but on the vocabulary items the terminals map onto, as in (i):

(i) For every lexical item *x*, *y*, and *z* in a phrase marker P,
  a. either $x < y$ or $y < x$ ⇨ TOTALITY
  b. not ($x < y$ and $y < x$) ⇨ ANTISYMMETRY
  c. if $x < y$ and $y < z$, then $x < z$ ⇨ TRANSITIVITY

In this dissertation, I maintain Kayne's original well-formedness conditions, with the caveat just mentioned.

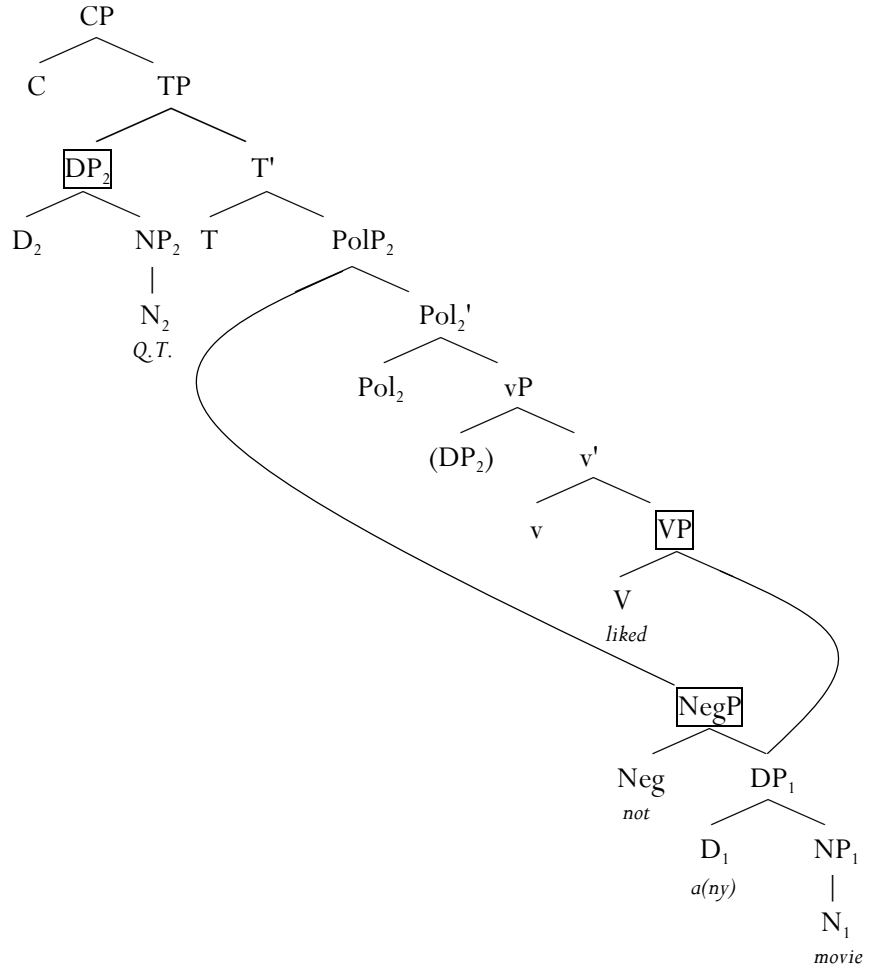
(92)



Then, the rest of the structure is built: T is merged with $PolP_2$, the subject DP_2 is remerged to become the specifier of TP and C is merged with TP, cf. (93).[80]

[80] Here I disregard the question of whether or not movement of the subject to Spec,TP takes place in narrow syntax or at PF (for discussion, see e.g. Merchant 2001, Lasnik & Park 2003, Brattico & Huhmarniemi 2006, and van Craenenbroeck & den Dikken 2006). This issue is not vital for my present purposes.

(93)



After merger of the phase head C, its complement TP is transferred to PF. The phasal domain undergoes Spell-Out and the linearization algorithm applies.

(94)

$$A = \left\{ \begin{array}{llll}
\langle DP_2, T\rangle & \langle T', D_2\rangle & \langle NegP, Pol_2\rangle & \langle Pol_2, DP_2\rangle \\
\langle DP_2, PolP_2\rangle & \langle T', NP_2\rangle & \langle NegP, vP\rangle & \langle Pol_2, D_2\rangle \\
\langle DP_2, NegP\rangle & \langle T', N_2\rangle & \langle NegP, DP_2\rangle & \langle Pol_2, NP_2\rangle \\
\langle DP_2, Neg\rangle & & \langle NegP, D_2\rangle & \langle Pol_2, N_2\rangle \\
\langle DP_2, DP_1\rangle & \langle T, Pol_2'\rangle & \langle NegP, NP_2\rangle & \langle Pol_2, v'\rangle \\
\langle DP_2, D_1\rangle & \langle T, NegP\rangle & \langle NegP, N_2\rangle & \langle Pol_2, v\rangle \\
\langle DP_2, NP_1\rangle & \langle T, Neg\rangle & \langle NegP, v'\rangle & \langle Pol_2, VP\rangle \\
\langle DP_2, N_1\rangle & \langle T, DP_1\rangle & \langle NegP, v\rangle & \langle Pol_2, V\rangle \\
\langle DP_2, Pol_2'\rangle & \langle T, D_1\rangle & \langle NegP, VP\rangle & \langle Pol_2, DP_1\rangle \\
\langle DP_2, Pol_2\rangle & \langle T, NP_1\rangle & \langle NegP, V\rangle & \langle Pol_2, D_1\rangle \\
\langle DP_2, vP\rangle & \langle T, N_1\rangle & \langle NegP, DP_1\rangle & \langle Pol_2, NP_1\rangle \\
\langle DP_2, DP_2\rangle & \langle T, Pol_2\rangle & \langle NegP, D_1\rangle & \langle Pol_2, N_1\rangle \\
\langle DP_2, D_2\rangle & \langle T, vP\rangle & \langle NegP, NP_1\rangle & \\
\langle DP_2, NP_2\rangle & \langle T, DP_2\rangle & \langle NegP, N_1\rangle & \langle v, V\rangle \\
\langle DP_2, N_2\rangle & \langle T, D_2\rangle & & \langle v, DP_1\rangle \\
\langle DP_2, v'\rangle & \langle T, NP_2\rangle & \langle Pol_2', Neg\rangle & \langle v, D_1\rangle \\
\langle DP_2, v\rangle & \langle T, N_2\rangle & \langle Pol_2', DP_1\rangle & \langle v, NP_1\rangle \\
\langle DP_2, VP\rangle & \langle T, v'\rangle & \langle Pol_2', D_1\rangle & \langle v, N_1\rangle \\
\langle DP_2, V\rangle & \langle T, v\rangle & \langle Pol_2', NP_1\rangle & \\
\langle DP_2, DP_1\rangle & \langle T, VP\rangle & \langle Pol_2', N_1\rangle & \\
\langle DP_2, D_1\rangle & \langle T, V\rangle & & \\
\langle DP_2, NP_1\rangle & \langle T, DP_1\rangle & & \\
\langle DP_2, N_1\rangle & \langle T, D_1\rangle & & \\
 & \langle T, NP_1\rangle & & \\
 & \langle T, N_1\rangle & &
\end{array} \right\}$$

Now, the ordered pairs corresponding the the asymmetric c-command relations in the A in (94) need to be disambiguated. A disambiguated subset is selected that has to satisfy English-particular requirements. Heads have to precede their complement. Specifiers have to precede the material they asymmetrically c-command. Note that the subject DP_2 is actually linearized twice, once in Spec,TP and once in Spec,vP. Because of Tolerance, the ordering statements referring to the subject DP_2 in Spec,vP will be jettisoned as English-particular requirements will choose to linearize subjects in Spec,TP. The (maximally small) disambiguated subset is given in (95). The resulting linearization is (96).

(95)

$$A' = \left\{ \begin{array}{lll} DP_2 < T & NegP < Pol_2 & v < V \\ DP_2 < PolP_2 & NegP < vP & v < DP_1 \\ & & \\ T < NegP & Pol_2 < v' & \\ T < Pol_2' & & \end{array} \right\}$$

(96)

$$d(A) = \left\{ \begin{array}{lllll} N_2 < T & T < Neg & Neg < Pol_2 & D_1 < Pol_2 & Pol_2 < v \\ N_2 < Neg & T < D_1 & Neg < v & D_1 < v & Pol_2 < V \\ N_2 < D_1 & T < N_1 & Neg < V & D_1 < V & Pol_2 < D_1 \\ N_2 < N_1 & T < Pol_2 & Neg < D_1 & D_1 < D_1 & Pol_2 < N_1 \\ N_2 < Pol_2 & T < v & Neg < N_1 & D_1 < N_1 & \\ N_2 < v & T < V & & & v < V \\ N_2 < V & T < D_1 & & N_1 < Pol_2 & v < D_1 \\ N_2 < D_1 & T < N_1 & & N_1 < v & v < N_1 \\ N_2 < N_1 & & & N_1 < V & \\ & & & N_1 < D_1 & \\ D_2 < N_2 & D_2 < Pol_2 & & N_1 < N_1 & \\ D_2 < T & D_2 < v & & & \\ D_2 < Neg & D_2 < V & & & \\ D_2 < D_1 & D_2 < D_1 & & & \\ D_2 < N_1 & D_2 < N_1 & & & \end{array} \right\}$$

Note that the linearization in (96) contains several problematic statements. The statements $D_1 < D_1$ and $N_1 < N_1$ are violations of Irreflexivity. Moreover, the d(A) in (96) contains antisymmetric statements such as $N_1 < v$ and $v < N_1$ or $D_1 < Pol_2$ and $Pol_2 < D_1$. Furthermore, the orderings $Neg < V$, $Neg < D_1$, $Neg < N_1$, $D_1 < V$, $N_1 < D_1$, and $N_1 < V$ clash with linearization statements that were introduced earlier in the derivation. That is, they are inconsistent with the orderings that were calculated before the NegP was merged as a specifier in the functional sequence of the clause and after Fusion Under Adjacency between Neg and D_1 (cf. (90)). Recall that the linearizations established for linearization domains earlier in the derivation cannot be changed later on. Linearization statements that are introduced later in the derivation have to be both total and consistent with the earlier statements.

Recall (section 3.4 in chapter 2) that Johnson (2007) proposes that d(A) is

tolerant, just as the linearization algorithm is: inconsistent and conflicting pairs can be disposed of. As such, the reflexive statements can be deleted and the conflicting statements can be discarded. Moreover, the antisymmetric orderings can be disposed of. $N_1 < Pol_2$, $D_1 < Pol_2$, $N_1 < v$, and $D_1 < v$ will be ignored, as these would otherwise result in conflicting statements and transitivity violations. For instance, the combination $N_1 < Pol_2$ and $Pol_2 < V$ would give rise to $N_1 < V$ (by Transitivity), which is in conflict with the linearization statement $V < N_1$, collected earlier.

Certain statements in (96) need to obey Transitivity when combining with statements collected earlier (cf. (90)). Relevant examples are given in (97). These statements in (97) are, however, contradicted by other statements in (96), namely $Neg < Pol_2$ and $Neg < v$. As the statements in (90) were collected earlier in the derivation, these cannot be altered, and the two statements in (96) under discussion need to be disposed of.

(97) TRANSITIVITY

a.	$Pol_2 < V$	(96)	+	$V < Neg = D_1$	(90)	→	$Pol_2 < Neg = D_1$
b.	$v < V$	(96)	+	$V < Neg = D_1$	(90)	→	$v < Neg = D_1$

The remaining statements are those in (98), which will be added to the orderings collected earlier (i.e. the ones in (90)).

(98)

$$d(A) = \left\{ \begin{array}{llll} D_2 < N_2 & N_2 < T & T < Neg & Pol_2 < v \\ D_2 < T & N_2 < Neg & T < D_1 & Pol_2 < V \\ D_2 < Neg & N_2 < D_1 & T < N_1 & Pol_2 < D_1 \\ D_2 < D_1 & N_2 < N_1 & T < Pol_2 & Pol_2 < N_1 \\ D_2 < N_1 & N_2 < Pol_2 & T < v & \\ D_2 < Pol_2 & N_2 < v & T < V & v < V \quad D_1 < N_1 \\ & & & v < D_1 \\ D_2 < v & N_2 < V & & v < N_1 \\ D_2 < V & & & \end{array} \right\}$$

Note that, in the d(A) in (98), not all terminals seem to be ordered with respect to each other (because of Tolerance in d(A)). For instance, there is no statement $Pol_2 < Neg$ or $Neg < Pol_2$. Nevertheless, Pol_2 and Neg are ordered with respect to one another by virtue of Fusion Under Adjacency between Neg and D_1 earlier in the derivation: $Pol_2 < D_1$ and $Neg = D_1$, hence $Pol_2 < Neg = D_1$. Similarly, Pol_2 and Neg are also ordered with respect to each other as a result of Transitivity: $Pol_2 < V$ and V

< Neg = D1, hence Pol_2 < Neg = D1 (cf. (97)). The result of adding the ordering statements in (98) to the ones in (90) is a total, consistent ordering, which will eventually be realized as *Quentin Tarantino liked no movie*.

Summarizing, the order of V and the indefinite determiner D_1 of the DP_1-object is determined when VP is spelled out and linearized (as a consequence of the PIC). At this point, the order of Neg relative to V and D_1 has not yet been determined, as Neg is not dominated by VP and hence, not spelled out as part of VP. Upon merger of NegP as a (complex) specifier into the clausal spine, it is spelled out and linearized (Uriagereka 1999). When NegP is spelled out and linearized, Neg and D_1 become adjacent: Fusion Under Adjacency can apply. Because of FUA, Neg and D_1 become one terminal element, which needs to obey all the ordering statements referring to both Neg and D_1. As a consequence of this, the new element (Neg = D_1) needs to surface following (i.e. to the right of) V. As positions assigned by the linearization scheme at an early stage in the derivation cannot be changed, an object negative indefinite will always surface in its *in situ* position.

As such, the multidominant, cyclic analysis proposed here is able to derive a modal-less English sentence like *Quentin Tarantino liked no movie*. In the following section, I show how a very similar analysis, with the same key components, derives an English sentence that contains an object negative indefinite and the existential deontic modal *can*.

3.2.2 THE DERIVATION OF A SENTENCE WITH *NO* AND MODAL *CAN*

In this section, I consider the derivation of the sentence in (75), repeated here, a sentence with a negative indefinite DP in object position and the existential deontic modal *can*.

(75) Quentin Tarantino can offer no help.

As noted by Iatridou & Zeijlstra (2010) and Iatridou & Sichel (2011), the existential deontic modal *can* is a 'Neg>Mod modal', i.e. a modal that typically only appears under the scope of sentential negation. For most speakers of English, the sentences in (42), repeated here as (99), can only get a reading whereby the negation outscopes *can*. For a limited number of speakers, *can* may outscope the negation, as indicated by the percentage sign % (see Cormack & Smith 2002, see also sections 2.2 and 3.1).

(99) a. [cf. Cormack & Smith 2002:13, (29a)]

John can not eat vegetables.
= 'It is not the case that John is permitted to eat vegetables.' (¬ > ◇)
= 'It is permitted that John not eat vegetables.' (% ◇ > ¬)

b. [cf. Iatridou & Sichel 2011:598,(4b)]

He cannot go to this party.
= 'It is not the case that he is permitted to go to this party.' (¬ > ◇)
= 'It is permitted that he does not go to this party.' (% ◇ > ¬)

Adopting the proposal that a clause can contain one or more polarity phrases PolP (cf. section 3.1.2), the observation that deontic *can* is a Neg>Modal can be implemented as follows (in line with Cormack & Smith 2002). The standard assumption is that modal verbs are base generated in T (cf. section 3.1.1). TP is dominated by the high $PolP_1$, and dominates the low $PolP_2$. As such, the deontic modal *can*, base generated in T, will occupy a position above $PolP_2$, but below $PolP_1$. The low PolP ($PolP_2$) is not available for sentential negation in sentences with the deontic modal *can*. The fact that the modal is base generated below $PolP_1$, combined with the unavailability of $PolP_2$, derives why it is always outscoped by negation (cf. also section 3.1.2).[81]

The same goes for sentences containing a negative indefinite and the modal *can* (as discussed by Iatridou & Sichel 2011). Recall that the relative scope of a modal and a negative indefinite DP matches the relative scope of a modal and sentential negation (Iatridou & Sichel 2011, see also sections 2.2 and 3.1.2).

Most of my informants only interpret the object negative indefinite DP in (43) (repeated here in (100)) as scoping above deontic *can*; a smaller set of speakers also allows the reverse scope relation.

(100) John can do no homework tonight.
= 'It is not the case that John is permitted to do homework tonight.'
(¬ > ◇)
= 'It is permitted that John does not do homework tonight.' (% ◇ > ¬)

[81] For those speakers allowing deontic *can* to outscope negation, this means that they have $PolP_2$ available for merging the negation in a sentence with deontic *can*, unlike the majority of English speakers. See Cormack & Smith (2002).

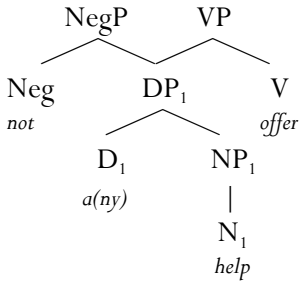
Therefore, I take the Merge site of the (negative component of the) negative indefinite to be part of $PolP_1$ in case the sentence contains the existential deontic modal *can*.

Let us take a look at the derivation for (75). Again, the syntactic derivation starts out with a collection of terminals in a numeration N. The recursive structure building operation Merge will again create complex syntactic objects, until all the terminals in the Numeration have been selected, starting out from the numeration in (101). (Recall that I use the label Neg for the terminal that is usually lexicalized as the negative adverb *not* in English, not to be confused with the polarity head Pol.)

(101) $N = \{D_1, N_1, Neg, V, D_2, N_2, v, T, Pol_1, C\}$

The first applications of Merge are identical to those discussed in the previous section (section 3.2.1). First, the indefinite object DP_1 is merged, after which Neg is merged with DP_1. Then, the verb selects the DP as its complement (recall that verbs do not select NegPs).[82] This yields the phrase marker in (102), in which a single node (DP_1) has two mothers (NegP and VP).

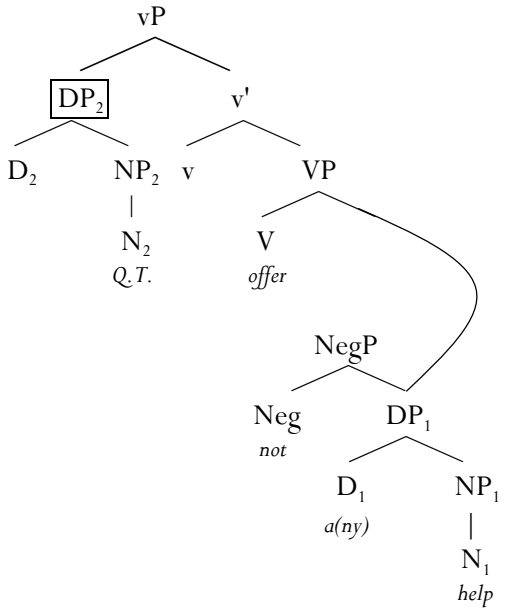
(102)



Subsequently, v merges with the VP, and the subject DP_2 is merged as Spec,vP. As a complex left branch, this subject DP is spelled out before merging as a specifier to the clausal spine. The resulting phrase marker is shown in (103).

[82] The semantics will require the phrase NegP to be merged in the clausal functional sequence to form a negative sentence later on, see below.

