Multidominance, ellipsis, and quantifier scope

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CHAPTER 6

CONCLUSIONS & FUTURE PROSPECTS

1 Summary and conclusions

This dissertation has shed new light on the interaction of multidominant phrase markers, cyclic Spell-Out/linearization and derivational ellipsis by providing a novel account for the scopal behavior of English negative indefinites, modals, and quantified phrases in ellipsis.

This dissertation set out to answer the following two main research questions:

(1) a. Why does ellipsis block high scope of object negative indefinites?
b. Why is QR of a quantified object out of an ellipsis site allowed?

The research question in (1)a also raised the following additional research questions:

(2) a. If verbal ellipsis is licensed by a modal, do negative indefinites always show the same scopal possibilities when this modal is deontic, epistemic, or dynamic? If so/not, why (not)?
b. Is it possible for a negative polarity item *any* to antecede the ellipsis of a negative indefinite? If so/not, why (not)?

The theoretical base for dealing with these issues was provided in chapter 2 of this dissertation. It was argued that a syntactic object can be remerged, which results multi-rooted phrase marker. Moreover, in a cyclic Spell-Out/linearization model of the grammar, a total, consistent linear order for a multidominant structure may be generated, provided two hypotheses. First, both the linearization scheme and the linearization d(A) are tolerant, and language-particular requirements and Kayne's (1994) well-formedness conditions function as 'filters', selecting an appropriate subset. Second, at the end of a linearization domain, linear order is fixed once and for all (Order Preservation). Finally, ellipsis is considered a PF-phenomenon that

involves the non-pronunciation of terminal elements and the deletion of linearization statements. Moreover, (the licensing/marking of) ellipsis takes place in the course of the derivation: an ellipsis site is sent to PF as soon as the licensor is merged. This dissertation provided an answer to the questions in (1) and in (2) given this multidominant, cyclic model of the grammar.

The questions in (1)a and (2)b were answered in chapter 3 of this dissertation. The investigation of the empirical data in this chapter led to two generalizations:

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

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

These two generalizations were accounted for in the multidominant, cyclic model developed in chapter two. It was argued that a negative indefinite is the result of a morphological process, Fusion Under Adjacency, between its two subparts (sentential negation and an indefinite determiner). This seemed surprising at first sight, as these two components are not obviously string-adjacent in English. I proposed that the required locality/adjacency is established under remerge, in combination with a cyclic Spell-Out/linearization. The PF-process of ellipsis can bleed the morphological process of FUA (at PF) in the formation of a negative indefinite. The timing of FUA and ellipsis is crucial: FUA has to happen before the licensing head merges. In the case of clausal ellipsis, FUA always takes place before the ellipsis licensor is merged. In the case of verbal ellipsis, on the other hand, 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 VP-ellipsis.

Chapter 4 provided an answer to the question in (2)a. It was shown that when ellipsis is licensed by a deontic, epistemic, or dynamic modal, an object negative indefinite in a verbal ellipsis site only has a narrow scope reading. Hence, the analysis presented in chapter three could straightforwardly be extended to all types of modals. However, when an epistemic modal co-occurs with an aspectual auxiliary in verbal ellipsis and when a dynamic modal is part of a verbal ellipsis site licensed by *do,* all scopal possibilities are available. I argued that co-licensing (by the epistemic modal and aspectual auxiliary) of verbal ellipsis after movement of the epistemic modal accounts for the former observation. Co-licensing by a deontic modal and an aspectual auxiliary shows different scopal properties, though, given that, unlike

epistemic modals, deontic modals do not move. The scopal facts regarding dynamic modals were accounted by considering them to involve a biclausal structure.

Finally, the question in (1)b received an answer in chapter 5. In this chapter, QR is argued to be the result of remerge of the NP-part of a quantificational phrase and FUA between two adjacent heads, the quantificational operator and the head of its restriction. Again, the two terminals fuse under adjacency in the multidominant, cyclic model of the grammar developed here. The lack of a blocking effect of ellipsis in QR (which also involves FUA) is accounted for by the fact that QR is always short, targeting the vP-periphery. In particular, a quantificational phrase must target a clause-denoting node and this operation is subject to *Shortest Move*. Fusion Under Adjacency therefore always occurs before the ellipsis licensing head is merged.

