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Modal complement ellipsis

VP ellipsis in Dutch?*

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Although the literature commonly assumes Dutch not to display VP ellipsis (VPE), this paper presents Dutch data reminiscent of VPE in English. In particular, the infinitival complement of a root modal can be elided. This modal complement ellipsis (MCE) differs from English VPE, however, in not allowing objects to extract out of the ellipsis site. Therefore, one might take MCE to involve a null proform. Since subjects can extract, however, I argue that MCE involves deletion of syntactic structure. I claim that the ellipsis site is sent to PF for non-pronunciation as soon as the ellipsis licensing head is merged. This implies that extraction is only possible to a position between the licensor and the ellipsis site. I account for the contrast between Dutch and English by showing that in MCE only the subject has such an escape hatch, while English VPE allows all extraction due to an intervening phase edge.

1. Introduction

Dutch displays a previously unnoticed type of ellipsis that is reminiscent of VP ellipsis in English. The complement of a modal verb can be left out, as in (1).[1]

(1) *Roos wil Jelle wel helpen, maar ze kan niet.* [*Dutch*]
Roos wants Jelle PRT help but she can not
'Roos wants to help Jelle, but she can't.'

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1. As pointed out by a reviewer, there might be dialectal variation as to the acceptability of the examples. This paper does not deal with this variation, however.

However, this phenomenon, which I call modal complement ellipsis or MCE, differs from VP ellipsis in various ways. In the next section I introduce some of those differences and discuss the properties of Dutch modals and their complement. I show that it is not easily decided whether MCE involves deletion or a proform, because the extraction data point both ways. Section 3 argues for a PF deletion account and I claim that ellipsis is licensed through an Agree relation between the licensor and the ellipsis site. In Section 4 this analysis is applied to Dutch MCE, where I demonstrate how it accounts for the extraction puzzle. In Section 5, the same analysis is applied to English VP ellipsis and Section 6 concludes.

2. Dutch modal complement ellipsis (MCE)

2.1 Basic properties

Dutch allows the infinitival complement of a modal verb to be missing, as was illustrated in (1) above. This phenomenon looks a lot like English VP ellipsis (VPE), even though it has been claimed that Dutch – like German, French and Italian – lacks VPE (see Lobeck 1995). I argue that Dutch MCE is not exactly the same phenomenon as English VPE, although their analyses are similar. One of the most noticeable differences is the distribution: MCE is much more restricted. Unlike VPE, MCE is not allowed with temporal auxiliaries such as *zijn* 'be', *hebben* 'have' or *zullen* 'will' (cf. (2)), nor with the passive auxiliaries *worden* 'become' and *zijn* 'be', as shown in (3).

(2) a. *Willem had gezegd dat hij was langsgekomen, maar hij*
Willem had said that he was by.come but he
*is niet *(langsgekomen).*
is not by.come
'Willem had said that he had dropped by, but he hadn't.'

b. *Pieter zegt dat hij niet gebeld heeft, maar hij heeft toch*
Pieter said that he not called has but he has PRT
*wél *(gebeld)?*
AFF called
'Pieter says he hasn't called, but he did, right?'

c. *Herman kan niet zingen vanavond, maar Marlies zal*
Herman can not sing tonight but Marlies will
**(zingen vanavond).*
sing tonight
'Herman can't sing tonight, but Marlies will.'

(3) a. *De brief wordt vandaag verwacht, maar het pakketje*
the letter becomes today expected but the package.DIM
*wordt niet *(vandaag verwacht).*
becomes not today expected
'The letter is expected today, but the package isn't.'

b. *Je broek is al gewassen, maar je rok is nog*
your pants is already washed but your skirt is still
*niet *(gewassen).*
not washed
'Your pants have already been washed, but your skirt hasn't (been) yet.'

Moreover, not all modal verbs license MCE. In particular, MCE is only possible with root modals, not with epistemic ones.[2] In the sentence in (4a) *moeten* 'must' is interpreted as expressing obligation. In the examples in (4b) on the other hand, it is interpreted epistemically and ellipsis of the infinitival complement is disallowed.

(4) a. *Jessica wil niet gaan werken morgen, maar ze moet*
Jessica wants not go work tomorrow but she must
[~~*gaan werken morgen*~~].
go work tomorrow
'Jessica doesn't want to go to work tomorrow, but she has to.'

b. *Jonas zegt dat hij niet de hele taart heeft opgegeten,*
Jonas says that he not the whole pie has up.eaten
maar hij moet wel ?(de hele taart hebben opgegeten),*
but he must PRT the whole pie have up.eaten
want er is geen taart meer over.
for there is no pie more left
'Jonas says he didn't eat the whole pie, but he must have, for there is no pie left.'