(103)



Given that vP is a phase, the PIC requires that the complement of the phase head is spelled out, i.e. VP is transferred to PF and linearized. Recall that NegP is not spelled out when VP is. Spell-Out targets VP and all the material dominated by it; that is, V and DP_1, but not Neg(P). As such, the linearization scheme produces orderings for VP, but not for NegP. The ordered pairs corresponding to the asymmetric c-command relations in the A in (104) have to be disambiguated. A subset that meets English-specific requirements is selected. After this, a linearization d(A) is produced that has to meet Kayne's (1994) well-formedness conditions. The (maximally small) disambiguated subset is given in (105)a and the linearization in (105)b.

(104) $A = \{ \langle V, D_1 \rangle, \langle V, NP_1 \rangle, \langle V, N_1 \rangle, \langle D_1, N_1 \rangle \}$

(105) a. $A' = \{ V < D_1, V < N_1, D_1 < N_1 \}$
b. $d(A) = \{ V < D_1, V < N_1, D_1 < N_1 \}$

After this stage of the derivation, T is merged with vP (recall that $PolP_2$ is not activated in a sentence that contains the deontic Neg>Mod modal *can*) and the subject DP_2 is remerged to become the specifier of TP.

Then, Pol_1 is merged with TP, after which NegP will be merged as the specifier of $PolP_1$. As (at least the negative part of) the negative indefinite has to outscope the

modal *can*, NegP has to be merged in the specifier of the high PolP ($PolP_1$). In this position, NegP semantically combines with the clause and takes sentential scope, scoping above the modal. Given that NegP now merges as a complex specifier, it has to be spelled out before it is merged with $PolP_1$. Hence, NegP is spelled out and the linearization algorithm appplies. The result is the maximally small subset in (107)a (disambiguated ordered pairs corresponding to the A in (106)), and the linearization in (107)b.

(106) $A = \{ \langle Neg, D_1 \rangle, \langle Neg, NP_1 \rangle, \langle Neg, N_1 \rangle, \langle D_1, N_1 \rangle \}$

(107) a. $A' = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$
b. $d(A) = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$

At this point, the PF-branch contains three spelled-out XPs and their linearizations, presented in (108):

(108) a. $d(A)_{NegP} = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$
b. $d(A)_{VP} = \{ V < D_1, V < N_1, D_1 < N_1 \}$
c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

This is the point in the derivation where the negative indefinite *no* is created. As the linearization scheme has put nothing in between the terminals Neg and D_1, these can undergo Fusion Under Adjacency. Once Neg and D_1 have fused, the terminal onto which Neg and D_1 are jointly mapped will occupy the positions assigned to Neg and D_1 in the linearization in (108). The result of Fusion applying to the terminals Neg and D_1 in (108) is given in (109).

(109) a.

$$d(A)_{NegP} = \left\{ \begin{array}{c} Neg = D_1 \ < \ Neg = D_1 \\ Neg = D_1 \ < \ N_1 \\ Neg = D_1 \ < \ Neg = D_1 \end{array} \right\}$$

b.

$$d(A)_{VP} = \left\{ \begin{array}{c} V \ < \ Neg = D_1 \\ V \ < \ N_1 \\ Neg = D_1 \ < \ N_1 \end{array} \right\}$$

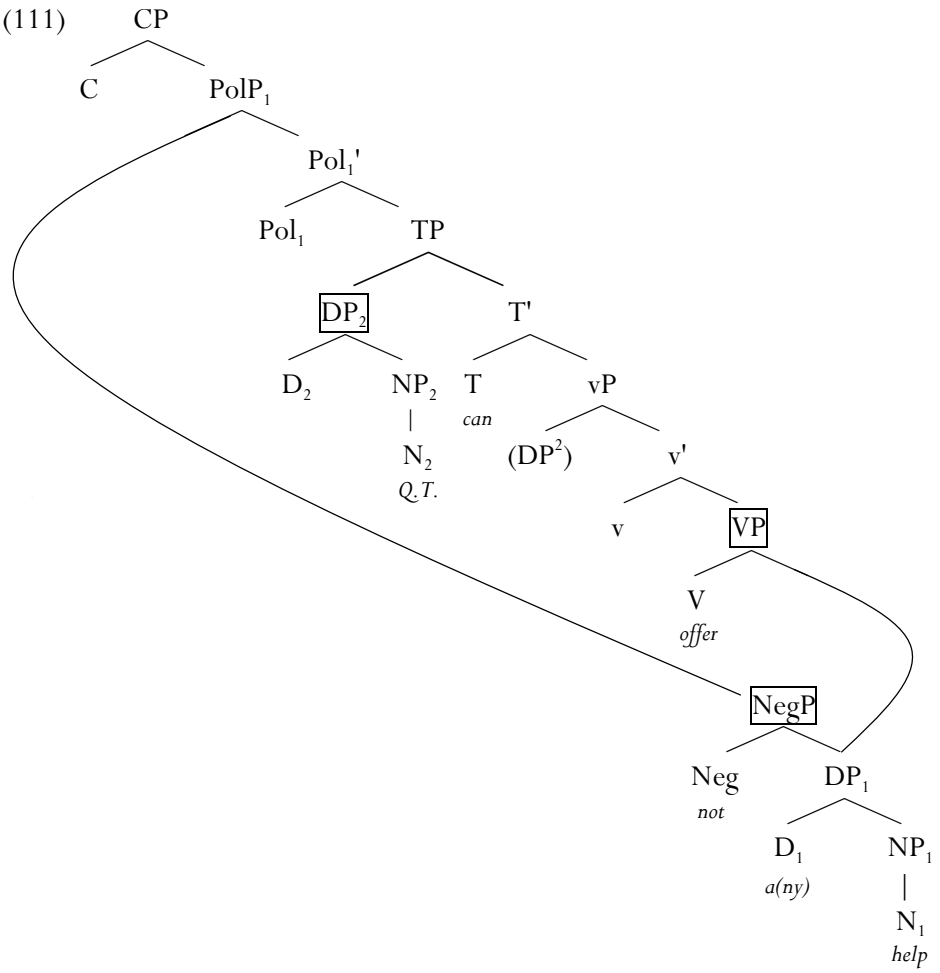
c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

As d(A) is tolerant, superfluous, inconsistent ordering statements can be disposed of:

(110) $d(A)_{NegP} = \{ Neg = D_1 < N_1 \}$

Then, the (spelled-out) NegP is merged as the specifier of $PolP_1$. After this, C is merged with $PolP_1$. The resulting structure is (111):

(111)



After completing the CP-phase, the phasal domain (i.e. the complement of C, here $PolP_1$) undergoes Spell-Out and the linearization algorithm applies.

(112)

$$A = \left\{ \begin{array}{lllll} \langle NegP, Pol_1\rangle & \langle Pol_1', Neg\rangle & \langle Pol_1, DP_2\rangle & \langle DP_2, T\rangle & \langle T', D_2\rangle \\ \langle NegP, TP\rangle & \langle Pol_1', DP_1\rangle & \langle Pol_1, D_2\rangle & \langle DP_2, vP\rangle & \langle T', NP_2\rangle \\ \langle NegP, DP_2\rangle & \langle Pol_1', D_1\rangle & \langle Pol_1, NP_2\rangle & \langle DP_2, DP_2\rangle & \langle T', N_2\rangle \\ \langle NegP, D_2\rangle & \langle Pol_1', NP_1\rangle & \langle Pol_1, N_2\rangle & \langle DP_2, D_2\rangle & \\ \langle NegP, NP_2\rangle & \langle Pol_1', N_1\rangle & \langle Pol_1, T'\rangle & \langle DP_2, NP_2\rangle & \langle T, DP_2\rangle \\ \langle NegP, N_2\rangle & & \langle Pol_1, T\rangle & \langle DP_2, N_2\rangle & \langle T, D_2\rangle \\ \langle NegP, T'\rangle & & \langle Pol_1, vP\rangle & \langle DP_2, v'\rangle & \langle T, NP_2\rangle \\ \langle NegP, T\rangle & & \langle Pol_1, DP_2\rangle & \langle DP_2, v\rangle & \langle T, N_2\rangle \\ \langle NegP, vP\rangle & & \langle Pol_1, D_2\rangle & \langle DP_2, VP\rangle & \langle T, v'\rangle \\ \langle NegP, DP_2\rangle & & \langle Pol_1, NP_2\rangle & \langle DP_2, V\rangle & \langle T, v\rangle \\ \langle NegP, D_2\rangle & & \langle Pol_1, N_2\rangle & \langle DP_2, DP_1\rangle & \langle T, VP\rangle \\ \langle NegP, NP_2\rangle & & \langle Pol_1, v'\rangle & \langle DP_2, D_1\rangle & \langle T, V\rangle \\ \langle NegP, N_2\rangle & & \langle Pol_1, v\rangle & \langle DP_2, NP_1\rangle & \langle T, DP_1\rangle \\ \langle NegP, v'\rangle & & \langle Pol_1, VP\rangle & \langle DP_2, N_1\rangle & \langle T, D_1\rangle \\ \langle NegP, v\rangle & & \langle Pol_1, V\rangle & & \langle T, NP_1\rangle \\ \langle NegP, VP\rangle & & \langle Pol_1, DP_1\rangle & & \langle T, N_1\rangle \\ \langle NegP, V\rangle & & \langle Pol_1, D_1\rangle & & \\ \langle NegP, DP_1\rangle & & \langle Pol_1, NP_1\rangle & & \langle v, V\rangle \\ \langle NegP, D_1\rangle & & \langle Pol_1, N_1\rangle & & \langle v, DP_1\rangle \\ \langle NegP, NP_1\rangle & & & & \langle v, D_1\rangle \\ \langle NegP, N_1\rangle & & & & \langle v, NP_1\rangle \\ & & & & \langle v, N_1\rangle \end{array} \right\}$$

The ordered pairs corresponding to the asymmetric c-command relations in the A in (112) need to be disambiguated. The selected subset has to satisfy English-specific requirements The (maximally small) disambiguated subset is given in (113). The resulting linearization d(A) is the one in (114).

(113)

$$A' = \left\{ \begin{array}{lll} DP_2 < T & NegP < Pol_1 & v < V \\ DP_2 < vP & NegP < TP & v < DP_1 \\ & & \\ T < vP' & Pol_1 < DP_2 & \\ & Pol_1 < TP' & \end{array} \right\}$$

(114)

$$d(A) = \left\{ \begin{array}{llll} N_2 < T & Neg < Pol_1 & D_1 < Pol_1 & N_1 < Pol_1 \quad Pol_1 < N_2 \\ N_2 < v & Neg < N_2 & D_1 < N_2 & N_1 < N_2 \quad Pol_1 < T \\ N_2 < V & Neg < T & D_1 < T & N_1 < T \quad Pol_1 < v \\ N_2 < D_1 & Neg < v & D_1 < v & N_1 < v \quad Pol_1 < V \\ N_2 < N_1 & Neg < V & D_1 < V & N_1 < V \quad Pol_1 < D_1 \\ & Neg < D_1 & D_1 < D_1 & N_1 < D_1 \quad Pol_1 < N_1 \\ D_2 < N_2 & Neg < N_1 & D_1 < N_1 & N_1 < N_1 \\ D_2 < T & & & \\ D_2 < v & T < v & v < V & \\ D_2 < V & T < V & v < D_1 & \\ D_2 < D_1 & T < D_1 & v < N_1 & \\ D_2 < N_1 & T < N_1 & & \end{array} \right\}$$

The linearization in (114) again contains several problematic statements. The statements $D_1 < D_1$ and $N_1 < N_1$ violate Irreflexivity, and statements like $N_1 < v$ and $v < N_1$ or $D_1 < N_2$ and $N_2 < D_1$ are antisymmetric. Moreover, the statements $Neg < V$, $Neg < D_1$, $Neg < N_1$, $D_1 < V$, $N_1 < D_1$, and $N_1 < V$ are inconsistent with the orderings that were fixed earlier in the derivation. Linearizations established for linearization domains earlier in the derivation cannot be changed later on.

As d(A) is tolerant, however, inconsistent and conflicting pairs can be disposed of. Therefore, the reflexive statements can be disposed of and the conflicting statements can be jettisoned. Moreover, the antisymmetric orderings can be discarded. $N_1 < v$, $D_1 < v$, $N_1 < T$, $D_1 < T$, $N_1 < N_2$, $D_1 < N_2$, $N_1 < Pol_1$, and $D_1 < Pol_1$ will be ignored, as these would otherwise result in conflicting statements and transitivity violations. For instance, the combination $N_1 < v$ and $v < V$ would result in $N_1 < V$ (by Transitivity), which contradicts with the linearization statement $V < N_1$, collected earlier.

Furthermore, certain statements in (114) need to obey Transitivity when combining with statements collected earlier (cf. (109)). Relevant examples are given in (115). These statements in (115) are, however, contradicted by other statements in (114), namely $Neg < Pol_1$, $Neg < N_2$, $Neg < T$, and $Neg < v$. As the statements in (109) were collected earlier in the derivation, these cannot be altered, and the four statements in (114) under discussion need to be disposed of.

(115) TRANSITIVITY

a.	Pol_1	<	V	(114)	+	V < Neg = D_1	(109)	→	Pol_1	<	Neg = D_1
b.	N_2	<	V	(114)	+	V < Neg = D_1	(109)	→	N_2	<	Neg = D_1
c.	T	<	V	(114)	+	V < Neg = D_1	(109)	→	T	<	Neg = D_1
d.	v	<	V	(114)	+	V < Neg = D_1	(109)	→	v	<	Neg = D_1

In the end, the remaining ordering statements are those in the d(A) in (116). These statements will be added to the orderings collected earlier (i.e. the ones in (109)).

(116)

$$d(A) = \left\{ \begin{array}{llllll} D_2 < N_2 & N_2 < T & T < v & Pol_1 < N_2 & v < V & D_1 < N_1 \\ D_2 < T & N_2 < v & T < V & Pol_1 < T & v < D_1 & \\ D_2 < v & N_2 < V & T < D_1 & Pol_1 < v & v < N_1 & \\ D_2 < V & N_2 < D_1 & T < N_1 & Pol_1 < V & & \\ D_2 < D_1 & N_2 < N_1 & & Pol_1 < D_1 & & \\ D_2 < N_2 & & & Pol_1 < N_1 & & \end{array} \right\}$$

At first sight, it seems that not all terminals are ordered with respect to each other in (116) – for instance, there is no statement T < Neg (or vice versa). Nevertheless, all terms will be ordered with respect to one another, by virtue of Fusion Under Adjacency between Neg and D_1 earlier in the derivation (cf. the orderings in (109)): T < D_1 and Neg = D_1, hence T < Neg = D_1. Similarly, T and Neg are also ordered with respect to each other as a result of Transitivity: T < V and V < Neg = D1, hence T < Neg = D1 (cf. (115)), The result of adding the ordering statements in (116) to the ones in (109) is a total, consistent ordering, which will eventually be realized as *Quentin Tarantino can offer no help*.

Again, the order of V and the indefinite determiner of the object DP_1 is fixed when VP is transferred to PF. At this point, the order of Neg relative to V and D_1 is not yet determined. When NegP merges as a complex left branch, it is spelled out and linearized. At this point, Neg and D_1 are adjacent and FUA can apply, resulting in Neg and D_1 becoming one terminal element. This element obeys all the ordering statements referring to both Neg and D_1. The fused element therefore has to follow V, because positions assigned by the linearization algorithm at an early stage in the derivation cannot be altered later on. As such, the multidominant, cyclic analysis developed here derives an English sentence containing a modal and an object negative indefinite, such as *Quentin Tarantino can offer no help*.

3.3 Summary and discussion

In this section I have developed an analysis of English negative indefinites with the following key components: decomposition of the negative indefinitive, remerge (multidominance), cyclic Spell-Out and linearization, and Fusion under Adjacency. This multidominant, cyclic analysis ensures that the two components of an English negative indefinite DP, sentential negation and an indefinite determiner, can fuse together even though they are not string adjacent at first sight. Moreover, the cyclicity of Spell-Out and linearization and the requirement of Order Preservation ensure that the negative indefinite object is realized in its base position, although it can be interpreted in its remerge position (e.g. outscoping a deontic modal such as *can*).[83]

Note that the structures in (93) and (111), with negation + indefinite DP (i.e. the negative indefinite) occupying the specifier of a polarity phrase seems reminiscent of the analyses in Haegeman & Zanuttini (1991, 1996), Rizzi (1991/96), Zanuttini (1991), DeGraff (1993), Haegeman (1995), and Cornilescu (2004) in terms of the NEG-criterion. The NEG-criterion (in line with Rizzi's (1991/96) WH-criterion) posits that negative indefinite DPs have to move to the specifier of a clausal polarity phrase (Spec,NegP in the original wording). According to Zanuttini (1991) and Haegeman & Zanuttini (1991), the NEG-criterion can be satisfied at LF in some languages, while in others it has to be satisfied in overt syntax. For Haegeman (1995), on the other hand, the NEG-criterion universally has to apply in overt syntax.[84] The analysis proposed here could be said to follow (Haegeman's (1995) version of) the NEG-criterion in that a negative indefinite DP always occupies a Spec,PolP in overt syntax. However, unlike in the NEG-criterion proposals, this does not imply that the negative indefinite is overtly realized in that position.[85]

In case a negative indefinite has a high scope reading, although it is realized in its base position, its scope (i.e. *no* > *can*) corresponds to its merger as the specifier of

[83] In the beginning of this chapter, it was mentioned (cf. footnote 6) that some speakers of English do not accept negative indefinites in object position. As pointed out by Anikó Lipták (p.c.), the question now arises whether these speakers might not allow for FUA. It should be noted that these speakers do allow for negative indefinites in subject position. If these are also the result of FUA (which seems desirable, see also chapter 6, section 2.4 for some discussion), it cannot be the case that FUA is lacking from their grammars altogether. It might be the case that formality plays an important role, as also mentioned in footnote 4 of this chapter.

[84] This forces Haegeman (1995) to posit the base generation of an empty operator in the specifier of the polarity head in order to deal with object negative indefinites. See also Cornilescu (2004).

[85] My account also differs from NEG-criterion analyses in that they (i) take negative indefinites to be negative quantifiers and (ii) posit that the negative indefinite moves to the specifier because it has to enter into a checking relation with the negative/polarity head in order to check its negative features. These two aspects are not present in my account.

$PolP_1$. As such, this multidominant, cyclic analysis of negative indefinites derives "covert raising" of the negative indefinite to a position outscoping the modal *can*. The account proposed here only relies on a single recursive structure-building operation (Merge) in narrow syntax, and on Order Preservation in a cyclic Spell-Out model of the grammar. This is reminiscent of Bobaljik's (1995, 2002) *Single Output Syntax*. He proposes that all movement, both overt and covert, takes place in narrow syntax. At the end of the derivation, PF decides which copy to spell out and LF decides which copy to interpret. Spell-Out of the high copy at PF yields traditional overt movement; Spell-Out of the low copy results in traditional covert movement. At LF too, a choice is made as to which copy is interpreted, resulting in reconstruction when the low copy is chosen. I do not adhere to the copy theory of movement. 'Move' is Internal (Re)Merge: one syntactic object is merged in several positions. Whether the remerged element will be spelled out in its original position or its remerge position depends on whether or not its original position is part of a spelled out node and how it is linearized there. Order Preservation can block linearization in the remerge position if this would contradict the ordering statements established in a previous linearization domain (cf. Fox & Pesetsky 2003, 2004a,b, 2007; Johnson 2007; Sabbagh 2007; among many others). Hence, PF is not exactly 'free' to choose in which position an object is linearized. Nevertheless, the gist of the proposal here is identical to Bobaljik's (1995, 2002) account: remerge happens in narrow syntax and where a syntactic object is linearized depends on PF-considerations. As such, the analysis developed here does not have to resort to mechanisms such as traditional "movement at LF" (cf. the LF-satisfaction of the NEG-criterion in e.g. Haegeman & Zanuttini 1991). Furthermore, the account proposed here does not subscribe to (counter-cyclic) "movement in a Spell-Out domain D after linearization of D" (cf. Fox & Pesetsky 2003).