Concluding, by allowing for remerge/multidominance in C_{HL} and adopting a cyclic view of the syntax-to-PF-mapping, the interaction of quantifier scope and ellipsis in English can be accounted for. Ellipsis, a PF-process, can bleed the morphological process FUA, which plays a crucial role in the formation of English negative indefinites and quantificational determiners. The derivational timing of both FUA and (the licensing/marking of) ellipsis plays a vital role in whether or not the latter bleeds the former.

2 Future prospects

This short final section identifies a number of areas for future research. I do not provide any detailed analyses in this section. The questions raised in this section might lead to confirmation or modification of the proposals made in this dissertation.

2.1 Negative concord

As discussed in section 6.4.2 of chapter 3, there are several reasons to prefer a FUA analysis of negative indefinites to an account in terms of Agree. One of these is that an Agree analysis would predict the negation and the agreeing indefinite D-head to be able to be spelled out simultaneously. This is, however, not possible in English, as illustrated in (5).

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

As noted in section 6.4.2 of chapter 3, this suggests that the account of negative concord in languages such as Italian (cf. (6)) should be different from the analysis of negative indefinites developed here. The same goes for varieties of English in which the sentences in (5) are grammatical under the single negation reading.

(6) [cf. Sauerland 2000a:5, (8a)]
Non o visto nessuno
not have seen nobody
'I saw nobody.' [Italian]

This is in line with accounts in the literature that propose different analyses for negative concord and negative indefinites. For instance, although Zeijlstra (2004) develops an Agree analysis for negative concord in various languages, he argues (contra e.g. Penka 2011) in Zeijlstra (2011) that this analysis should not be extended to negative indefinites in non-negative concord languages like German, Dutch and English. For the latter, he develops an analysis which incorporates both QR and amalgamation (cf. section 6.2 of chapter 3). If it is indeed the case that negative concord involves Agree (cf. Ladusaw 1992; Zeijlstra 2004; Penka 2011; among many others), we predict that ellipsis should not interact with sentences like the one in (6) as it does with negative indefinites in English (cf. section 4 of chapter 3). It was shown in this dissertation that high scope of a negative indefinite is blocked in verbal ellipsis in English, as illustrated in (7). I argued that verbal ellipsis blocks FUA in this case.

(7) a. Quentin Tarantino can offer no help. (¬ > *can*, $^{\%}$ *can* > ¬)
b. Q: Who can offer no help?
A: $^{\%}$ Quentin Tarantino can ⟨ ~~offer no help~~ ⟩. (* ¬ > *can*, $^{\%}$ *can* > ¬)

Recall (section 6.2 of chapter 3), though, that ellipsis does not block Agree. If negative concord is indeed to be analyzed as involving Agree, it is predicted that the elliptical counterpart of (8)a in (8)b should be grammatical with a high scope reading (that is, for speakers who allow (8)a with a single negation reading to begin with).

(8) a. The Rolling Stones can't get no satisfaction.
b. Q: Who can't get no satisfaction?
A: The Rolling Stones can't.

It remains to be seen whether these predictions are borne out.

2.2 Overt QR and NEG-shift

In this dissertation, I argued that Fusion Under Adjacency, the cyclicity of Spell-Out and linearization, and the requirement of Order Preservation cause an object negative indefinite and an object QP to always be realized in their base positions (cf. section 4 of chapter 3 and section 3 of chapter 5, respectively), although they can be interpreted in their remerge positions (e.g. outscoping a modal).

As also noted by Johnson (2011a:25, fn.23), "[t]his way of making QR 'covert' seems to predict that no language could have an overt version of QR. This has sometimes been claimed to arise, even in English." Hungarian has also been claimed to exhibit both covert and overt QR (cf. Szabolcsi 1997; Surányi 2002). To entertain the possibility that all QR in Hungarian is covert, I need to propose that the overt fronting of quantifiers is not QR, but rather an instantiation of an operation piggybacking on an independently existing movement operation such as topicalization and focus movement. See e.g. Surányi (2002) for discussion (although Surányi rejects this proposal).

Also note that according to Fox (2000), overt QR does not have to affect semantic interpretation; only covert scope-shifting operations cannot be scopally vacuous (given *Scope Economy*). Fox (2000:76) predicts that "in Hungarian QR will need to affect semantic interpretations only when it is covert". The prediction that overt QR in Hungarian can be scopally vacuous seems to be correct, as noted by Surányi (2002:98): "it appears that there does not need to be a scope-sensitive element in the clause for QR to occur in a preverbal position overtly". This observation at least leaves open the possibility that overt and covert fronting of quantifiers in Hungarian should be distinguished from each other.

When it comes to negative indefinites, Johnson (2010b) – who adheres to an Agree account of negative indefinites – proposes that the linearization algorithm can put an object negative indefinite in one of two positions. Either the object negative indefinite could be realized in its base position, or it could be realized in its remerge position. Johnson (2010b:2) supposes that "English [...] expresses the first case and those languages that have NEG-movement express the other." In this dissertation, however, negative indefinites are argued to involve FUA and to be realizable only in their base position. My analysis thus predicts there to be only *in situ* negative indefinites and, hence, no overt NEG-shift. This seems corroborated by the fact that many proposed instances of NEG-shift are parasitic on independently attested movement operations, such as scrambling in continental West-Germanic (Haegeman 1995) and object shift in Scandinavian (Svenonius 2002). Tubau (2008:136ff) argues that overt fronting of negative indefinites should be analyzed as an instance of focus

movement. As such, overt NEG-shift would again be an instantiation of an operation piggybacking on an independently existing movement operation.

A detailed investigation of cases of apparent overt QR and NEG-shift is beyond the scope of this dissertation.

2.3 Dutch negative indefinites

As discussed in sections 1.1 and 6.1 of chapter 3, lexical decomposition analyses of negative indefinites were originally proposed for SOV languages like Dutch and German (cf. Jacobs 1980; Rullmann 1995). A superficially adjacent negative marker and indefinite determiner are considered to undergo obligatory amalgamation/incorporation (forming a negative indefinite). As Dutch and German are SOV languages, the object and sentential negation surface adjacent to each other (i.e. the verb does not intervene between them). The co-occurrence of sentential negation and an indefinite object is ungrammatical. All this was illustrated with the examples in (9)-(10)-(11) (cf. section 6.1 of chapter 3).

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

(10) * 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]

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

According to Rullmann (1995), incorporation/amalgamation seems is blocked when lexical material intervenes between the negation and the indefinite determiner. Relevant examples were the sentences in (12), with an intervening preposition (cf. section 6.1 of chapter 3).

(12) [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]

The question arising then is whether the analysis developed in this dissertation for English, an SVO-language is extendable to SOV-languages like Dutch and German. The sentences in (12) at first sight seem to indicate that Dutch and German negative indefinites indeed crucially rely on phonological string-adjacency – and not on adjacency at some point in the derivation as proposed in this dissertation. Note that in English, a negative indefinite inside a prepositional phrase is grammatical, also with high scope (as in (13)):

(13) The prisoner is not permitted to exercise; nor is he allowed to leave his cell. He may talk with no one (if he is caught speaking, he is penalized with another day in "the hole").
[Krause v. Schmidt, 341 F.Supp. 1001 (1972)][1]
= He is not allowed to talk with anyone. (¬ > ◇)

The ungrammaticality judgment for sentences such as (12)b is contested, however. As Rullmann (1995:197) himself indicates, "there is quite some variation regarding the acceptability of sentences like these" (translation TT). It is easy to find examples of Dutch sentences with negative indefinites inside PPs (with the negation scoping high). In the sentences in (14) and (15), the prepositions *over* 'of' and *met* 'with' intervene between sentential negation and the indefinite. Nevertheless, negative indefinite formation is allowed.[2]

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[1] http://www.leagle.com/xmlResult.aspx?page=2&xmldoc=19721342341FSupp1001_11174.xml&docbase=CSLWAR1-1950-1985&SizeDisp=7

[2] Note that the grammaticality of both the a- and b-sentences in (14) and (15) – the former ones with a negative indefinite, the latter ones with sentential negation and an indefinite – also contradicts Rullmann's (1995:197) claim that "when incorporation is possible, it is also required in Dutch". Rullmann (1995:197) himself gives an example (cf. (i)a) that shows that incorporation is not always required:

(i) a. [cf. Rullmann 1995:197, (9b)]
? Ze willen niet verpleegkundigen / een verpleegkundige ontslaan.
they want not nurses a nurse fire
'They do no want to fire any nurse(s).'