Thus, in this section I have derived the equivalent of (or alternative to) "covert raising" of negative indefinites. It should be stressed, though, that an LF-raising account and my proposal are not equivalent. The next section focuses on the interaction between negative indefinites and ellipsis in English. I argue that the empirical generalizations discussed in section 2 are elegantly accounted for under the analysis of English negative indefinites developed in this section. A "covert raising" analysis of negative indefinites makes different predictions (cf. section 6 of this chapter for related discussion). As such, the decisive evidence for the analysis presented in this section (and against covert LF-movement) is presented in section 4 (and section 6).[86]

4 Negative indefinites and ellipsis: The analysis

This section discusses the behavior of English negative indefinites in verbal and clausal ellipsis. In section 2.2, it was shown that negative indefinites in object position cannot take scope out of VP-ellipsis sites. Section 4.1 presents an account of this observation based on the analysis of negative indefinites developed in section 3 of this chapter; that is, negative indefinites involve Fusion Under Adjacency between sentential negation Neg and an indefinite determiner, and this adjacency comes about under multidominance and cyclic Spell-Out. Section 2.1 discussed the interchangeability of *any* and *no* in verbal and clausal ellipsis. While *not…any* can antecede the ellipsis of *no* in clausal ellipsis, this switch is disallowed in verbal ellipsis. In section 4.2, this is again analyzed on the basis of the account presented in section 3. Crucially, for both observations (in section 2.1 and 2.2), it is argued that, given that ellipsis is a PF-process, it can block Fusion Under Adjacency (at PF) between sentential negation Neg and the indefinite determiner D of the object DP.

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[86] As Anikó Lipták (p.c.) notes, at first sight, the LF-raising account might seem better suited to deal with data such as the sentence in (i).

(i) You bought no book, didn't you?

Klima (1964) introduced the question tag test: while a negative sentence combines with a positive question tag, an affirmative sentence combines with a negative question tag, as illustrated in (ii):

(ii) a. You did not buy a book, did/*didn't you?
b. You bought a book, didn't/*did you?

This question tag test seems to indicate that the sentence with the object negative indefinite *no book* in (i) is affirmative – in other words, that PolP is specified for positive polarity in (i), see also De Clercq (2011). It is therefore not obvious in which sense PolP is negative in the syntax in (i) (as proposed in my analysis of object negative indefinites).

However, as also noted by De Clercq (2011: fn.3), there are native speakers of English who report that they have positive tags with a negative indefinite in object position. Moreover, De Clercq stresses that "it is definitely the case that *no/nothing* in object position gives rise to positive tags with certain modal verbs, e.g. with *could*" (cf. (iii)).

(iii) [De Clercq 2011: fn.3, (1)]
He could use no credit cards in that shop, ??could he/ ?couldn't he?

Thus, it might well be the case that sentences like (i) and (iii) with positive tags confirm that sentences with object negative indefinites *are* (or at least *can be*) negative.

De Clercq (2011: fn.3) wonders whether positive tags in (i) and (iii) show that the speakers who allow these "are mixing up the two kinds of tags, or whether there is genuine variation with respect to tagging." It should also be noted that according to Tubau (2008:78), Klima's tests "have been reported to run into some problems" (see Tubau 2008 for relevant references). I take the data discussed in this chapter to show convincingly that the analysis developed in this dissertation is to be preferred over an LF-raising account and I leave the issue of question tags to further research.

The interaction between ellipsis and negative indefinites shows that the derivation of negative indefinites crucially involves a PF-ingredient. Because ellipsis, a PF-process, blocks negative indefinites, it can be concluded that the formation of negative indefinites (in particular, Fusion Under Adjacency), is also a PF-process. The idea that ellipsis can bleed morphological processes is also adopted by Fuß 2008, Saab & Zdrojewski 2010, Schoorlemmer & Temmerman 2010, 2012, Boone 2011, Stjepanović 2011, and Lipták & Saab 2012.

4.1 Deriving the VPE/NI Generalization

Sections 2.2 and 2.3 introduced the VPE/NI Generalization in (117):

(117) THE VPE/NI GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

This section presents an analysis for this generalization. It is argued that the PF-process of ellipsis blocks the PF-process Fusion Under Adjacency. The analysis of (117) presented in this section has the following central ingredients:

(118) *Ingredients for the analysis*

(i) Negative indefinites are the result of Fusion Under Adjacency between sentential negation and an indefinite determiner. The required adjacency comes about under multidominance and cyclic Spell-Out/linearization. (this chapter, section 3.2)

(ii) The clausal structure contains 2 PolPs, one dominating and one dominated by TP. (this chapter, sections 3.1.2 and 3.2)

(iii) Ellipsis of α involves (i) the non-pronunciation of any terminal element dominated by α and (ii) the deletion from the Ordering Table of all ordering statements referring to the terminal elements dominated by α. (chapter 2, section 4)

(iv) Ellipsis takes place in the course of the derivation. (chapter 2, section 4)

(v) VP-ellipsis is ellipsis of the complement of T (this chapter, next subsection)

Before I go through the analysis of two relevant example sentences, I discuss the fifth ingredient (i.e. VP-ellipsis is ellipsis of the complement of T) in the next subsection.

4.1.1. VP-ELLIPSIS IS ELLIPSIS OF T'S COMPLEMENT

As discussed in section 4.2.1 of chapter 2, I take ellipsis to require a licensing head, following Zagona (1982, 1988a, 1988b), Lobeck (1992, 1995), Martin (1992, 1996), Johnson (2001), Merchant (2001 *et seq*.), and Aelbrecht (2009), amongst others. That is, only particular heads with a certain feature specification, the licensors, can trigger PF-deletion; their complements constitute the ellipsis site. For VP-ellipsis in English, the licensing head is generally taken to be the inflectional head T (when T is occupied by a finite auxiliary, a modal, or the infinitival marker *to*).[87] Grammatical instances of English VP-ellipsis have a modal, an auxiliary *have, be,* or *do*, or the infinitival marker *to* filling the T-head, as illustrated in (119).[88] When there is no licensor overtly occupying T, VP-ellipsis is impossible, as indicated by the contrast between (120)a and (120)b. Verbal elements other than the aforementioned ones do not license ellipsis of their complements, cf. (121). The examples in (122) show that non-finite auxiliaries cannot license VP-ellipsis.

(119) [Johnson 2001:440, (5) & Johnson 2001:442, (13)]

a. José Ybarra-Jaegger likes rutabagas, and Holly does too.
b. José Ybarra-Jaegger ate rutabagas, and Holly has too.
c. José Ybarra-Jaegger is eating rutabagas, and Holly is too.
d. Mag Wildwood wants to read Fred's story, and I also want to.
e. Sally might have eaten rutabagas, but Holly shouldn't.

(120) [Johnson 2001:439, (4)]

I can't believe Holly Golightly won't eat rutabagas.

a. I can't believe Fred won't, either.
b. * I can't believe Fred, either.

[87] See Zagona (1982, 1988a, 1988b), Martin (1992, 1996), Lobeck (1992, 1995), Johnson (2001), Aelbrecht (2009).

[88] I take the modals and dummy *do* to be base generated in T and aspectual auxiliaries (merged in Aux/Asp, cf. chapter 4) to move to T when there is no modal present, which are fairly standard assumptions (cf. Chomsky 1957; Jackendoff 1972; Fiengo 1974; Bobaljik 1995; Wurmbrand 2003; Gergel 2009). That the infinitival marker *to* originates in T has been proposed by Akmajian et al. (1979), Stowell (1982), den Besten (1989), and van Gelderen (1996, 1997).

(121) [Johnson 2001:440, (7)]

a. * Sally Tomato started running down the street, but only after José started.

b. * Sally Tomato made Mag laugh, and then José made.

(122) [Aelbrecht 2009:180-181, (19)]

a. * I hadn't been thinking about it, but I recall Morgan having been.

b. * I hadn't thought about it, but I recall Morgan having.

As T has been established as the licensing head, 'VP-ellipsis' is actually ellipsis of the complement of T.[89] That the elliptical constituent in 'VP-ellipsis' is, despite its name, actually larger than the verb phrase has been argued by Johnson (2001, 2004), Merchant (2001, 2007, 2008b), and Aelbrecht (2009), for instance. One of the arguments is that in sentences with a *there*-expletive subject, the associate of *there* is elided, showing that vP is targeted by elision as well. This is true for *there*-sentences involving unaccusative verbs and copular *be* (with the correlate of *there* base-generated inside VP), as in (123)a, but importantly also for *there*-sentences involving unergative and transitive verbs, as in the example in (123)b. In these cases, the elided *there*-expletive associate has been base generated in Spec,vP, showing that 'VP-ellipsis' targets (at least) vP.[90]

(123) [Aelbrecht 2009:186, (32)-(33)]

a. At first I didn't believe there was an elephant in the garden, but there was ⟨ ~~an elephant in the garden~~ ⟩.

b. I didn't know there was someone talking to Rebecca, but there was ⟨ ~~someone talking to Rebecca~~ ⟩.

In section 3.1.2 of this chapter, it was argued that the clausal spine contains two PolPs, one dominating and one dominated by TP. A schematic representation was given in (64), repeated here in (124)a. The effect of 'VP-ellipsis' in this clausal

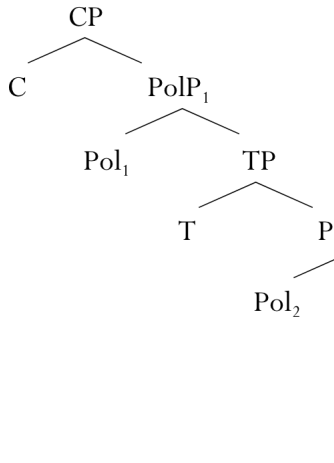
[89] But see chapter 4 for some modifications.

[90] The claim that 'VP-ellipsis' targets the complement of the licensor T is complicated by two factors. First, aspectual and voice auxiliaries can survive the ellipsis (Aelbrecht 2009:184-186). Second, Merchant (2007, 2008b) accounts for the possibility of Voice mismatches in VP-ellipsis by positing that VP-ellipsis does not elide the head Voice. See Aelbrecht (2009) for a possible implementation. As this would take us too far afield, I stick to the more 'traditional' account that T is the licensor of 'VP-ellipsis' and that its complement is subject to elision. It should be noted, though, that an Aelbrecht (2009)-style account, where ellipsis does not target the complement of T, but a smaller constituent, is compatible with my analysis, as long as the low $PolP_2$ is part of the verbal ellipsis site.

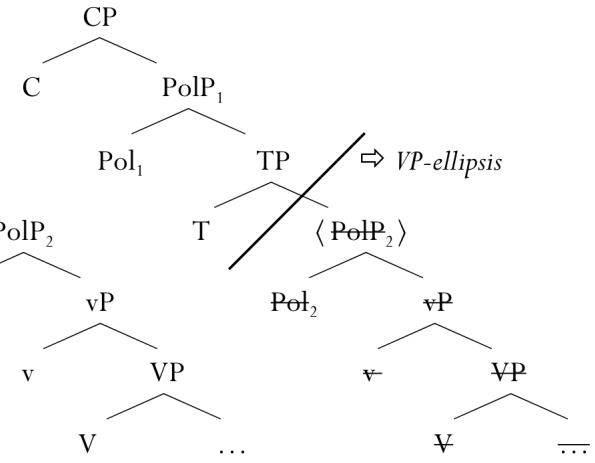
structure is given in (124)b: as VP-ellipsis is ellipsis of the complement of T, everything c-commanded by T is elided. Hence, the 'VP-ellipsis' site includes $PolP_2$.

(124)

a. CLAUSAL ELLIPSIS



b. VP-ELLIPSIS = ELLIPSIS OF THE COMPLEMENT OF T



4.1.2. THE VPE/NI GENERALIZATION: TWO SAMPLE DERIVATIONS

This section shows how the VPE/NI Generalization, repeated here, can be derived based on the ingredients presented at the beginning of this section in (118). The main claim of this section is that ellipsis, a PF-process (cf. section 4 of chapter 2), blocks another PF-process, Fusion Under Adjacency. It is shown that, because ellipsis blocks FUA, negative indefinites cannot take scope out of a VP-ellipsis site.

(117) THE VPE/NI GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

Two relevant examples are the ones in (40) and (44), repeated here. The antecedent of the VP-ellipsis example in (44) is an English sentence that contains both a negative indefinite in object position and the existential deontic modal *can*. VP-ellipsis is only grammatical for those speakers allowing the modal to outscope negation, and only under that reading. The antecedent of the example in (40) is a modal-lesss English

sentence with a negative indefinite in object position. VP-ellipsis in this example is grammatical.

(44) Q: Who can offer **no** help?
A: % Quentin Tarantino can ⟨ ~~offer **no** help~~ ⟩. (* ¬ > ◇, % ◇ > ¬)

(40) Q: Who liked **no** movie?
A: ? Quentin Tarantino did ⟨ ~~like **no** movie~~ ⟩.

Let us first consider the derivation of the VP-ellipsis example in (44).

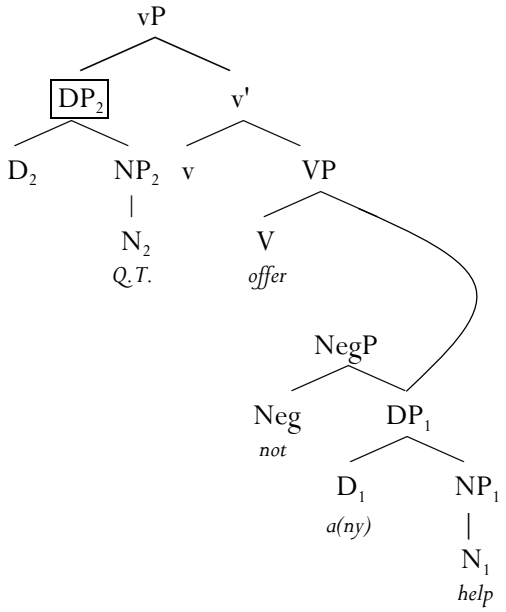
4.1.2.1 Sample derivation 1: VP-ellipsis blocks high scope of no

For the VP-ellipsis example in (44), the syntactic derivation starts out with a collection of terminals in a numeration N, given in (125).

(125) $N = \{D_1, N_1, Neg, V, D_2, N_2, v, T, Pol_1, C\}$

The first applications of the structure building operation Merge are identical to those discussed in section 3.2.2. First, the indefinite object DP_1 is merged, after which Neg is merged with DP_1. Then, the verb selects the object DP_1 as its complement, resulting in a single node (DP_1) having two mothers (NegP and VP). After this, v merges with VP, and the subject DP_2 is merged as Spec,vP. Given that it is a complex left branch, this subject DP is spelled out before merging as a specifier of vP. The resulting phrase marker is the one in (126).

(126)

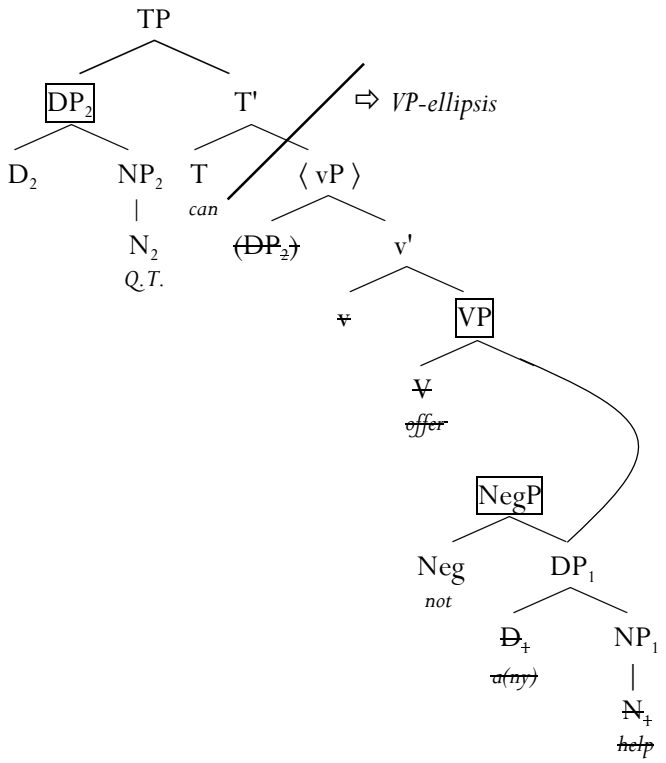


Since vP is a phase, the complement of the phase head, VP, is shipped off to PF (cf. the *Phase Impenetrability Condition* (PIC)). Recall that NegP is not spelled out when VP is. Spell-Out targets VP and all the material it dominates; that is, V and DP_1, but not Neg(P). At PF, the linearization algorithm applies to the transferred phasal domain (VP, but not NegP). The result is the linearization d(A) in (127):

(127) $d(A) = \{ V < D_1, V < N_1, D_1 < N_1 \}$

After this, T is merged with vP (recall that $PolP_2$ is not available when the sentence contains the deontic Neg>Mod modal *can*, cf. sections 3.1.2 and 3.2.2). T is the licensor of VP-ellipsis, i.e. it triggers ellipsis of its complement (here vP). As ellipsis takes place in the course of the derivation (Aelbrecht 2009), the ellipsis site is sent off to PF (marked for ellipsis) as soon as the licensing head is merged (cf. chapter 2, section 4.2). Importantly, the licensor itself can attract an element out of the ellipsis site prior to ellipsis, as all operations triggered by the same head take place simultaneously (Aelbrecht 2009, see section 4.2.2 of chapter 2). Therefore, the subject DP_2 can be remerged to become the specifier of TP before T's complement (vP) is transferred to PF for ellipsis.

(128)



Following Fox & Pesetsky (2003, 2004a), ellipsis of vP involves (i) the non-pronunciation of any terminal element dominated by vP and (ii) the deletion from the Ordering Table of all ordering statements referring to the terminal elements dominated by vP (chapter 2, section 4.2.2). Crucially, this entails that ellipsis targets (the ordering statements referring to) the terminals v, V, D_1, and N_1 (all dominated by vP) but not Neg, as it is not dominated by vP.[91] The terminals V, D_1 and N_1 had already been ordered with respect to one another when VP was sent off to PF as a consequence of the PIC (cf. (127)). These ordering statements are deleted (cf. (129)a). New ordering statements referring to v are simply not generated, cf. (129)b.

(129) a. $d(A)_{VP} = \{ \sout{V \prec D_+, V \prec N_+, D_+ \prec N_+} \}$
b. $d(A)_{vP} = \{ \ \}$

[91] I disregard the subject DP_2 in Spec,vP, which will be linearized in its remerged position Spec,TP (cf. section 3.2 for more details on the linearization of the subject).

Subsequently, Pol_1 is merged with TP. As the negative indefinite scopes above *can*, NegP is merged as the specifier the high PolP ($PolP_1$), where it will take sentential scope, outscoping the modal in T. NegP is a complex left branch. Therefore, it has to be spelled out before it merges with $PolP_1$. NegP is transferred to PF and the linearization algorithm applies. Recall (section 3.2.2) that this is the point in the derivation where Neg and D_1 normally become adjacent and can therefore undergo Fusion Under Adjacency. DP_1 was – as part of the vP-ellipsis site – subject to ellipsis, however. This means that the terminals in DP_1 (D_1 and N_1) have been elided: these terms are not pronounced and linearization statements referring to them are ignored. As DP_1 has already been elided at this point, there Neg cannot fuse with D_1. Fusion Under Adjacency between Neg and D_1 is thus blocked because of ellipsis. Only Neg remains and, consequently, Neg can only be spelled out as an independent lexical item (i.e. as *not*). The result of the linearization algorithm applying to the linearization domain NegP is simply the linearization d(A) in (131):[92]

(130) A = { ⟨Neg, ~~D_1~~⟩, ⟨Neg, ~~NP_1~~⟩, ⟨Neg, ~~N_1~~⟩, ⟨~~D_1~~, ~~N_1~~⟩ }[93]

(131) a. A' = { Neg }[94]

b. d(A) = { Neg }

After merger of NegP as specifier of $PolP_1$, the phase head C is merged with $PolP_1$.[95] The resulting structure is (132).

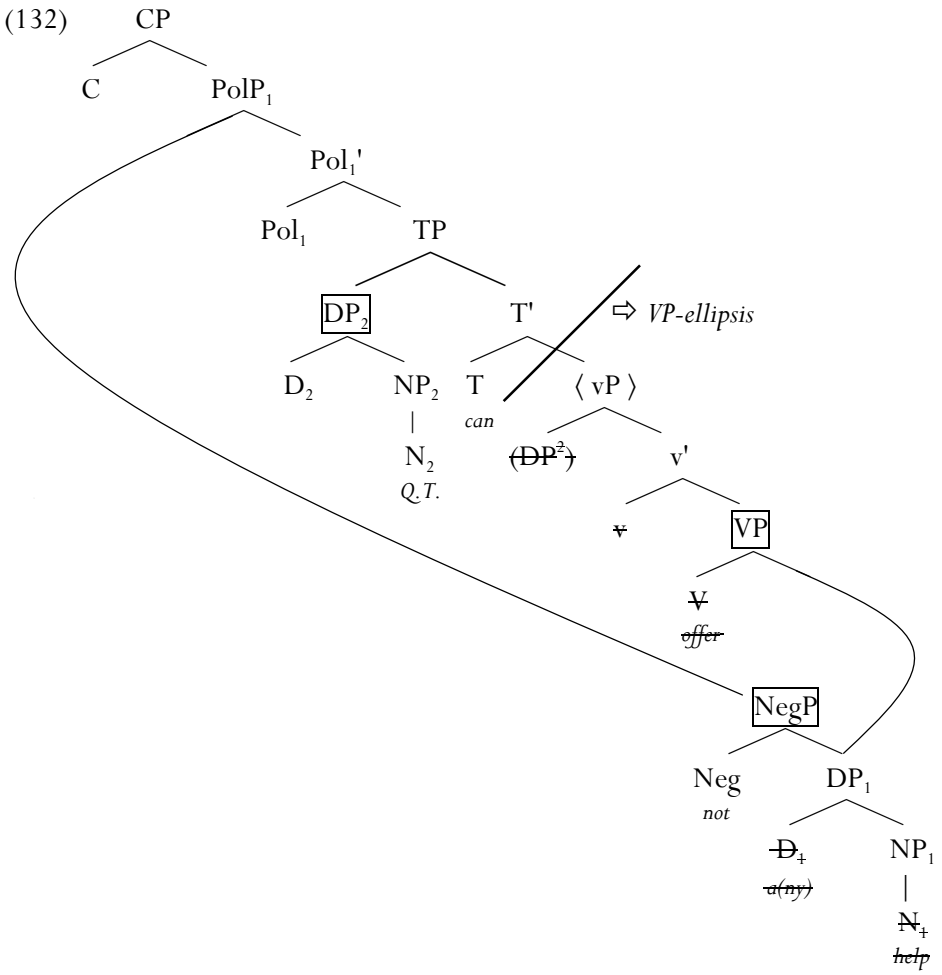
[92] Note that, although DP_1 is part of the vP-ellipsis site, NegP is still a complex specifier syntactically: it consists of Neg and DP_1. Following Uriagereka (1999), NegP is therefore still required to be spelled-out before merging to the clausal spine. The result of Spell-Out/linearization is, however, not complex, as a part of NegP (DP_1) remains unpronounced as a consequence of its being part of an ellipsis site.

[93] The representation of ellipsis in (130) is not 100% accurate, as only linearization statements mentioning terminal elements are deleted, i.e. not linearization statements referring to phrases (such as NP_1). In the end, however, the d(A) produced on the basis of the A in (130) will only contain statements referring to terminals and 'the contents of' NP_1, i.e. the terminals inside NP_1, will be ignored. I strike through NP_1 here and similar phrases throughout this chapter for ease of exposition.

[94] To be precise, A' and d(A) in (131) are actually not the singleton {Neg}, but an empty set { }, as A' and d(A) are collections of ordering statements and 'Neg' is not an ordering statement. This will not pose problems for the linearization of Neg, as it will be linearized once again when the domain of the CP-phase is spelled out and linearized.

[95] Note that merger of NegP containing an elided DP does not contradict the second consequence of derivational ellipsis discussed by Aelbrecht (2009), i.e. that "the ellipsis site becomes inaccessible for any further syntactic operations" (p.91), cf. chapter 2. Crucially, for Aelbrecht (2009), an element inside an ellipsis site cannot be targeted for movement/remerge once the ellipsis site has been sent off to PF. This does not mean, though, than a constituent that contains (part of) an ellipsis site is not accessible for syntactic operations. DPs containing an elided NP and CPs containing a sluiced TP, for instance, can be remerged. In the sluicing examples in (i) and (ii) for instance, a CP with a sluiced TP is fronted, as shown in (i')b and (ii')b. (*continued on the next page*)

(132)



When the CP-phase is completed, the phasal domain (i.e. the complement of the

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(i) "You are so beautiful," he said as he stared at her. "Standing there in the light like that."
She glanced at her Gap black pants and her two year old knit turtleneck. "You must be blind."
"Why?" he asked, coming over to her. [*Lover Avenged,* by J.R. Ward, 2009]

(i') a. He asked: " [Why ⟨ ~~must I be blind~~ ⟩] ?"
b. " [Why ⟨ ~~must I be blind~~ ⟩]$_i$?" he asked t_i.

(ii) "You must not say these things to Lucy. It could never be."
Lord Vane laughed. "Why?" asked he.
"Your father and mother would not approve of it." [*East Lynne*, by Mrs. Henry (Ellen) Wood, 1861]

(ii') a. He asked "[why ⟨ ~~could it never be~~ ⟩] ?"
b. " [Why ⟨ ~~could it never be~~ ⟩]$_i$?" asked he t_i.

phase head C, here $PolP_1$) undergoes Spell-Out. The derivation in (125)-(132) will ultimately be spelled out as (133)a; the example in (133)b can – in the intended reading – not be derived by the system proposed here.[96]

(133) Who can offer no help?
a. Quentin Tarantino can not ⟨ ~~offer (any) help~~ ⟩. (¬ > ◇)
b. * Quentin Tarantino can ⟨ ~~offer no help~~ ⟩. (* ¬ > ◇)

As such, the system developed here derives the VPE/NI Generalization in (117), i.e. the fact that a negative indefinite in object position cannot scope out of a VP-ellipsis site, on the basis of the ingredients in (118). The PF-process ellipsis blocks another PF-process, Fusion Under Adjacency. As a consequence, negative indefinites cannot scope out of a VP-ellipsis site.

In the next subsection, I consider how the system proposed here derives that a VP-ellipsis site may contain a negative indefinite, as long as it does not take scope out of the ellipsis site.

4.1.2.2 Sample derivation 2: Low-scoping no *in a VP-ellipsis site*

A relevant example of a grammatical case of VP-ellipsis containing a negative indefinite is the one in (40), repeated here. The antecedent of the example in (40) is a modal-less English sentence with a negative indefinite in object position. There are no indications that the negative indefinite takes high scope, as there is no other scopal element in this sentence.

(40) Q: Who liked **no** movie?
A: ? Quentin Tarantino did ⟨ ~~like **no** movie~~ ⟩.

For this example, the syntactic derivation starts out with the numeration N given in (134):

[96] Although the deontic modal *can* is inside the scope of negation (cf. T is c-commanded by Neg(P) in (132)), it surfaces higher than the negative marker (cf. *can not* in (133)a). Recall the discussion in footnote 66 that Cormack & Smith (2002) take the modal to be displaced over the negation at PF. Note that the subject DP_2 will also need to be displaced to obtain the correct word order, for instance to Spec,CP (although this seems odd for a non-V2 language like English). Another option is to have the tolerant linearization algorithm of Johnson (2007) do the work, e.g. linearizing Neg(P) or $PolP_1$ following T. This would require a reconsideration of the English-specific linearization requirements regarding the specifier occupied by NegP.

(134) $N = \{D_1, N_1, Neg, V, D_2, N_2, v, Pol_2, T, C\}$

Upon the completion of the vP phase after multiple instances of merge (cf. the previous subsection and section 3.2 for details), the phasal complement VP and all the material dominated by it is targeted by Spell-Out and linearization (because of the PIC), resulting in the d(A) in (135).

(135) $d(A) = \{ V < D_1, V < N_1, D_1 < N_1 \}$

Next, Pol_2 is merged with vP, after which NegP will be merged as the specifier of $PolP_2$ to take sentential scope. Recall that, as there is no scopal element such as a modal that needs to be outscoped by negation, I take the negative element to merge with the low PolP, i.e. $PolP_2$ (cf. sections 3.1.2 and section 3.2.1).[97] As NegP forms a complex left branch, it is transferred to PF before merging with $PolP_2$. As such, NegP is spelled out and the linearization scheme applies. The linearization produced is (136):

(136) $d(A) = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$

At this point, the PF-branch contains the linearizations of three spelled out phrases:

(137) a. $d(A)_{NegP} = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$
b. $d(A)_{VP} = \{ V < D_1, V < N_1, D_1 < N_1 \}$
c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

As the linearization algorithm has put no element in between the two terminals Neg and D_1, they are adjacent at this point in the derivation. Because the linearization scheme has assigned Neg and D_1 adjacent positions, they can undergo Fusion Under Adjacency. Once Neg and D_1 have fused, the terminal onto which Neg and D_1 are jointly mapped will occupy the positions assigned to Neg and D_1 in the linearization in (137). The result of Fusion Under Adjacency of Neg and D_1 is given in (138).[98]

[97] In principle, merging NegP as the specifier of $PolP_1$ to gain sentential scope is possible as well. Ellipsis will in that case, however, block Fusion Under Adjacency (as discussed in the previous subsection), and hence, formation of a negative indefinite.

[98] The d(A) for NegP was originally more elaborate, but as d(A) is tolerant, superfluous and inconsistent statements can be discarded (see section 3.4 of chapter 2 and section 3.2 of this chapter).

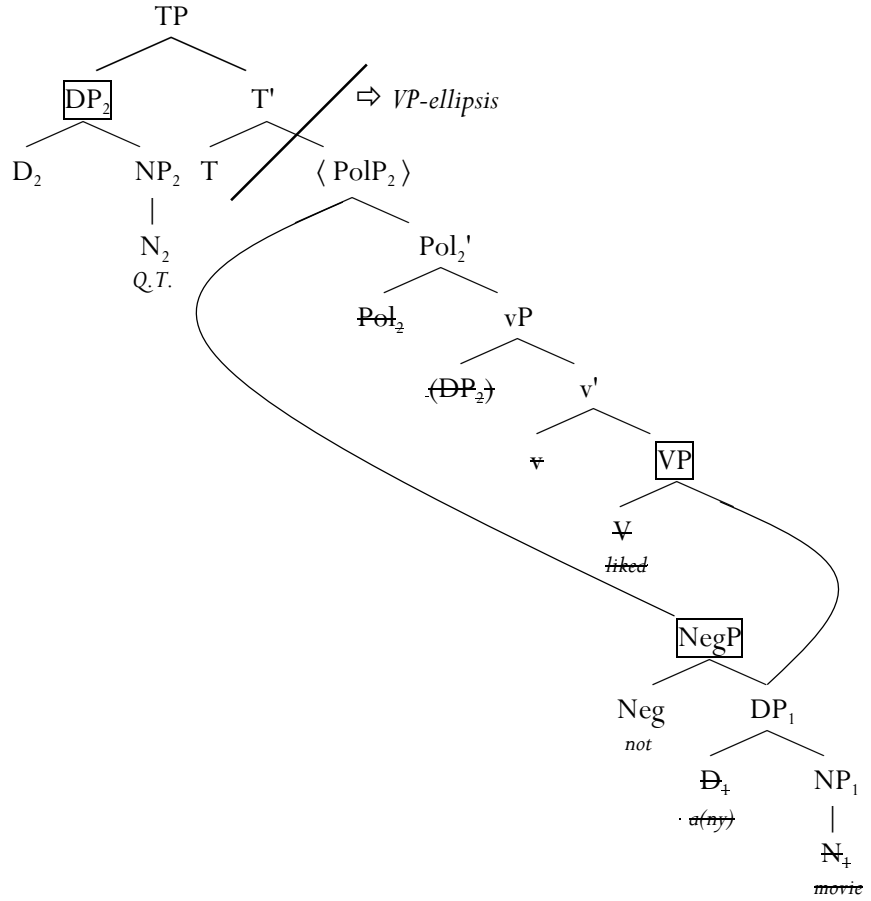
(138) a. $d(A)_{NegP} = \{ Neg = D_1 < N_1 \}$

b.
$$d(A)_{VP} = \left\{ \begin{array}{r} V < Neg = D_1 \\ V < N_1 \\ Neg = D_1 < N_1 \end{array} \right\}$$

c. $d(A)_{DP_2} = \{ D_2 < N_2 \}$

After this stage in the derivation, the (spelled-out) NegP is merged as the specifier of $PolP_2$. Then, T is merged with $PolP_2$. As T is the licensor of VP-ellipsis, it triggers deletion of its complement (here $PolP_2$). Because ellipsis is derivational, the ellipsis site is transferred to PF as soon as the licensing head T is merged. Recall that the subject DP_2 can be remerged to become the specifier of TP before T's complement is sent off to PF.

(139)



Ellipsis of $PolP_2$ involves (i) the non-pronunciation of any terminal element dominated by $PolP_2$ and (ii) the deletion from the Ordering Table of all ordering statements referring to the terminal elements dominated by $PolP_2$ (Fox & Pesetsky 2003, 2004a). This entails that ellipsis targets all terminals dominated by $PolP_2$, including D_1, N_1 and, crucially, also Neg. The terminals V, Neg, D_1 and N_1 had already been ordered with respect to one another when VP was sent off to PF as a consequence of the PIC and when NegP was spelled out because it constituted a complex left branch. Neg and D_1 became jointly mapped through Fusion Under Adjacency. These ordering statements are ignored because of ellipsis (cf. (140)a,b). Note that new linearization statements for $PolP_2$ are not created ((140)c).[99]

[99] I again disregard the subject DP_2 in Spec,vP, which will be linearized in its remerged position Spec,TP.

(140) a. $d(A)_{NegP} = \{ \sout{Neg = D_+ < N_+} \}$

b. $d(A)_{VP} = \left\{ \begin{array}{c} \sout{V < Neg = D_+} \\ \sout{V < N_+} \\ \sout{Neg = D_+ < N_+} \end{array} \right\}$

c. $d(A)_{PolP_2} = \{ \quad \}$

After all this, the rest of the structure is merged and, finally, the derivation is spelled out as in (141). Recall that VP-ellipsis can only be licensed by a filled T-head (cf. subsection 4.1.1). As English main verbs (such as *like*) do not undergo V-to-T movement (cf. Emonds 1976, 1978; Pollock 1989; Lasnik 1995; among many others), VP-ellipsis without a modal or aspectual auxiliary would leave T's inflectional morphemes without a host. As a rescue strategy, dummy *do* is inserted (cf. e.g. Aelbrecht 2009; see also Lipták & Saab 2012).[100,101]

(141) Who liked no movie?
? Quentin Tarantino did ⟨ ~~like **no** movie~~ ⟩.

Crucially, Fusion Under Adjacency between Neg and D_1, i.e. the formation of the negative indefinite, had already occurred *before* ellipsis targeted the complement of T. If Fusion takes place prior to ellipsis (i.e. if NegP merges as the specifier of $PolP_2$ rather than the one of $PolP_1$), the derivation converges and the VP-ellipsis site can contain an object negative indefinite.

Recall (cf. section 2.2) that there are English speakers who accept the reading $\Diamond > \neg$ in sentences with the existential deontic modal *can* and a negative indefinite.

---

[100] The mild markedness (cf. the ?-judgment) of (141) could indicate that, although both $PolP_1$ and $PolP_2$ are in principle available in a modal-less sentence, selecting $PolP_2$ is the dispreferred option compared to $PolP_1$ (but the only one available here).

[101] The account developed in this dissertation implies that, for the derivation of the example in (i), NegP has to merge as the specifier of $PolP_1$ (technically possible, as discussed before). This is because merger of NegP in $PolP_2$ will always result in ellipsis of the negative marker (*not*) when there is VP-ellipsis. Recall that *n't* in (ii) always realizes the Pol_1-head, (section 3.1.3).

(i) Who liked no movie?
Quentin Tarantino did not.

(ii) Who liked no movie?
Quentin Tarantino didn't.

This is also the case in verbal ellipsis with *no* legitimately contained in the ellipsis site, where they allow a narrow scope reading for the negative indefinite. For these speakers, the same derivation as the one developed in this section for a modal-less sentence is available for a sentence containing the modal *can*. The negative indefinite (that is, Neg merged with DP_1, forming NegP) will merge as the specifier of $PolP_2$, a position c-commanded by (and hence in the scope of) the modal base generated in T, resulting in the $\Diamond > \neg$ reading. As FUA takes place when NegP gets merged into the clausal spine (in $PolP_2$), the negative indefinite will be formed before ellipsis takes place, that is, before T deletes its complement. This derives the formation of *no* as part of a verbal ellipsis site when it is outscoped by the modal in T.

4.1.2.3 Extension: unfortunate dresser vs. nudity

The analysis developed in the previous subsections is extendable to the case of the 'unfortunate dresser' vs. 'nudity reading' of *with no clothes,* discussed in section 2.2. Recall that the sentence in (45), repeated here as (142), admits two different readings. The example in (46), repeated here as (143), shows that under verbal ellipsis, only the 'nudity' reading survives.

(142) Mary looks good with no clothes.
= Mary doesn't look good with any clothes. (*the unfortunate dresser reading*)
= Mary looks good naked. (*the nudity reading*)

(143) You say Mary looks good with **no** clothes, …
… but I say Julie does ⟨ ~~look good with **no** clothes~~ ⟩.
(**unfortunate dresser*, ^{ok}*nudity*)

Haegeman (1995) and Svenonius (2002) propose that the two readings of (142) correlate with two different scope positions for the negative indefinite *no*. In the 'unfortunate dresser' reading, the negative indefinite takes high scope. Under the 'nudity' reading, the negation ranges over a smaller domain with a narrower scope. Specifically, they claim that the negative indefinite *no* expresses sentential negation in the 'unfortunate dresser' reading, while it ranges over PP in the case of the 'nudity' interpretation – although Svenonius (2002:14) talks about "*clause-like* [my italics, TT] negation occurring at the level of PP".

Incorporating the analysis developed in the previous subsections, I propose that the 'nudity' reading of *with no clothes* corresponds to $PolP_2$, while the 'unfortunate

dresser' reading corresponds to $PolP_1$. Verbal ellipsis will block FUA between Neg and D when NegP is the specifier of $PolP_1$, but not when it is merged in $PolP_2$, as discussed extensively in the previous subsections.

According to Ernst (2002:16), certain adverbs/adjuncts can "show two readings (clausal and manner readings), corresponding to higher and lower parts of clausal structure." One interpretation of the adverb/adjunct is subject-oriented (clausal), while the other corresponds to manner. The adverb/adjunct takes a proposition or event, respectively, as its semantic argument. A relevant example is (144):

(144) [cf. Kim 2000:461; Ernst 2002:42]

a. John has *cleverly* answered their questions. → subject-oriented / manner
b. John *cleverly* has answered their questions.
   'It was clever of John to have answered their questions.'
   → subject-oriented
c. John has answered their questions *cleverly*.
   'John has answered their questions in a clever manner.'
   → manner

The sentence in (144)a is ambiguous, its reading corresponding to both (144)b and (144)c. The sentence in (144)c shows a manner reading, with the adverb modifying the verb (paraphrasable as 'in an ADJ manner'), while sentence in (144)b takes "some sort of clausal entity as an argument" (Ernst 2002:43). Note that the adverb in (144)b scopes above the subject. Manner adjuncts scope over VP (the event), while subject-oriented adjuncts scope over TP (the proposition). Wenger (2009:8) argues that adverbs must have "more than one Merge-position to account for cases like this."