b. Ze willen geen verpleegkundige(n) ontslaan.
they want no nurse(s) fire
'They want to fire no nurse(s).' [Dutch]

(14) a. Men mag over geen eigendommen beschikken.[3]
one may of no properties have
'One is not allowed to have any properties.' (¬ > ◇)

b. Men mag niet over eigendommen beschikken.
one may not of properties have
'One is not allowed to have any properties.' (¬ > ◇)

[Dutch]

(15) a. Ik mag met geen wagen rijden, gezondheidsproblemen.[4]
I may with no car drive health-problems
'I am not allowed to drive a(ny) car, (since I have) health problems.'
(¬ > ◇)

b. Ik mag niet met een wagen rijden.
I may not with a car drive
'I am not allowed to drive a(ny) car.' (¬ > ◇)

[Dutch]

Moreover, the question arises whether subject negative indefinites in Dutch are the result of phonological string adjacency. As noted by Iatridou & Sichel (2011:609) for English subject negative indefinites, "the negative component of a subject NegDP behaves with respect to scopal predicates just as sentential negation does. If the negative part of NegDPs is, in some sense, sentential negation, it is almost trivial that [this generalization] should hold." Sentential negation in Dutch is, however, not realized adjacent to the subject, as shown in (16)a. If Iatridou & Sichel (2011) are on the right track in arguing that the subject negative indefinite has sentential negation as one of its subparts, it remains to be seen how subject negative indefinites (as in (16)a) can be the result of superficial adjacency.

(16) a. <*niet> (de/een) journalist(en) <*niet> mag/mogen …
not the/a journalist(s) not may
… Syrië <niet> in.
Syria not in
'(The/a) journalist(s) may not enter Syria.' (¬ > ◇)

[3] http://www.ocmw.dessel.be/file_uploads/1813.pdf?_vs=0_N
[4] http://forum.belgiumdigital.com/f22/sd-brugge-30-november-2003-a-27582-5.html

b. Geen journalist mag Syrië in.
no journalist may Syria in
'No journalist may enter Syria.'
(= All journalists are required to stay out.) (¬ > ◇)

[Dutch]

Given these preliminary observations, the analysis developed in this dissertation might be preferable to an account in terms of 'real' phonological string adjacency for negative indefinites in SOV languages like Dutch and German. I leave an inquiry into the precise formation of these indefinites to future research.

2.4 Subject QPs and negative indefinites

This dissertation has focused on negative indefinites and quantified phrases (QPs) in object position. The analysis of negative indefinites and QPs in terms of Fusion Under Adjacency in a cyclic, multidominant model of the grammar should be extended to subject negative indefinites and QPs.[5]

As noted by for instance von Fintel & Iatridou (2003) subject QPs show scope ambiguities with deontic modal operators, as illustrated in (17):

(17) [von Fintel & Iatridou 2003:175, (4)]
Most of our students must get outside funding –
a. for the department budget to work out.
b. the others have already been given university fellowships.

The sentence in (17)a has an inverse scope reading, with the subject QP scoping below the deontic modal (for the budget to work, it needs to be the case that most of the students get outside funding; von Fintel & Iatridou 2003:175). The sentence in (17)b has a surface scope reading, with the subject QP scoping above the modal (the obligation is imposed on those specific students who have not already been given fellowships; von Fintel & Iatridou 2003:175).

If the subject QP is first merged in the vP-area and later on remerged in the TP-

[5] In any case, subject QPs and negative indefinites are not expected to be obligatorily spelled out in their base position (as was the case for object QPs and negative indefinites), given that they are not part of the spelled-out domain of the vP-phase (as object QPs and negative indefinites are). Subjects are merged in Spec,vP, part of the vP-edge.

area above the deontic modal in T (as proposed throughout this dissertation), the ambiguity follows straightforwardly. This is also perfectly in line with the analysis developed for object QPs in chapter 5 of this dissertation: first, the object QP is obligatorily part of the vP-domain, and later on, it may be remerged in the TP-domain, accounting for scopal ambiguities (for instance with respect to a deontic modal).

When it comes to subject negative indefinites, Iatridou & Sichel (2011) have shown that some scope above a deontic modal (cf. (18)), while others do below it (cf. (19)).