Let us return to the case under scrutiny here, the PP-adjunct *with no clothes*. The 'nudity' reading corresponds to the interpretation "Mary looks good naked, i.e. in a naked (ADJ) manner". According to Ernst (2002:54), agent-oriented adjuncts (a subclass of the subject-oriented ones) "indicate that an event is such as to judge its agent as ADJ with respect to the event". For the 'unfortunate dresser' reading, this would correspond to something like "Mary is judged as [always infelicitous/unsuccessful, irrespective of clothes] with respect to looking good". Given that in the 'unfortunate dresser' reading, i.e. "there are no clothes such that Mary looks good in them", the negative indefinite outscopes the subject and following Ernst's (2002) and Wenger's (2009) reasoning, I take (the negative indefinite in) the 'unfortunate dresser' reading to correspond to $PolP_1$, from where

it takes scope over the proposition and the subject in Spec,TP. The 'nudity' reading corresponds to a lower scopal position, $PolP_2$.

Finally, note also that the related sentence *Mary looks good without clothes* – despite being negative – can never have the 'unfortunate dresser' reading (thanks to Johan Rooryck, p.c., for pointing this out). This means that the PP [*without* XP] can only get a manner reading, and thus can only be associated with the VP (event). It cannot be associated with ($PolP_1$ above) the TP-domain. *Without* differs from *with no* in not containing a negative indefinite. Here, it was proposed that negative indefinites have (Neg in) either one of the PolPs as one of their building blocks. *Without*, on the other hand, is simply a prepositional head, heading a VP-associated PP. This contrast confirms the analysis of negative indefinites as being associated with (Neg inside) the PolPs.

4.1.2.4 Conclusion

The VPE/NI Generalization, repeated below, follows straightforwardly from the system proposed here. The main contribution of this section is the idea that the PF-process of ellipsis blocks another PF-process, Fusion Under Adjacency. Because ellipsis blocks FUA of Neg and a D-head, negative indefinites cannot scope out of a VP-ellipsis site.

(117) THE VPE/NI GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

If, however, FUA happens before ellipsis targets a phrase marker containing the fused terminals, the ellipsis site can contain a (low-scoping) negative indefinite.

As such, the interaction between VP-ellipsis and negative indefinites shows that the derivation of negative indefinites crucially has to involve a PF-ingredient, as was proposed in section 3.2 of this chapter. The fact that ellipsis blocks Fusion Under Adjacency, a PF-process, is completely expected as ellipsis is a PF-process itself, interfering with other PF-processes. That ellipsis can bleed morphological processes has been proposed by Fuß (2008), Saab & Zdrojewski (2010), Schoorlemmer & Temmerman (2010, 2012), Boone (2011), Stjepanović (2011), and Lipták & Saab (2012). For example, it has been argued that English has T-to-V lowering at PF, a process that is blocked by ellipsis (cf. Embick & Noyer 2001:586; Lipták & Saab 2012). *Do*-insertion is necessary to rescue a stranded affix violation.

(145) LOWERING
John $[_{TP}\ t_{ed}\ [_{VP}$ [destroy+*ed* the opposition]]

(146) a. * John destroyed the opposition and Pete t_{ed}
⟨ ~~destroy+*ed* the opposition~~ ⟩ too.
b. John destroyed the opposition and Pete *did*
⟨ ~~destroy the opposition~~ ⟩ too.

The observation that ellipsis blocks morphological processes confirms an analysis of negative indefinites as involving a morphological operation. I have proposed that this morphological operation is Fusion Under Adjacency (between sentential negation and the indefinite determiner of a DP), which comes about in a multidominant, cyclic model of the grammar.

4.2 Deriving the Clausal/Verbal Generalization

This section focuses on the Clausal/Verbal Generalization in (147):

(147) THE CLAUSAL/VERBAL GENERALIZATION
While in clausal ellipsis *any* can antecede the ellipsis of *no*,
in verbal ellipsis this switch is disallowed.

This generalization is analyzed on the basis of the multidominant, cyclic Spell-Out/linearization account of negative indefinites developed in section 3.2. The central ingredient of the analysis is again the idea that the PF-process of ellipsis blocks Fusion Under Adjacency at PF (cf. section 4.1). Clausal ellipsis is shown to differ from verbal ellipsis in not blocking FUA.

Two relevant examples illustrating the difference for *any-no* interchangeability under clausal and verbal ellipsis are (23) and (36), repeated here as (148) and (149), respectively:

(148) Q: Which song didn't any judge always vote for?
A: Katie's song ⟨ ~~**no** judge always voted for~~ ⟩.

(149) Q: Who didn't like any movie?
A: * Quentin Tarantino did ⟨ ~~like **no** movie~~ ⟩.

The analysis of the Clausal/Verbal Generalization has the following central ingredients:

(150) *Ingredients for the analysis*

(i) Negative indefinites are the result of Fusion Under Adjacency between sentential negation and an indefinite determiner. The required adjacency comes about under multidominance and cyclic Spell-Out/linearization (this chapter, section 3.2).

(ii) The clausal structure contains 2 PolPs, one dominating and one dominated by TP (this chapter, sections 3.1.2 and 3.2).

(iii) Ellipsis takes place in the course of the derivation (chapter 2, section 4 and this chapter, section 4.1).

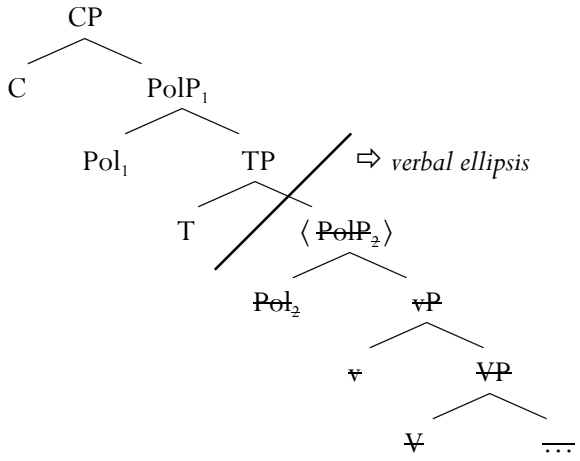
(iv) Ellipsis blocks Fusion Under Adjacency (this chapter, section 4.1).

(v) Verbal ellipsis is ellipsis of the complement of T (this chapter, section 4.1.1).

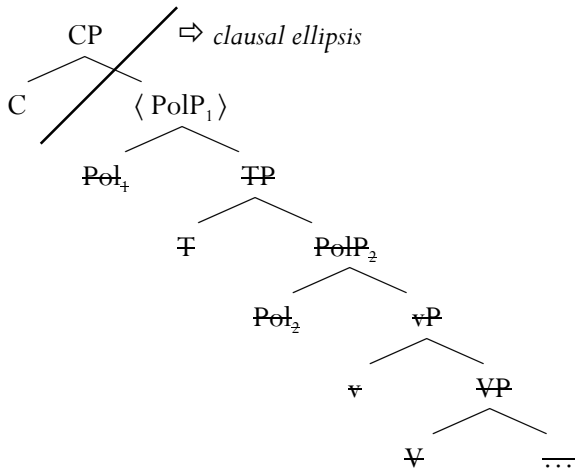
(vi) Clausal ellipsis (in fragment answers, sluicing, stripping) is ellipsis of the complement of C.

The structures in (151)a and (151)b illustrate the relevant configurations for verbal and clausal ellipsis, respectively:

(151) a. VERBAL ELLIPSIS = ELLIPSIS OF THE COMPLEMENT OF T



b. CLAUSAL ELLIPSIS = ELLIPSIS OF THE COMPLEMENT OF C[102]



Recall that a negative indefinite is the result of Fusion Under Adjacency between sentential negation and an indefinite determiner (cf. section 3). In a nutshell: Merge of a Neg-head and an indefinite DP forms a NegP. This NegP is merged as the

[102] See Lobeck (1995) and Merchant (2001), amongst others. I abstract away here from studies on clausal ellipsis assuming a split CP-domain, such as van Craenenbroeck & Lipták (2006), Aelbrecht (2009), van Craenenbroeck (2010), Kluck (2011), and Temmerman (to appear). It should be noted that these are not incompatible with the general idea of my proposal. What matters is that $PolP_1$ is included in the clausal ellipsis site.

specifier of a polarity phrase, either $PolP_1$ or $PolP_2$. Before merger of the NegP as a complex specifier in the clausal spine, the NegP is spelled out. FUA between Neg and D takes place as soon as NegP is spelled out. And at this point, nothing intervenes between Neg and D (i.e. they are adjacent), and they can undergo FUA.

The PF-process of ellipsis blocks Fusion Under Adjacency (cf. section 4.1). Therefore, for an ellipsis site to contain a negative indefinite, FUA between sentential negation and an indefinite determiner has to take place before ellipsis occurs. In clausal ellipsis, the ellipsis site (the complement of C) properly contains both polarity phrases (i.e. both $PolP_1$ and $PolP_2$), as is clear in (151)b. Therefore, FUA between sentential negation and an indefinite determiner (merged as part of either $PolP_1$ or $PolP_2$) will always have taken place before the licensing head C is merged. Because FUA always precedes ellipsis, negative indefinites are allowed in clausal ellipsis sites, regardless of whether the negative indefinite merges as part of $PolP_1$ or $PolP_2$. The verbal ellipsis site (the complement of the licensing head T), on the other hand, only properly contains the low polarity phrase ($PolP_2$), as can be seen in (151)a. The high polarity phrase ($PolP_1$) is never part of the VP-ellipsis site. Only when NegP is the specifier of $PolP_2$ will FUA precede ellipsis. Therefore, negative indefinites are allowed in verbal ellipsis sites only if they merge as part of $PolP_2$, i.e. if they are low-scoping (below T).

Based on this, it should be clear why the clausal ellipsis example in (148) is grammatical. The negative indefinite in subject position is the result of FUA between sentential negation Neg and an indefinite determiner D. FUA between Neg and D takes place as soon as NegP is spelled out, that is, before it is merged as the specifier of a polarity phrase. The relevant polarity phrase is presumably Pol_1, because the antecedent contains the negative marker *n't* (see below). Ellipsis of the complement of C (i.e. $PolP_1$ or some higher projection) yields the fragment answer in (148).

Although this reasoning explains the grammaticality of the negative indefinite in the clausal ellipsis site in (148), it does not yet establish why the verbal ellipsis example in (149) is ill-formed: why couldn't the negative indefinite in the ellipsis site in (149) merge as part of $PolP_2$, resulting in a grammatical instance of verbal ellipsis?

In the example in (149), the antecedent for the verbal ellipsis contains the contracted negation *n't*. The negative marker *n't* is the realization of the high polarity head, i.e. of Pol_1 (as proposed by, for instance Cormack & Smith 2002, cf. section 3.1.3 of this chapter), as shown in (152):[103]

[103] Although I represent raising of the heads T (*did*) and Pol_1 (*n't*) to C as a narrow syntactic phenomenon here, it could just as well be one that takes place at PF. See also footnote 66. As this is not the primary concern here, I abstract away from it. What matters here is that *n't* is merged in the high polarity head Pol_1.

(152) a. Who didn't like any movie?

b. [$_{CP}$ Who$_i$ [$_{C'}$ C [$_{PolP1}$ [$_{Pol1'}$ n't [$_{TP}$ t_i [$_{T'}$ did [$_{vP}$ t_i like any movie]]]]]]] ?

c. [$_{CP}$ Who$_i$ [$_{C'}$ did$_j$ + n't$_k$ [$_{PolP1}$ [$_{Pol1'}$ t_j+t_k [$_{TP}$ t_i [$_{T'}$ t_j [$_{vP}$ t_i like any movie]]]]]]] ?

Scope Parallelism – cf. (153) – now requires that the negation in the ellipsis site also be of the Pol_1-type.

(153) *Parallelism* (*a consequence of*)

In an ellipsis construction, the scopal relationship among the elements in the antecedent must be identical to the scopal relationship among the parallel elements in the ellipsis site. [Fox 2000:32]

As the negation in the antecedent is Pol_1, i.e. scoping above TP, (the negation that is part of) the negative indefinite also has to outscope TP to obey Scope Parallelism in (153). Therefore, the NegP that contains sentential negation and the indefinite has to be merged as the specifier of $PolP_1$. Merging as part of $PolP_2$, i.e. scoping below T, would violate Scope Parallellism.[104] As discussed at length in section 4.1 of this chapter, verbal ellipsis (ellipsis of the complement of T) blocks Fusion Under Adjacency between sentential negation and an indefinite determiner if NegP is merged as the specifier of $PolP_1$, i.e. if the negative indefinite has to be part of the high polarity phrase. This is the case in (149) because of Scope Parallelism. Therefore, the (ungrammatical) example in (149) cannot be derived.[105]

To conclude, an ellipsis site can contain a negative indefinite only if it properly contains the polarity phrase responsible for assigning a scope position to that negative indefinite. For clausal ellipsis, this is always the case. For verbal ellipsis, however, this only holds for the lower polarity projection $PolP_2$. Negative indefinites involve Fusion Under Adjacency between sentential negation and an indefinite determiner. Both elements are part of a NegP that is spelled out before it is merged as the specifier of one of two polarity phrases in the clausal spine. FUA has to precede

[104] For a lengthier discussion of Parallelism, I refer the reader to section 6.3 of this chapter and to chapter 5.

[105] This line of reasoning suggests that if *any* were licensed by Pol_2 instead of Pol_1, *any* should be able to antecede the ellipsis of *no* even in VP-ellipsis contexts. A relevant example would be the one in (i).

(i) [context: There's an eating contest and both John and Mary want to end last in the contest. Peter and Julie are discussing this.]

Peter: So can John forfeit the game?
Julie: Well, he COULD not eat anything, I guess.
Peter: But then, Mary could ⟨ ~~eat nothing~~ ⟩ too.

The problem with these kinds of examples, though, is that there is no way of telling if the ellipsis site contains a (fused) negative indefinite or the NPI and its licensor Pol_2.

ellipsis, because otherwise, ellipsis will block this process at PF. FUA always precedes ellipsis in cases of clausal ellipsis, but this operation only precedes ellipsis in cases of verbal ellipsis when the scopal position of the negative indefinite is part of the low polarity phrase $PolP_2$.

4.3. Summary

The interaction between ellipsis and negative indefinites shows that the derivation of negative indefinites crucially has to involve a PF-ingredient. The fact that ellipsis blocks Fusion Under Adjacency, a PF-process, is expected as ellipsis itself is a PF-process, interfering with other PF-processes. The timing of FUA plays a crucial role: it has to happen before the ellipsis licensing head is merged (as ellipsis is derivational, cf. Aelbrecht (2009), discussed in section 4.2 of chapter 2). Recall that the PF-ingredient of FUA could only be established in a multidominant, cyclic framework (section 3 of this chapter). Sentential negation and (the indefinite determiner of) the object are not superficially adjacent in English, as the verb intervenes (given that English is an SVO languages). Under the analysis proposed here, incorporating remerge and cyclic Spell-Out/linearization, the Neg- and D-head become adjacent in the course of the derivation, allowing for FUA.[106]

Section 6 of this chapter discusses existing analyses of negative indefinites. These, however, fail to explain the interactions between ellipsis and negative indefinites analyzed in this section. But before running through these, the next section extends the analysis of negative indefinites to the 'non-fused' counterpart of *no*, i.e. *not…any*.

[106] Other English negative indefinites, such as *never*, are also likely to be decomposable into sentential negation and an indefinite (*not* + *ever* in the case of *never*). The question then arises whether the data and analysis discussed in this chapter carry over to a negative indefinite such as *never*, i.e. what the grammaticality and scopal judgments for (i) and (ii) are.

(i) John could never offer help.

(ii) Q: Who could never offer help?
A: i. John could.
ii. John could not / couldn'

I leave this to future research.

5 Extending the proposal: A cyclic, multidominant analysis of *not…a(ny)*

The previous sections of this chapter developed a cyclic, multidominant decomposition account of negative indefinites. In this section, I propose that *not…a(ny)* and *no* have an identical syntactic derivation. That is, the overtly 'decomposed' or discontinous counterpart of a negative indefinite, i.e. *not…a(ny)*, can be derived in exactly the same way as a negative indefinite in the narrow syntax. Examples (all attested) are given in (154):

(154)

negative indefinite	decomposed counterpart	examples
no	*not … any*	Vegetarians eat no meat. (1) Vegetarians do not eat any meat. (6)
nobody	*not … anybody*	My cat likes nobody but me. My cat does not like anybody but me.
no one	*not … anyone*	The blame game helps no one. The blame game does not help anyone.
nothing	*not … anything*	Googling has given me nothing. Googling has not given me anything.

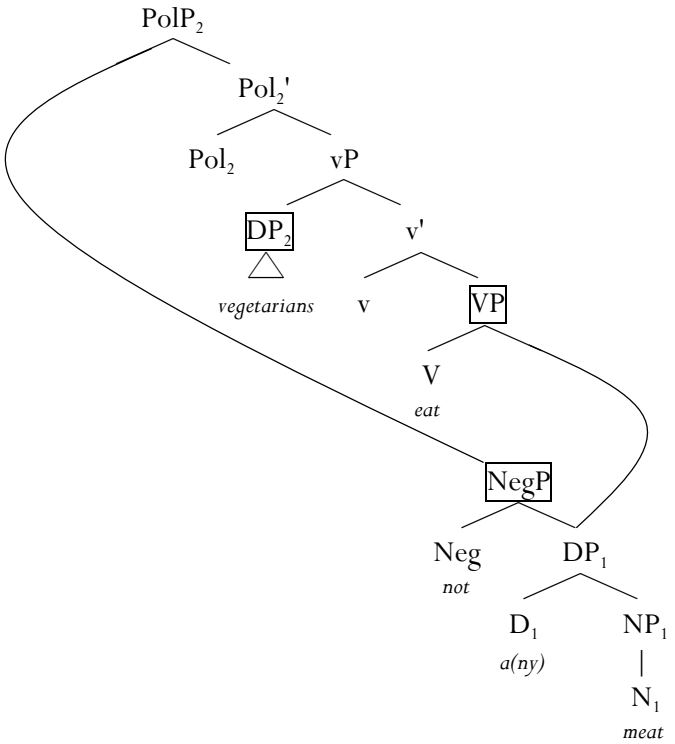
I propose that it is only in the mapping to PF that *no* and *not…a(ny)* are different: while the former is the result of Fusion Under Adjacency (at PF) between sentential negation and an indefinite determiner, this process simply does not occur in the case of *not…a(ny)*.

As already mentioned in footnote 4 of this chapter, the choice between a *no*-form and its 'decomposed' counterpart *not + a(ny)* seems to be driven by degree of formality in English. Negative indefinites are considered more formal than analytic forms; they tend to have a high register flavor in English (Tottie 1991; Anderwald 2002; Svenonius 2002; Tubau 2008). There are no differences between the two regarding their semantics or their syntactic properties and distribution. This observation follows straightforwardly if negative indefinites and their analytic counterparts are simply the result of the same derivational steps in narrow syntax, differing only at PF.

Recall that, in the derivation of negative indefinites, the indefinite object DP is merged both as the sister of Neg and the sister of V, resulting in its being dominated by two mother nodes, NegP and VP, respectively. The phase head v selects VP as its complement, and the subject merges as its specifier. When the phase is completed, the phasal domain (the complement of the phase head) VP is transferred to PF, where it is linearized. After this, a low polarity head Pol_2 merges with vP and the NegP merges as its specifier.

(1) Vegetarians eat no meat.
(6) Vegetarians do not eat any meat.

(155)



Given that NegP constitutes a complex left branch, it is spelled out and linearized before it merges as Spec,$PolP_2$ (following Uriagereka 1999). At this point in the derivation, the PF-component contains the linearizations d(A) of both VP and NegP (cf. (156)).

(156) a. $d(A)_{NegP} = \{ Neg < D_1, Neg < N_1, D_1 < N_1 \}$
b. $d(A)_{VP} = \{ V < D_1, V < N_1, D_1 < N_1 \}$

As the linearization algorithm has put nothing in between the terminals Neg and D_1 (i.e. there is no element that follows Neg and precedes D_1 or vice versa), the two are adjacent (adopting Johnson's (2011a) definition of Adjacency). As the two terminal nodes have been assigned adjacent positions by the linearization algorithm, they can undergo Fusion Under Adjacency, combining the two terminals into one, realized by the lexical item *no*. Note, however, that just because two adjacent terminals in English *can* undergo FUA, this does not mean that they *must*. NegP might just as well be spelled out without Neg and D_1 fusing under adjacency. The derivation then simply proceeds as usual. Just as in the linearization of a derivation with a negative indefinite, this derivation will result in conflicting ordering statements, which need to be resolved. Let us consider the relevant linearizations. After merger of the phase head C, its complement TP is transferred to PF. The phasal domain undergoes Spell-Out and the linearization algorithm applies. This results in a new linearization d(A). The ordering statements for the terminals in (155) are given in (157) (ignoring the subject DP_2 in Spec,vP for convenience).

(157)

$$d(A) = \left\{ \begin{array}{lllll} Neg < Pol_2 & D_1 < Pol_2 & N_1 < Pol_2 & Pol_2 < v & v < V \\ Neg < v & D_1 < v & N_1 < v & Pol_2 < V & v < D_1 \\ Neg < V & D_1 < V & N_1 < V & Pol_2 < D_1 & v < N_1 \\ Neg < D_1 & D_1 < D_1 & N_1 < D_1 & Pol_2 < N_1 & \\ Neg < N_1 & D_1 < N_1 & N_1 < N_1 & & \end{array} \right\}$$

Note that the linearization in (157) contains several problematic statements. The statements $D_1 < D_1$ and $N_1 < N_1$ are violations of Irreflexivity. Moreover, the d(A) in (157) contains antisymmetric statements such as $N_1 < v$ and $v < N_1$ or $D_1 < Pol_2$ and $Pol_2 < D_1$. Furthermore, the orderings $D_1 < V$, $N_1 < D_1$, and $N_1 < V$ clash with linearization statements that were introduced earlier in the derivation (see (156)). That is, they are inconsistent with the orderings that were calculated before NegP was merged as a specifier in the functional sequence of the clause. Recall that the linearizations established for linearization domains earlier in the derivation cannot be changed later on. Linearization statements that are introduced later in the derivation have to be both total and consistent with the earlier statements. Given that d(A) is tolerant (Johnson 2007), however, inconsistent and conflicting pairs can be disposed of. As such, the reflexive and conflicting statements can be deleted. Moreover, antisymmetric orderings can be discarded. $N_1 < Pol_2$, $D_1 < Pol_2$, $N_1 < v$, and $D_1 < v$

will be ignored, as these would otherwise result in conflicting statements and transitivity violations. For instance, the combination $D_1 < Pol_2$ and $Pol_2 < V$ would give rise to $D_1 < V$ (by Transitivity), which is in conflict with the linearization statement $V < D_1$ collected earlier. The remaining statements are those in (158), which will be added to the orderings collected earlier (i.e. the ones in (156)).

(158)

$$d(A) = \left\{ \begin{array}{llll} Neg < Pol_2 & D_1 < N_1 & Pol_2 < v & v < V \\ Neg < v & & Pol_2 < V & v < D_1 \\ Neg < V & & Pol_2 < D_1 & v < N_1 \\ Neg < D_1 & & Pol_2 < N_1 & \\ Neg < N_1 & & & \end{array} \right\}$$

The result of adding the ordering statements in (158) to the ones in (156) is a total, consistent ordering, which will eventually be realized as *(Vegetarians do) not eat any meat,* with sentential negation *not* preceding the verb and the indefinite *any* following the verb.

As such, the analysis presented here elegantly allows the negative indefinite *no* and its 'decomposed' counterpart *not…a(ny)* to have the same syntactic analysis, differing only in that there is Fusion Under Adjacency at PF between the negation Neg and the indefinite D in the formation of the negative indefinite, but not in the case of *not…a(ny)*. Note that this explains why the English sentential negative marker *not* behaves like a specifier even though it looks like a head (cf. section 3.1.3 of this chapter): underlyingly, the NegP with Neg *not* as its head is actually always syntactically complex, selecting a DP as its complement. It is only because of cyclic Spell-Out/linearization and Order Preservation that it looks as if the specifier is occupied by a head (*not*) instead of a phrase (*not any meat*).[107]

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[107] The question arises whether the sentence in (i) has an identical syntactic derivation as sentences (1) and (6).

(i) Vegetarians don't eat any meat.

As discussed in section 3.1.3 of this chapter, *n't* is to be analyzed as the spell-out of the high polarity head Pol_1. Merging this head Pol_1 with the object DP is problematic, though. If the clausal polarity head Pol_1 merges directly with the indefinite DP, it forms a polarity phrase $PolP_1$. If this $PolP_1$ merges with TP, again projecting as $PolP_1$, the resulting structure is problematic: in this case, TP seems to be the specifier (or an adjunct) of $PolP_1$, rather than the complement of Pol_1 (thanks to Marcel den Dikken (p.c.) for pointing this out).

(ii) $[_{PolP1}\ [_{PolP1}\ Pol_1\ [_{DP}\ D\ NP]]\ TP\ \dots\ ]$

(*continued on the next page*)

6 Previous analyses of negative indefinites

Recall (cf. section 1) that existing analyses of negative indefinites can be roughly divided into two types. The traditional view is that they are atomic lexical items, in particular, negative generalized quantifiers.[108] A second group of proposals takes negative indefinites to be complex, decomposable lexical items. That is, while being spelled out as a single word, *no* contains two separate (syntactic and semantic) building blocks: (sentential) negation and an indefinite (expressing existential quantification).[109] The analysis presented in this chapter clearly belongs to the latter class. Negation and the indefinite determiner become a single lexical item through Fusion Under Adjacency, under a multidominant, cyclic view of the grammar (cf. section 3).

In my proposal, a negative indefinite in object position takes sentential scope simply because sentential negation is a subpart of the object negative indefinite: the negation merges with an indefinite DP, forming a (complex) NegP. Like the (simple) negative marker *not*, the negative indefinite obtains sentence-wide scope because it is merged as the specifier of a polarity phrase in the functional sequence of the clause. This is close in spirit to the amalgamation/incorporation analyses proposed by Jacobs (1980) and Rullmann (1995), in which an object negative indefinite is the result of a fairly superficial process of amalgamation or incorporation between a clausal polarity head and the determiner of the object DP. There are some

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This might seem to suggest that the structure for a sentence like (i) should simply be a non-multidominant one, with Pol_1 merging only with TP and not with DP.

(iii) $[_{PolP1}\ Pol_1\ TP\ \dots\ ]$

I would like to propose, though, that the sentence in (i) has a similar syntactic derivation as the sentences in (1) and (6). (i) differs syntactically from (1) and (6) only in that for the latter two, both $PolP_2$ and $PolP_1$ are in principle available, while only $PolP_1$ is for the former (cf. section 3.1.3). The spec-head distinction between *not* on the one hand and *n't* on the other (discussed in section 3.1.3) corresponds to a difference in how lexical insertion takes place. In the former case, (the head Neg of) the specifier in $PolP_2$ or $PolP_1$ is lexicalized as *not* (or as part of a negative indefinite *no*). In the latter case, the head of the specifier (Neg) of $PolP_1$ is not lexicalized, while the head of the projection Pol_1 gets a lexical realization, *n't*.

[108] See among others Zanuttini (1991), Haegeman & Zanuttini (1991, 1996), Haegeman (1995), Geurts (1996), de Swart (2000), and Iatridou & Zeijlstra (2010).

[109] See among others Jacobs (1980), Rullmann (1995), Giannakidou (1997), Sauerland (2000a), Weiß (2002), Tubau (2008), Haegeman & Lohndahl (2010), Iatridou & Zeijlstra (2010), Johnson (2010b), Penka & Zeijlstra (2010), Iatridou & Sichel (2011), Merchant (2011), Penka (2011), and Zeijlstra (2011). Note that some of these proposals do not involve actual decomposition. Some take the negative indefinite to be a plain indefinite, which gets a negative interpretation because a covert negative operator licenses it in its scope (via Agree or feature checking). These proposals are discussed in section 6.2. As noted by Iatridou & Sichel (2011:609, fn.12), they can nonetheless be grouped in the 'decomposition camp' because "on these analyses too negation and the existential are syntactically separate."

important differences, though, which are discussed in section 6.1. This section also considers alternative morphological analyses in the framework of Distributed Morphology (DM) and shows that none of the existing DM operations can handle the VPE/NI Generalization (section 2.2).

Apart from the morphological accounts of Jacobs (1980) and Rullmann (1995), there are two common syntactic analyses in the literature that allow a negative indefinite in object position to take clausal scope. First, it has been proposed that a sentential polarity head undergoes Agree or feature checking with the negative indefinite in object position (cf. Giannakidou 1997; Weiß 2002; Tubau 2008; Haegeman & Lohndahl 2010; Penka & Zeijlstra 2010; Merchant 2011; Penka 2011). This is discussed in section 6.2. Second, it has been suggested that a negative indefinite undergoes Quantifier Raising to take clausal scope (cf. Geurts 1996; De Swart 2000; Iatridou & Zeijlstra 2010). The accounts proposed in Iatridou & Sichel (2011) and Zeijlstra (2011) combine a QR-analysis with an amalgamation/incorporation component.[110] QR-analyses are considered in section 6.3. As it turns out, a syntactic analysis of object negative indefinites based on Agree/feature checking or QR cannot account for the interaction between ellipsis and negative indefinites discussed in section 2 of this chapter. Finally, section 6.4 considers Johnson's (2010b) proposal for negative indefinites, which is to be situated in the multidominant framework he adopts to deal with WH-movement and Quantifier Raising in Johnson (2010a, 2011a).

6.1 Morphological analyses: Amalgamation/Incorporation

6.1.1 AMALGAMATION / INCORPORATION

The first 'lexical decomposition' analyses of negative indefinites (Jacobs 1980; Rullmann 1995) involve an (obligatory) amalgamation or incorporation process. This process combines a superficially adjacent negative marker and indefinite

[110] There is another alternative analysis, proposed in for instance den Dikken et al. (1997). Under this account, the negative indefinite *no* is assumed to decompose into two syntactic parts, an abstract sentence negation NEG and an indefinite *no*, the latter having the force of *any*. NEG is assumed to raise to the position of sentential negation at LF, as illustrated in (i).

(i) [cf. Larson et al. 1996:23, (55)]
   a. Max had no bananas.
   b. Max NEG_i had [t_i no] bananas.

I will not discuss this analysis here, as Iatridou & Sichel (2011) convincingly argue that negation scopes in a fixed position (it cannot undergo additional scope adjustment operations). See also Iatridou & Zeijlstra (2010).

determiner into a negative indefinite.[111] Rullman's rule for Dutch negative indefinites is given in (159) (Rullmann 1995:197, (8)), where *geen* is the negative indefinite ('no'), *niet* ('niet') is the sentential negation marker and Det_{indef} is either an overt indefinite *een* ('a') or a zero determiner (ø).

(159) *niet* $Det_{indef} \Rightarrow$ *geen*

As noted by Iatridou & Sichel (2011) and Zeijlstra (2011), while neither Jacobs nor Rullmann uses the term 'PF' to describe the component of the grammar where this process takes place, "the prose implies that this is what was intended" (Iatridou & Sichel 2011:626, fn.27): Rullmann (1995:197) talks about "a relatively superficial level of representation".

Importantly, Jacobs and Rullman focused on German and Dutch, respectively. These are SOV languages, which means that the object and the sentential negation marker are superficially adjacent (i.e. the verb does not intervene between them). As shown in (160), in Dutch, the sentential negation marker (*niet* 'not') and the object (*de doodstraf* 'the death penalty') surface adjacent to each other, followed by the main verb (*uitvoeren* 'execute'). Example (161) shows that the co-occurrence of *niet* 'not' and an indefinite object is ungrammatical: instead, a negative indefinite has to be used, as in (162).[112]

(160) EU-landen mogen niet de doodstraf uitvoeren.
EU-countries may not the death-penalty execute
'EU-countries may not execute the death penalty.' [Dutch]

(161) *EU-landen mogen niet (een) doodstraf uitvoeren.
EU-countries may not a death-penalty execute
INTENDED: 'EU countries may not execute a death penalty.' [Dutch]

(162) EU-landen mogen geen doodstraf uitvoeren.
EU-countries may no death-penalty execute
'EU countries may not execute a death penalty.' [Dutch]

Although this seems to deal nicely with negative indefinites in SOV languages such as Dutch and German, it poses a problem for English, an SVO language. As noted by

[111] Rullmann (1995) attributes particular observations to Bech (1955/57) and bases his proposal on Klima's (1964) rules of incorporation.

[112] Rullmann (1995:197) notes for Dutch that "when incorporation is possible, it is also obligatory" (translation TT). See section 2.3 of chapter 6 for some further discussion.

Zeijlstra (2011:19), the amalgamation/incorporation analyses of Jacobs and Rullman crucially rely on phonological string-adjacency of the negation and the indefinite. In SOV languages, object negative indefinites mainly occur when sentential negation and an object indefinite are indeed adjacent. Incorporation/amalgamation seems to be blocked when lexical material (e.g. a preposition) intervenes between the negation and the indefinite determiner. This is illustrated in (163) with the preposition *naar* 'to, for': if the preposition intervenes between the negation and the indefinite (cf. (163)a), a negative indefinite cannot be formed (cf. (163)b).

(163) [cf. Rullmann 1995:197, (10)]

a. Zij mogen niet naar een eenhoorn zoeken.
they may not for a unicorn search
'They are not allowed to look for a unicorn.'

b. ?* Zij mogen naar geen eenhoorn zoeken.
they may for no unicorn search [Dutch]

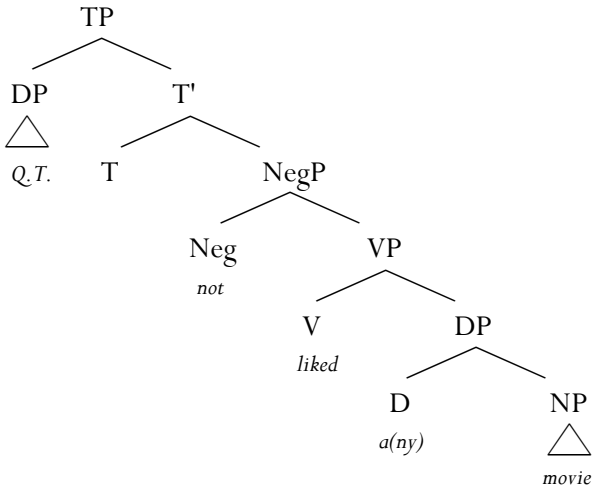
Such a configuration does not arise in an SVO language like English, though: the (VP-external) position occupied by negation in narrow syntax and at LF is never string-adjacent to the (postverbal) position where an indefinite object appears at PF. This is obvious in the English translation of (162), where sentential negation *not* and (the indefinite determiner of) the postverbal object *a death penalty* are separated by the verb *execute*. As Rullmann (1995:197) contends that "incorporation is blocked by lexical material that lies between *not* and $\text{Det}_{\text{indef}}$ at the surface" (translation TT), the amalgamation/incorporation accounts of Jacobs (1980) and Rullmann (1995) are not well suited to deal with object negative indefinites in English. The analysis of English negative indefinites in object position cannot rely on phonological string-adjacency.

In this chapter, I proposed that a cyclic, multidominant framework allows Fusion Under Adjacency at a particular point in the derivation. The local morphological relationship required for amalgamation/incorporation of negation and an indefinite determiner is established throughout the derivation. As such, I maintained the early insight that a negative indefinite should be decomposed into two components, while avoiding the problems encountered by solely relying on superficial phonological string-adjacency as the triggering configuration for this amalgamation process.

6.1.2 DM OPERATIONS DO NOT PROVIDE THE REQUIRED LOCALITY

In this chapter, I pursued an analysis of negative indefinites that crucially involves a PF-ingredient, FUA. This morphological relation requires a higher degree of locality than seems to exist between the negation and the indefinite determiner in English at first sight. I argued that this locality is established through multidominance and cyclic Spell-Out/linearization. The reader might wonder whether this multidominant, cyclic view of the grammar is the only way of establishing the required locality between sentential negation and the indefinite determiner. Couldn't mechanisms proposed in Distributed Morphology (DM, Halle & Marantz 1993) obtain a sufficiently local configuration for constructing an English object negative indefinite on the basis of a clausal negative head and an indefinite determiner? It turns out, though, that none of the existing DM operations fit the bill because all of them are too local. Consider the simple structure in (164) for *Quentin Tarantino liked no movie*:

(164)



Possible DM-candidates for creating a local relation between Neg and D, allowing them to morphologically combine, are: (i) Lowering (Marantz 1988; Halle & Marantz 1993; Embick & Noyer 2001), (ii) Fusion[113] (Halle & Marantz 1993; Halle 1997; Kandybowicz 2006, 2007; Parrott 2007), and (iii) Local Dislocation (Embick & Noyer 2001, 2007; Embick 2007).

[113] Not to be confused with *Fusion Under Adjacency*, cf. section 3 of this chapter.

Lowering is head-to-head adjunction under immediate locality: it establishes a relation between a head and the head of its complement, as schematically represented in (165):

(165) *Lowering of X to Y*

$[_{XP}\ X \ldots [_{YP} \ldots Y \ldots]] \rightarrow [_{XP} \ldots [_{YP} \ldots [_{Y}\ Y{+}X\ ] \ldots]]$

[Embick & Noyer 2001:561, (6)]

In (164), however, DP is not the complement of Neg. As a result, an English object negative indefinite cannot be the result of lowering Neg to D.

Fusion takes two discrete terminal nodes that are sisters under a single category node and collapses them into a single terminal node (cf. Halle & Marantz 1993:116). Fusion combines two sets of morpho-syntactic features (cf. Cable 2005:73). The result of Fusion to two feature sets A and B is the union of A and B. As shown in (166), Fusion of a node A containing features (a,b,c,d) and a node B containing features (e,f,g,h) produces a node C containing all eight features (a,b,c,d,e,f,g). As noted by Halle & Marantz (1993:136), the node A can for instance be Agreement Agr, and the node B Tense T.

(166) *Fusion of X and Y*

$[a,b,c,d]_A + [e,f,g,h]_B \rightarrow [a,b,c,d,e,f,g,h]_C$ [Cable 2005:73, (4)]

In (164), Neg and D are not sisters under a single category node. Moreover, head movement from D to Neg is disallowed, so they cannot *become* sisters either. Thus, an English object negative indefinite cannot be the result of fusing Neg and D.

Local Dislocation affects a head that is linearly adjacent to (the head of) a following constituent, cf. (167). The head X is adjoined to the peripheral head Y of that adjacent constituent (cf. Harley & Noyer 1999:6; Embick & Noyer 2001:270-1). The result of Local Dislocation is affixation.