(18) [cf. Iatridou & Sichel 2011:599, (6)]
Interpretation: Subject NegDP > Mod

a. No student has to / needs to leave.
   = All are allowed to stay.
   ≠ It is required that no student leaves.

b. No student can / may leave.
   = All are required to stay.
   ≠ It is permitted that no student leaves.

(19) [cf. Iatridou & Sichel 2011:599, (7)]
Interpretation: Modal > Subject NegDP

a. No student should / ought to leave.
   = All should / ought to stay.
   ≠ All can stay.

b. No student must leave.
   = All must stay.
   ≠ All are allowed to stay.

Iatridou & Sichel (2011) argue that a negative indefinite should be decomposed, with sentential negation as one of its subparts (as also proposed in chapter 3). Iatridou & Sichel (2011:609) observe that "the negative component of a subject NegDP behaves with respect to scopal predicates just as sentential negation does." That is, subject negative indefinites scope above a Neg>Mod modal such as *have to*, but below a Mod>Neg modals such as *should* (cf. chapters 3 and 4 on Mod>Neg and Neg>Mod modals).

When adopting the account developed in chapter 3, the negative component of the subject negative indefinites in (18) is part of the high $PolP_1$ (from where it

outscopes the modal in T). Thus, NegP is merged as the specifier of $PolP_1$. It is conceivable that the DP-part of NegP was first remerged in Spec,TP for EPP reasons. For the subject negative indefinites in (19), on the other hand, their negative component has to be part of the low $PolP_2$ (with the modal outscoping the negation). Hence, NegP is merged as the specifier of $PolP_2$. It is unclear, however, how the negative indefinite ends up in Spec,TP, the surface position of the subject. Remerge of NegP in Spec,TP is ruled out, as this would result in the negation outscoping the modal in T (contrary to fact, cf. (19)). If only the DP-part of NegP is remerged in Spec,TP, it is predicted that the indefinite component of the subject negative indefinite may outscope the modal in T ($\exists > Mod > \neg$) in (19). Alternatively, the subject negative indefinite occupying Spec,TP could be a surface effect. It has been argued that the EPP is a PF-phenomenon: "it is controlled by morphosyntactic properties of expressions at PF rather than at LF" (Brattico & Huhmarniemi 2006:7) (cf. Merchant 2001; Lasnik & Park 2003; Brattico & Huhmarniemi 2006; van Craenenbroeck & den Dikken 2006 for discussion). In this case, it is predicted that only the reading with the modal outscoping the whole subject negative indefinite is allowed in (19). Answering the question how the subject negative indefinites in (19) end up in their surface position Spec,TP thus requires a detailed investigation of the scopal possibilities of the subparts of subject negative indefinites with respect to other scopal other operators in the TP-area. I leave this issue open for further research.

2.5 Remaining issues

There are some other remaining questions that have not been answered in this dissertation. How do negative indefinite formation and QR interact, given that both of these operations require a D-head to fuse with a higher functional head? How should an English sentence containing two negative indefinites be analyzed (whether it has a positive interpretation or a negative concord reading, cf. (20)a vs. (20)b and (21)a vs. (21)b)?

(20) But no one said nothing. [Fleetwood Mac, *Walk a thin line*]
   a. Everyone said something.
   b. No one said anything.

(21) The coach gave no one nothing.
   a. The coach gave everyone something.
   b. The coach gave no one anything.

Moreover, in this dissertation, it was argued how multidominance and cyclicity feed Fusion Under Adjacency in the formation of negative indefinites and quantificational determiners. The question arises whether there are other such non-local morphological relations elsewhere in the grammar. Jacobs (1980) suggests to extend his decomposition analysis of negative indefinite determiners to other negative expressions (such as *nichts* 'nothing'); Stickel (1970) argues that all negative expressions should be analyzed as involving decomposition. Sportiche (2005) proposes that all quantificational DPs can have a split structure, with the determiner possibly generated in the matrix clause and the NP-part in the embedded clause. It remains to be seen whether the analysis proposed in this dissertation can be extended to other (non-quantificational) elements and if so, how these need to be constrained (e.g. in terms of locality). It should be clear that ellipsis is a promising diagnostic tool: if something is bled by ellipsis, it is probably the case that it involves a (potentially non-local) morphological relation (as discussed at length in chapter 3 of this dissertation, see also van Craenenbroeck & Temmerman 2011).

I leave these questions open for future research.