(167) *Local Dislocation of X to Y*

$[\ X * [\ Y * Z\ ]] \rightarrow [\ [Y{+}X]_Y * Z\ ]$ *or* $[\ [X{+}Y]_Y * Z\ ]$

In English, however, *not* (the vocabulary item inserted in Neg) and *any* (the vocabulary item inserted in D) are not linearly adjacent, cf. *Quentin * Tarantino * not * liked * any * movie*. Hence, an English object negative indefinite cannot be the result of Local Dislocation of *not* to *any*.

The interaction between negative indefinites and ellipsis provides evidence that

negative indefinites are the result of a morphological operation (rather than a syntactic one, cf. also the next two sections). Just like Jacob's (1980) and Rullmann's (1995) amalgamation and incorporation under phonological string adjacency, however, existing DM-operations cannot provide a morphological analysis of English negative indefinites in a non-cyclic, non-multidominant view of the grammar, as these operations are all too local. Therefore, the cyclic, multidominant analysis proposed in this chapter is superior to the ones discussed in this section.[114]

6.2 Syntactic analyses I: Agree / Feature checking

A common syntactic analysis of negative indefinites is the proposal that they are the result of feature checking or Agree between an abstract negative operator, which takes clausal scope, and a non-negative indefinite in object position (cf. Giannakidou 1997; Tubau 2008; Haegeman & Lohndahl 2010; Penka & Zeijlstra 2010; Penka 2011). The presence of an abstract negative marker is needed to license the indefinite. The semantically non-negative indefinite carries an uninterpretable negative feature [uNEG] that has to be checked against a (covert) semantic negation, i.e. against an interpretable negative feature [iNEG] on a semantically negative element.[115] The negative indefinite is therefore the visible result of syntactic agreement, similar to phenomena such as subject-verb agreement or multiple gender marking on e.g. nouns and adjectives (cf. Penka & Zeijlstra 2010:781).

In a feature checking approach (e.g. Weiß 2002), the checking of the [uNEG] feature on the indefinite happens in a specifier-head relation in a designated functional projection (for instance, NegP). The indefinite object DP is taken to move to the specifier of this functional projection, attracted by a head (e.g. Neg) carrying the same (interpretable) formal feature [iNEG]. The result of feature checking is the deletion of the [uNEG] feature on the indefinite.

[114] It seems that the introduction of Fusion under (multidominant, cyclic) adjacency in the PF-branch of the grammar has the potential of replacing several DM-operations (such as DM-Lowering, DM-Fusion, and DM-Local Dislocation) by a single operation. This would lead to increased theoretical parsimony, which is the preferable state of affairs (cf. also Siddiqi 2006 and Caha 2009, who try to eliminate several Morphology specific devices by replacing them by a single operation).

[115] This proposal actually goes back to the analyses in, for instance, Ladusaw (1992) and Zeijlstra (2004) for negative indefinites in negative concord languages (or n-words, Laka's (1990) term for negative indefinites in negative concord languages). A variety of languages exhibit negative concord, such as Czech and Italian (cf. Haspelmath 2005). The authors mentioned here extend the proposal to languages that do not exhibit negative concord, such as English, German, and Dutch.

In an Agree account, the operation Agree (Chomsky 2000, 2001; Pesetsky & Torrego 2001) establishes a relation between a Probe and a Goal, which carry (a) feature(s) of the same kind. An element is identified as a suitable Goal when (i) it has an uninterpretable but valued feature that matches an interpretable but unvalued feature of the Probe, and (ii) when it is sufficiently local. Tubau (2008) proposes, for instance, that a sentential polarity head Pol is endowed with an interpretable polarity feature that is unvalued, i.e. [iPOL: __]. This head can therefore act as a Probe, and scans its c-command domain for a local Goal that has a matching feature that can value the relevant unvalued feature. This Goal (the indefinite D) carries an uninterpretable, but valued, polarity feature [uPOL: Neg].

This Agree/feature checking analysis of negative indefinites again turns out to be problematic, though, when considering the interaction between negative indefinites and verbal ellipsis discussed in section 2 of this chapter. Recall that VP-ellipsis prohibits a negative indefinite in object position to take scope out of a VP-ellipsis site (the VPE/NI Generalization). The relevant example, (44), is repeated here:

(44) Q: Who can offer no help?
A: * Quentin Tarantino can ⟨ ~~offer no help~~ ⟩. (* ¬ > ◇, % ◇ > ¬)

It is well known that VP-ellipsis does not block Agree/feature checking. For example, T can agree with the elided associate of a *there*-expletive. In *there*-expletive constructions, the expletive occupies the subject position Spec,TP, while the thematic subject (the associate) remains in the base position inside the vP. When there is VP-ellipsis, the associate is part of the ellipsis site. As is shown in (168), the auxiliary outside of the ellipsis site, occupying the T-head and licensing the ellipsis, agrees with the associate inside the ellipsis site.

(168) [van Craenenbroeck 2007:3, (13)]
a. Jim said there wouldn't be many people at the party, but there **were** ⟨ ~~many people at the party~~ ⟩.
b. Jim said there wouldn't be a linguist at the party, but there **was** ⟨ ~~a linguist at the party~~ ⟩.

If VP-ellipsis does not interact with Agree/feature checking, it remains unexplained why it blocks the presence of negative indefinites in a VP-ellipsis site if these negative indefinites are the result of Agree/feature checking. Therefore, I conclude that an Agree/feature checking analysis of object negative indefinites cannot account for the blocking effect of VP-ellipsis. As the analysis developed in this chapter does

provide an analysis for this blocking effect, I take it to be the preferred option.

6.3 Syntactic analyses II: Quantifier Raising

The traditional analysis of negative indefinites is that they are generalized quantifiers that are semantically negative (cf. Zanuttini 1991; Haegeman & Zanuttini 1991, 1996; Dahl 1993; Haegeman 1995; Geurts 1996; De Swart 2000; von Fintel & Iatridou 2003; Iatridou & Zeijlstra 2010). Under this view, negative indefinites are considered to be atomic lexical items. The sentence in (169)a is analyzed as sketched in (169)b, where the meaning of *no* is the generalized determiner NO as in (169)c, cf. Sauerland (2000a).[116]

(169) [Sauerland 2000a:416-7]

a. Andy has no enemies.
b. NO ([[enemies]]) (λx Andy has x)
c. NO $(R)(S) = 1$ iff $\forall x : R(x) \Rightarrow S(x)$

Negative quantifiers are interpreted just like other, non-negative generalized quantifiers. In order to obtain sentence-wide scope, the negative indefinite undergoes Quantifier Raising (QR), targeting the same position as QR of other generalized quantifiers. Iatridou & Sichel (2011:610) also hint at the possibility of QR moving the negative quantifier to the scope position of sentential negation.

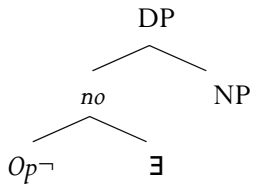
Some decompositional analyses of negative indefinites also take (part of) the negative indefinite to undergo QR. These accounts submit that a negative indefinite consists of two (syntactically and semantically) separate components, negation and an existential indefinite. Iatridou & Sichel (2011) take the latter to undergo QR to the position of the former. They propose that clauses contain a fixed scope position dedicated to the interpretation of sentential negation, which can be realized as a sentential negative marker or within a negative indefinite. As such, the scope position of the negative ingredient of a negative indefinite is identical to the scope

[116] Here, I will not go into the details of accounts that take negative indefinites to be negative generalized quantifiers (cf. Geurts 1996; De Swart 2000; Iatridou & Zeijlstra 2010). For critiques of this approach independent of the ellipsis critique developed here, see, for amongst others, Sauerland (2000a), Weiß (2002), Iatridou & Sichel (2011), Penka (2011), and Zeijlstra (2011). Tubau (2008:76) even maintains that "negative quantifiers do not exist in natural languages." The same idea can be found in Sauerland (2000a) and Penka (2011).

position of sentential negation. The existential component can undergo QR to scope in the position of sentential negation.

Zeijlstra (2011) proposes that an abstract negative operator and a non-negative indefinite determiner are sisters in the syntactic structure. That is, first there is merger of the negative operator and the indefinite determiner, thus creating the negative indefinite. This syntactic constituent is subject to a spell-out rule, which morphophonologically realizes [*Op*¬ ∃] a single morphological word /*no*/. The negative indefinite merges with an NP, forming a negative DP, cf. (170):

(170) [cf. Zeijlstra 2011:121, (25)]



This syntactic constituent DP, "being quantificational in nature, can undergo QR (raising across another scope-taking element)" to a higher position (Zeijlstra 2011:120). The target of QR of the negative indefinite DP is an IP-adjoined position.

This Quantifier Raising analysis of negative indefinites turns out to be problematic, however, when considering the interaction between negative indefinites and verbal ellipsis discussed in section 2 of this chapter. In sections 2.2 and 2.3 it was shown that a negative indefinite in object position cannot take scope out of a VP-ellipsis site (the VPE/NI-Generalization in (117), repeated here).

(117) THE VPE/NI-GENERALIZATION
A negative indefinite (NI) in object position cannot scope out of a VP-ellipsis (VPE) site.

Relevant examples were those in (43) and (44), repeated here:

(43) John can do no homework tonight.
= 'It is not the case that John is permitted to do homework tonight.'
(¬ > ◇)
≠ 'It is permitted that John does not do homework tonight.' (% ◇ > ¬)

(44) Q: Who can offer no help?
A: * Quentin Tarantino can ⟨ ~~offer no help~~ ⟩. (* ¬ > ◇, % ◇ > ¬)

It is well known, however, that VP-ellipsis does not block Quantifier Raising (cf. Fox 2000). More specifically, VP-ellipsis does not block QR, provided *Parallelism* (cf. (171)) and *Scope Economy* (cf. (172), (173)) are respected.[117]

(171) *Parallelism (a consequence of)*
In an ellipsis construction, the scopal relationship among the elements in the antecedent must be identical to the scopal relationship among the parallel elements in the ellipsis site.[118] [cf. Fox 2000:32]

(172) *Economy condition on scope shifting (Scope Economy)*
An operation *OP* can apply only if it affects semantic interpretation (i.e., only if inverse scope and surface scope are semantically distinct).
[cf. Fox 2000:21]

(173) *The Ellipsis Scope Generalization*
In an ellipsis construction, inverse scope is possible only if it is semantically distinct from surface scope both in the sentence that includes the ellipsis site and in the sentence that includes the antecedent. [cf. Fox 2000:83]

Parallelism (cf. (171)) ensures that in ellipsis environments, the antecedent and the elliptical clause receive isomorphic representations at LF. Even if sentences are potentially scopally ambiguous, the scopal relationships in the antecedent cannot be different from the those in the ellipsis site. That is, either both the antecedent and the ellipsis site have surface scope or they both have inverse scope. The latter option is only available if it obeys Scope Economy (cf. (172), (173)). The sentences in (174) and (175) illustrate how Parallelism and Scope Economy operate in VP-ellipsis. The sentences in (175) are restricted to surface scope, whereas the sentences in (174) are not.

[117] Chapter 5 provides an analysis of the interaction between QR and verbal ellipsis in the multidominant, cyclic framework developed here.

[118] Fox (2000) adjusts the principle of Parallelism somewhat in Chapter 3 of his monograph. For present purposes, the form in (171) suffices.

(174) a. A boy admires every teacher. A girl does, too ⟨ ~~admire every teacher~~ ⟩.
[Fox 2000:33, (22e)]

b. Some girl watched every movie, and some boy did ⟨ ~~watch every movie~~ ⟩ too. [Ha 2007:160, (10)]

(i)		∃ > ∀ & ∃ > ∀		(both conjuncts take surface scope)
(ii)		∀ > ∃ & ∀ > ∃		(both conjuncts take inverse scope)
(iii)	*	∃ > ∀ & ∀ > ∃		(*Parallelism)
(iv)	*	∀ > ∃ & ∃ > ∀		(*Parallelism)

(175) A boy admires every teacher. Mary does, too ⟨ ~~admire every teacher~~ ⟩.
[Fox 2000:32, (21)]

(i)		∃ > ∀ & ∃ > ∀		(both conjuncts take surface scope)
(ii)	*	∀ > ∃ & ∀ > ∃		(*Scope Economy)
(iii)	*	∃ > ∀ & ∀ > ∃		(*Parallelism)
(iv)	*	∀ > ∃ & ∃ > ∀		(*Parallelism)

In both (174) and (175), the interpretations in (iii) and (iv) are unavailable because they violate Parallelism. In order to explain why the sentences in (174) have the interpretation in (ii) available, while those in (175) do not, Fox (2000) resorts to Scope Economy (and Parallelism):

(176) "The relevant difference between the two constructions, I propose, is that in [(175)] the ellipsis sentence is scopally uninformative. Therefore, Scope Economy restricts the ellipsis site to surface scope, and Parallelism blocks inverse scope in the antecedent sentence. In [(174)a and (174)b] the ellipsis sentence is scopally informative and is therefore unrestricted by Scope Economy. Both the ellipsis sentence and the antecedent sentence can receive inverse scope as long as Parallelism is maintained." [Fox 2000:34]

Similarly, in (175), the antecedent is scopally uninformative and, therefore, Scope Economy restricts the ellipsis site to surface scope. Parallelism blocks inverse scope in the ellipsis sentence.

Note that in the illicit example in (44), both Parallelism and Scope Economy would be respected. In particular, 'inverse scope' (i.e. the negative indefinite outscoping the modal) is scopally informative, as it is different from 'surface scope' (i.e. the modal outscoping the negative indefinite). In other words, Scope Economy

is respected. This 'inverse scope' is available in the antecedent, so following Parallelism, it should also be available in the ellipsis site. This is corroborated by the fact that in its non-elliptical counterpart, inverse scope is freely available:

(44)' Q: Who can offer no help? (¬ > ◇, % ◇ > ¬)
A: Quentin Tarantino can offer no help. (¬ > ◇, % ◇ > ¬)

As both Parallelism and Scope Economy are respected, QR of the negative indefinite out of the VP-ellipsis site should be allowed. This is, however, not the case.

(44) Q: Who can offer no help? (¬ > ◇, % ◇ > ¬)
A: * Quentin Tarantino can ⟨ ~~offer no help~~ ⟩. (¬ > ◇, % ◇ > ¬)

Given that an analysis of object negative indefinites based on Quantifier Raising cannot account for the blocking effect of VP-ellipsis, I conclude that negative indefinites do not undergo QR.[119,120]

6.4 Johnson (2010a,b, 2011a)

In this chapter, I have developed an analysis of English negative indefinites with the following key components: decomposition of the negative indefinite, multidominance, cyclic Spell-Out and linearization, and Fusion Under Adjacency. English negative indefinites are the result of a (fairly superficial) PF-process (Fusion Under Adjacency) that combines sentential negation and the determiner of an indefinite DP. I have argued that the locality required for morphologically combining the negative head and the indefinite determiner is established under multidominance and cyclic Spell-Out/linearization. The analysis takes as a starting point Johnson's

[119] Note that in Zeijlstra's (2011) account, it cannot be the case that verbal ellipsis blocks the Spell-Out of the constituent [*Op*¬ ∃] in (170): as /*no*/. Op¬ and ∃ are merged as sisters at the beginning of the derivation in Zeijlstra's proposal. If VP-ellipsis were to block them being spelled out as one morphological word, this would be the case in all instances of ellipsis, i.e. also in VP-ellipsis sites out of which the negative indefinite does not scope or in clausal ellipsis sites. In section 2.1, however, I have shown that clausal ellipsis sites can contain a negative indefinite, which shows that the formation of a negative indefinite inside an ellipsis site is not categorically blocked. Similarly, VP-ellipsis sites can contain a negative indefinite as long as it does not take scope out ouf the ellipsis site (cf. sections 2.2 and 2.3).

[120] In this section, it is shown that Quantifier Raising is not blocked by verbal ellipsis. Johnson (2010a, 2011a), however, proposes that QR involves Fusion (under adjacency). I argued in this chapter that ellipsis can block FUA. If this is the case, and if Johnson (2010a, 2011) is right in taking QR to involve Fusion, then why can QR escape a VP-ellipsis site? This is the topic of chapter 5.

(2010a,b, 2011a) multidominant account of WH-movement, Quantifier Raising, and negative indefinites.

Johnson (2010b) proposes that negative indefinites involve multidominant phrase markers. He wants to include the analysis of negative indefinites in the general approach he developed for WH-movement and QR in Johnson (2010a, 2011a). His analysis contains two crucial ingredients: (i) movement is remerge (giving rise to multidominant phrase markers), (ii) determiners can spread across distant syntactic positions but are mapped onto one word. According to Johnson (2010a,b, 2011a), the locality required for morphologically combining the two components of determiners (in QR, WH-movement and negative indefinites) is established by remerge. Before discussing Johnson's (2010b) proposal for negative indefinites (in subsection 6.4.2), I briefly consider his (2010a, 2011a) remerge analysis of WH-movement in the next subsection (6.4.1). This section is not intended to present every single detail of Johnson's (2010a, 2011a) proposal: I select and discuss those components that are most relevant to the discussion in this chapter. For details, especially concerning the semantics of the proposal, I refer the reader to the original papers.[121]

6.4.1 BACKGROUND: A MULTIDOMINANT ANALYSIS FOR WH-MOVEMENT

Johnson (2010a, 2011a) proposes to model WH-movement with the operation of remerge (i.e. Internal Merge, cf. section 2 of chapter 2). He argues that remerge resolves conflicting requirements of the semantics and the morphology of constituent questions. Remerge results in a phrase having two mothers, i.e. in multidominance.

Johnson adopts the idea that constituent questions involve two components: (i) a DP that introduces a variable in a lower position and (ii) a question morpheme Q in a higher position that semantically combines with the clause (marking the scope of the question) and that binds off the variable introduced by the DP (cf. Reinhart 1998; Hagstrom 1998, 2000; Kishimoto 2005; Cable 2007, 2010). In English, the Q-component is phonologically silent; only the variable component (the WH-phrase) is visible. In other languages (e.g. Japanese), however, both components are overtly recognizable. In the Japanese example in (177), an interrogative phrase (*dono gakusei*) occupies the position of the variable and a question morpheme (*ka*) on the verb marks the scope of the question.

[121] For discussion of Johnson's (2010a, 2011a) remerge analysis of QR, see sections 3.1 and 4 in chapter 5.

(177) [Johnson 2011a:16, (33)]

(Kimi-wa) dono-gakusei-ga nattoo-o tabe-tagatte-iru-to omoimasu-**ka**?
(you-TOP) which-student-NOM natto-ACC eat-desirous-be-C think-Q
'Which student do you think wants to eat natto?' [Japanese]

For Japanese, "we might imagine that the question morpheme and the interrogative phrase are independently merged into the positions that they are pronounced in" (Johnson 2011a:16). For English, however, Johnson adopts Cable's (2007, 2010) analysis of WH-questions in Tlingit. A WH-phrase in Tlingit occupies the left edge of the constituent question, like in English. But like in Japanese, the question contains both a WH-determiner and another morpheme, called Q by Johnson.[122] Unlike the Japanese Q, the Q-morpheme in Tlingit is part of the WH-phrase. This is illustrated in (178): the Q-particle *sá* has merged with the DP that contains the WH-word *aadóo*.

(178) [Johnson 2011a:16, (34), referring to Cable 2010:44, (67)]

[Aadóo yaagú **sá**]$_i$ ysiteen t_i?
whose boat Q you-saw
'Whose boat did you see?' [Tlingit]

Cable (2007, 2010) follows Kratzer & Shimoyama (2002) and Adger & Ramchand (2005) in proposing that there is an Agree relation between the Q-particle and the WH-word. This Agree relation is subject to locality conditions, which determine where the Q-morpheme can be merged (see Cable (2007, 2008, 2010) for details). This locality condition forces the Q-morpheme to merge not with the clause, but instead with the interrogative phrase. Johnson (2010a, 2011a) follows Cable's proposal that in English too, there is a Q-morpheme that is merged to the WH-phrase, and that this Q is in an Agree-relation with the determiner of the interrogative DP (see the structure in (180)).

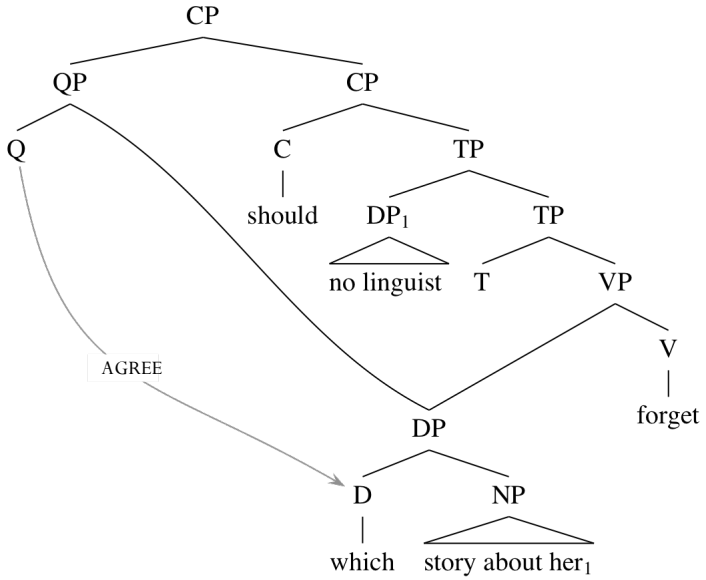
The form of the interrogative phrase in English depends on the presence of the Q-morpheme, because of the Agree-relation that holds between them. As a result of the Agree-relation between Q and the D of the interrogative DP, this D is spelled out in an agreeing form (i.e. as *which*). Thus, the Q-morpheme expresses itself by

[122] Johnson (2011a:18, fn.12) notes that the Q-particle in Tlingit cannot have the meaning that he associates with the Q-morpheme in Japanese and English. The morpheme under consideration for Tlingit not only surfaces in questions, but also in declarative sentences. Cable analyzes the Tlingit Q-particle as a choice function (which can be bound by other operators, determining whether the result is a declarative or a question). Johnson therefore suggests that "English has something akin to the Japanese question morpheme, but that it is deployed syntactically like the Tlingit Q particle".

determining how the determiner in the WH-phase gets pronounced. As such, an English WH-question such as (179) gets the representation in (180):

(179) [Johnson 2011a:17, (40)]
Which story about her should no linguist forget?

(180) [Johnson 2011a:17, (41)]



Importantly, Q does not combine semantically with the DP that it has merged with. Therefore, the QP it heads will have the same denotation as Q. The QP has the CP as its sister, and these combine semantically, forming the question. The WH-DP, however, is not interpreted semantically in the higher position; only the Q-morpheme is. In other words, the semantics require that the Q-morpheme and the interrogative DP be more distant than the locality conditions on the Agree-relation (cf. supra) tolerate. These (conflicting) semantic and syntactic/morphological requirements are met thanks to remerge (resulting in the multidominant representation). Although the question morpheme only combines semantically with CP (marking the scope of the question), it morphologically combines with DP through very local Agree.

When the linearization applies to the structure in (180), the remerged DP, which is now related to two positions, can only be linearized in one of these positions.[123] For the representation in (180), the interrogative DP can either be linearized in the position assigned to Spec,CP or in the position assigned to the direct object. In a simple constituent question like (179), English chooses the former option, linearizing the interrogative phrase in clause-initial position (i.e. it is mapped to the left of its original position in the linearized string). Crucially, though, the multiply dominated WH-phrase can in principle be spelled out either in the high (remerged) or the low (in situ) position. It is only because of English-specific requirements that the former option is chosen. As such, in theory nothing prevents a WH-phrase from being spelled out in its lower position. As Johnson (2011a:23) notes: "To the extent that WH-in-situ questions, like that in [(181)], involve 'covert' movement of the WH-phrase, this is a good result." Under the semantics sketched by Johnson, both WH-phrases have moved in (181). Still, the WH-phrase *which woman* gets linearized in its remerge position, while the WH-phrase *which magazine* gets linearized in its base position. The analysis provided here allows for precisely this type of flexibility.

(181) [Johnson 2011a:23, (52)]
Which woman bought which magazine?

6.4.2 JOHNSON'S (2010b) MULTIDOMINANT ANALYSIS OF NEGATIVE INDEFINITES

Johnson (2010b) wants to include negative indefinites in the general multidominant approach he developed for WH-movement (and QR) in Johnson (2010a, 2011a). His analysis contains two crucial ingredients. First, although the negative indefinite is

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[123] Johnson (2010a, 2011a) adopts Kayne's well-formedness constraints on linearizations as well as the idea that linearizations have to obey certain language-specific requirements (section 3 of chapter 2). Recall that *Totality* requires that the linearization algoritm evaluate each terminal in a phrase marker so that they emerge in at least one of their positions. The requirement of *Antisymmetry*, on the other hand, prevents the linearization algorithm from evaluating a remerged phrase in both of its positions. See Johnson (2011a:12).

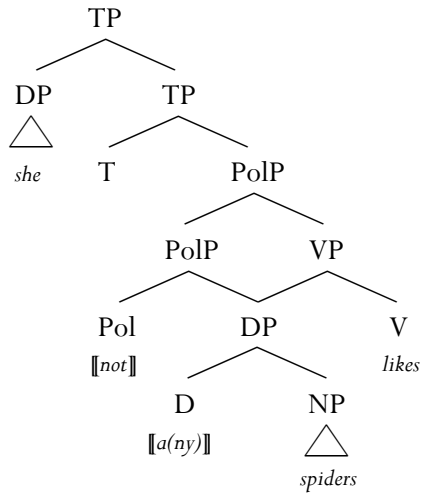
Johnson (2011a:12-13) also introduces a constraint to ensure that when a choice is made about how to resolve *Antisymmetry* for one of the terms in a remerged phrase, that choice spreads to all the other terminals in that remerged phrase. This constraint is *Contiguity*:

(i) CONTIGUITY
Let δ be all the lexical items in the phrase D. Contiguity holds for D iff for every α that is not in δ, α precedes everything in δ or α follows everything in δ. [Johnson 2011a:13, (28)]

Contiguity is violated when multidominance arises, though. Therefore, Johnson proposes that there is a restriction that says that "more violations of Contuigity are worse than fewer violations of Contiguity". See also Johnson (2011b).

mapped onto one word, it spreads across distant syntactic positions. *No* is composed of sentential negation (*not*) and an existential indefinite (*a(ny)*). Second, the analysis of negative indefinites involves remerge (giving rise to multidominant phrase markers): the indefinite merges with the verb and later (re)merges with sentential negation.[124] The multidominant phrase marker proposed by Johnson (2010b) for *She likes no spiders* is given in (182):

(182)



The specifics of Johnson's analysis of negative indefinites resemble those of WH-movement (discussed in the previous subsection). The main reason for this is that the negation ⟦*not*⟧ semantically combines with clauses, not NPs or DPs (see also section 3). Therefore, the phrase resulting from merger of the Pol-head and DP (PolP in (182)) has the same meaning as the Pol-head. As such, the properties of negative indefinites are like those of WH-movement, as the question morpheme in constituent questions only semantically combines with CP, not with its DP-sister. Although the Pol-head in (182) only semantically combines with VP, not with NP or DP, it does combine morphologically with DP. Johnson proposes that, in (182), an Agree relation is established between the Pol-head and the determiner of DP Pol merges with. This is possible as Pol c-commands D. Agreement fixes the appropriate morphological form for the determiner, i.e. *no*. As such, the polarity head expresses

[124] It is not that clear why negation merges with the indefinite DP. For WH-movement, Johnson (2010a, 2011a) proposes that this is necessary because of locality conditions on the Agree-relation between the determiner of the WH-phrase and the Q-morpheme. It is unclear to me whether such a locality condition also holds for the indefinite and the negation in the analysis of negative indefinites. On the merger of the indefinite DP and sentential negation, see section 3 of this chapter.

itself by determining (via Agree) how the indefinite determiner in the DP gets pronounced.

I have argued, however, that the analysis of negative indefinites involves a PF-component (Fusion Under Adjacency), given their interaction with the PF-process of ellipsis (cf. section 4 of this chapter). Recall that ellipsis does not block Agree (cf. section 6.2), so in the analysis in (182), the interaction between negative indefinites and ellipsis remains unexplained. Moreover, there are other reasons to take sentential negation and the indefinite determiner to undergo Fusion Under Adjacency instead of Agree.

First, an Agree analysis of negative indefinites would predict the negation (the head Neg) and the agreeing indefinite (the head D) to be able to be spelled out simultaneously. Recall that in Tlingit – the language on which Johnson (2010a, 2011a) bases his multidominant Agree analysis for WH-movement – the WH-form of D (= the Goal) and the Q-particle (= the Probe) overtly co-occur (cf. Cable 2007, 2008, 2010, discussed in section 6.4.1). A relevant example is (178):

(178) [Johnson 2011a:16, (34), referring to Cable 2010:44, (67)]
[Aadóo yaagú **sá**]$_i$ ysiteen t_i?
whose boat Q you-saw
'Whose boat did you see?' [Tlingit]

Negation and an agreeing D-head can, however, not be spelled out simultaneously, as is shown in (183).[125] An analysis in terms of Fusion Under Adjacency thus correctly predicts overt sentential negation and negative indefinites to be in complementary distribution.[126]

(183) a. * John did not buy nothing. (* under the single negation reading)
b. * John does not read no novels. (* under the single negation reading)

[125] This suggests that the analysis of negative concord in languages such as Italian should be different from the account developed for negative indefinites in this section. The same goes for varieties of English in which the sentences in (183) are grammatical under the single negation reading. See section 2.1 in chapter 6 for some discussion.

[126] I agree with Andrés Saab (p.c.) that a more detailed and precise investigation of the vast amount of extremely complex agreement/concord patterns across languages is required to really substantiate this reasoning. Obviously, however, this is not my primary concern here.

Secondly, negative indefinites transparently consist of two morphemes (negation + indefinite), as discussed at length in Sauerland (2000a). [127] For instance, Sauerland discusses negative indefinites in Mohawk, based on Baker (1995, 1996). A relevant example is *yahuhka* 'nobody' in (184):

(184) [Sauerland 2000a:421, (10)]
Shawatis yahuhka to-shako-ka-0.
John nobody NEG-AGR-see-STAT.
'John saw nobody.' [Mohawk]

Baker and Sauerland argue that *yahuhka* consists of *yah* and *uhka(k)*, *yah* being the morpheme of sentential negation and *uhkak* an indefinite with existential meaning. [128] These components are exemplified in (185)a and (185)b, respectively. *Yahuhka* can also be split in *yah* and *uhka* in overt syntax, as shown in (186), expressing the same meaning as in (184).

(185) [Sauerland 2000a:422, (13b)-(14)]
a. Sak yah kanusha' te-ho-hninu-0.
Sak not house NEG-AGR-buy-STAT
'Sak didn't buy a/the house.'

b. Uhkak wa-shako-kv-'.
someone FACT-AGR-see-PUNC
'He saw somebody.' [Mohawk]

(186) [Sauerland 2000a:422, (15)]
Yah to-shako-ka-0 uhka.
not neg-agr-see-stat somebody
'He didn't see anybody.' [Mohawk]

Similarly, in Norwegian, the negative indefinite *ingen* 'no' transparently consists of the negation *ikke* and the indefinite *noen* 'any' (Christensen 1986; Kayne 1998; Sauerland 2000a), cf. (187). In Dutch as well, the negative indefinite *niets* 'nothing'

[127] Johnson (2011a:22, fn.20) also sees corroborating evidence for his Fusion analysis of quantifiers in the fact that some quantificational determiners are transparently composed of two separate parts (cf. section 3.1 in chapter 5).

[128] Note that *yahuhka* and the overt splitting *yah-uhka* surface without the final /k/ of the existential indefinite *uhkak*. See Baker (1995, 1996) for discussion.

can be transparently decomposed into negation *niet* and the indefinite *iets* 'something', as shown in (188).

(187) [Sauerland 2000a:423, (17)-(18)]

a. Jon leser inger romaner.
John reads no novels
'John reads no novels.'

b. Jon leser ikke noen romaner.
John reads not any novels
'John does not read any novels.' [Norwegian]

(188) a. Jan heeft niets gekocht.
John has nothing bought
'John has bought nothing.'

b. Dat is niet iets wat Jan gekocht heeft.
that is not something what John bought has
'That is not something John has bought.' [Dutch]

Concluding, unlike Johnson (2010b), I do not take the multidominant analysis of negative indefinites to include an Agree-component. Instead, I maintain that sentential negation and the indefinite undergo Fusion Under Adjacency.

Another difference between the analysis proposed here and Johnson's (2010b) account is that in the latter, the clausal polarity head merges directly with the indefinite DP, forming a PolP (cf. (182)). I proposed that a negative head merges with the indefinite DP, and the result of this merger (NegP) is merged as the specifier of the clausal polarity head. See section 3.2 of this chapter for this analysis. One problem with the structure proposed by Johnson (2010b) for negative indefinites is that the VP in (182) seems to be the specifier of (or an adjunct to) the PolP. This is surprising, given that the polarity head is one of the heads in the clausal functional structure, normally considered to select VP (or a bigger chunk such as vP or TP) as its complement. My remerge analysis of negative indefinites does not face this problem.[129]

[129] Thanks to Marcel den Dikken (p.c.) for pointing out this problematic aspect. See also footnote 107.

7 Conclusion

This chapter discussed the interaction of English negative indefinites and (verbal and clausal) ellipsis, summarized in the following two generalizations:

(189) THE CLAUSAL/VERBAL GENERALIZATION
While in clausal ellipsis *any* can antecede the ellipsis of *no*, in verbal ellipsis this polarity switch is disallowed.

(190) THE VPE/NI GENERALIZATION
A negative indefinite in object position cannot scope out of a VP-ellipsis site.

English negative indefinites and quantificational phrases decompose into two independent elements. In this chapter, I proposed that their formation is the result of a (fairly superficial) process that morphologically combines a negative head and the determiner of the object DP. I referred to this process as Fusion Under Adjacency (FUA). Fusion between negation and an indefinite can come about through remerge/multidominance, in combination with cyclic Spell-Out/linearization. I argued that the PF-process of ellipsis can block the formation of negative indefinites, by bleeding the PF-process of FUA. As ellipsis is derivational, the timing of both FUA and ellipsis is vital. FUA has to occur before the ellipsis licensor is merged. In verbal ellipsis, FUA only takes place before merger of the licensor if the negative indefinite has narrow scope. High scope of a negative indefinite is, however, blocked in verbal ellipsis. In clausal ellipsis, on the other hand, FUA always takes place before the ellipsis licensor is merged.

Concluding, this chapter accounted for the interaction between English negative indefinites and ellipsis by allowing for multidominant phrase markers and adopting a cyclic view on the syntax-to-PF-mapping (cf. cyclic Spell-Out/linearization and derivational ellipsis).[130]

[130] In this chapter, I proposed that negative indefinites are the result of the morphological operation FUA, an operation defined over multidominant phrase markers. Ellipsis, a PF-operation, can bleed this morphological process.

Andrés Saab (p.c.) wonders whether an LF-copy analysis of ellipsis (cf. section 4 in chapter 2) could also account for both *The VPE/NI Generalization* and *The Clausal/Verbal Generalization* discussed in this chapter. In an LF-copy analysis (cf. Fiengo & May 1994; Chung et al 1995; Wilder 1997), an empty category is generated in the elliptical phrase. This empty proform has the category corresponding to the elliptical gap (vP in verbal ellipsis, TP in clausal ellipsis). The antecedent is copied into the ellipsis site at LF, providing the elliptical constituent with the right interpretation. For the example in (i)a, the syntactic structure would be the one in (ii). (*continued on the next page*)

(i) Who can offer no help?
a. * Quentin Tarantino can ⟨ offer no help ⟩.
b. Quentin Tarantino can not ⟨ offer (any) help ⟩.

(ii) Quentin Tarantino can ⟨ pro_{vP} ⟩.

Saab (p.c.) reasons that a high polarity head Pol_1, which is not part of the elliptical constituent, could not establish a (syntactic or morphological) dependency with an indefinite object DP in (ii), as there simply is no syntactic representation of an indefinite DP in object position in the elliptical gap. The unavailability of this dependency would explain the ungrammaticality of (i)a. The only option for the negative Pol_1 is then to be realized independently as *not*, as in (i)b. In this case, the antecedent (containing a non-negative indefinite object DP) is successfully copied in the null pro-form at LF. Unlike in the verbal ellipsis example in (i)a, an elliptical constituent can contain a negative indefinite object in clausal ellipsis, cf. (iii)a. According to Saab (p.c.), this follows from this LF-copy analysis if the antecedent that is copied into the null pro-form ⟨ pro_{TP} ⟩ contains a negative Pol_1: in this case, the dependency between Pol_1 and the indefinite object can be established straightforwardly.

(iii) Q: Which song didn't any judge always vote for?
A: a. Katie's song ⟨ no judge always voted for ⟩.
b. Katie's song ⟨ pro_{TP} ⟩.

I take an LF-copy analysis to be undesirable for several reasons, however. First, if a verbal ellipsis site should be analyzed as a null pro-form, blocking dependencies between a head outside the ellipsis site and a DP inside an elliptical gap, it is mysterious how Agree between T and the elided associate of a *there*-expletive construction is possible. In *there*-expletive constructions, the expletive occupies the subject position Spec,TP, while the thematic subject (the associate) is part of the verbal ellipsis site. As is shown in (iv), the auxiliary outside of the ellipsis site (occupying the T-head) agrees with the associate inside the ellipsis site (see also section 6.2 of this chapter). As there is no syntactic representation of the associate in the ellipsis site in an LF-copy theory, it is unclear how Agree can take place.

(iv) [van Craenenbroeck 2007:3, (13)]
a. Jim said there wouldn't be many people at the party, but there were ⟨ many people at the party ⟩.
b. Jim said there wouldn't be a linguist at the party, but there was ⟨ a linguist at the party ⟩.

Second, if a null pro-form (i.e. absence of internal structure in the ellipsis site) blocks a dependency between the high Pol_1-head outside the ellipsis site and an indefinite object DP inside the elliptical gap, it is predicted that high scope of a negative indefinite in verbal ellipsis is *never* allowed. It is discussed at length in chapter 4, however, that for instance in cases of *co-licensing* of verbal ellipsis by an epistemic modal and an aspectual auxiliary, an object negative indefinite (inside the verbal ellipsis site) has more scopal possibilities. In these cases, high scope of the object negative indefinite is allowed, i.e. a dependency between the high polarity head and the object negative indefinite inside the ellipsis site *can* be established. It is unclear to me how this state of affairs could follow if the LF-copy analysis of ellipsis introduced above is adopted.

Third, there is abundant evidence in the literature (e.g. from preposition stranding, case marking, extraction) that the ellipsis site in verbal ellipsis and clausal ellipses like sluicing and fragment answers contains more syntactic structure than a pronoun (cf. e.g. Merchant 2001 *et seq.*; Aelbrecht 2009; Temmerman to appear). Moreover, as pointed out by Aelbrecht (2009: section 1.2.2.1), if ellipsis sites are like pronouns, it is not expected that Antecedent-Contained Deletion (ACD) should be allowed: interpreting the antecedent in the ellipsis site would lead to infinite regress. ACD does exist however (see section 3.3.2 of chapter 5 for discussion). Given all this, I take a PF-deletion approach to ellipsis to be preferred to an LF-copy account. I leave a more detailed comparison of the proposal developed in this dissertation with an LF-copy analysis to future research.