In short, Dutch MCE is only allowed with root modal verbs. The next subsection takes a closer look at Dutch modals and their complements, focusing on how they differ from their English counterparts.

2. I do not yet have an explanation for why MCE is restricted to root modals. Possible explanations that come to mind are the fact that only root modals can take DP/AP/PP complements (see Barbiers 1995, 1996), or a locality effect, as epistemic modals have been claimed to be situated higher in the hierarchical structure than root modals, but none of these options seem to fully capture the data. I defer this issue to further research.

2.2 Dutch modals and their complements

Given that Dutch MCE is only allowed with modals, a better understanding of this construction requires that we determine the properties of Dutch modals and their categorial status as well as that of their complement. In this section I argue that deontic modals, just like epistemic modals, are raising verbs and that modals in Dutch are not auxiliaries like in English. Furthermore, the infinitival complement they select is a non-finite TP. Let us now look at the empirical evidence in favour of these claims.

2.2.1 *Modals are raising verbs*

Traditionally, epistemic modals are seen as raising verbs, while root modals are considered to involve control (see Ross 1969a; Roberts 1985 & Zubizarreta 1982, among others). Recently, however, evidence has been brought forward showing that both epistemic and deontic modals are raising verbs (Vanden Wyngaerd 1994; Barbiers 1995, 1996; Bhatt 1998 & Wurmbrand 2003). When putting Dutch deontic modals to the diagnostic tests that distinguish between raising and control, we see that they pattern with raising verbs.

Passivization. When the infinitival complement of a control verb is passivized, there is a change in meaning: in (5a) the police is trying to arrest the thief, whereas in (5b) it is the thief who is trying to be arrested, regardless of whether the police has any intention of arresting him. No such meaning shift occurs after passivization of the complement of a raising verb (see Haegeman 1994; Sag & Wasow 1999: 279 and Miller 2006): both (5c) and (5d) express that there seems to be an action of arresting going on, of which the police is the Agent and the thief is the Patient or Experiencer.

(5) a. *De politie probeert de dief te arresteren.* [*control verb*]
The police tries the thief to arrest
'The police tries to arrest the thief.'

b. *De dief probeert gearresteerd te worden door de politie.*
the thief tries arrested to become by the police
'The thief tries to be arrested by the police.'

c. *De politie lijkt de dief te arresteren.* [*raising verb*]
the police seems the thief to arrest
'The police seems to arrest the thief.'

d. *De dief lijkt gearresteerd te worden door de politie.*
the thief seems arrested to become by the police
'The thief seems to be arrested by the police.'

The examples in (6) illustrate that deontic modals behave like raising verbs in this respect: the sentence in (6a) is truth-conditionally equivalent to the one in (6b).

They both mean that a situation has to be reached where the thief is arrested and the police has to play the role of Agent.

(6) a. *De politie moet de dief arresteren.* [*deontic modal*]
the police must the thief arrest
'The police has to arrest the thief.'

b. *De dief moet gearresteerd worden door de politie.*
the thief must arrested become by the police
'The thief has to be arrested by the police.'

Impersonal passives. Secondly, only raising verbs allow impersonal passives, as (7a,b) show (Postal 1974; Barbiers 1996). Again, deontic modals pattern with raising verbs, cf. (7c).

(7) a. **Er probeert gedanst te worden.* [*control verb*]
there tries danced to become

b. *Er lijkt gedanst te worden.* [*raising verb*]
there seems danced to become
'There seems to be dancing going on.'

c. *Er moet gedanst worden.* [*deontic modal*]
there has.to danced become
'Someone has to dance.'

Weather expletives. Thirdly, both deontic modals and raising verbs allow weather-*it* as their subject, while control verbs do not (Chomsky 1986; Brennan 1993; Hornstein 1999, 2003; Wurmbrand 2003; Davies & Dubinsky 2004; Miller 2006).

(8) a. **Het probeert te regenen.* [*control verb*]
it tries to rain

b. *Het lijkt te regenen.* [*raising verb*]
it seems to rain
'It seems to be raining.'

c. *Het moet regenen.* [*deontic modal*]
it must rain
'It has to rain.'

Inanimate subjects. Finally, raising verbs can have an inanimate subject (Bobaljik & Wurmbrand 1999; Wurmbrand 2003; Becker 2005), as in (9b). The control example in (9a), on the other hand, is ungrammatical. Deontic modals also allow inanimate subjects, again behaving like raising verbs.

(9) a. **De auto probeert gewassen te worden.* [*control verb*]
the car tries washed to become

b. *De auto lijkt gewassen te worden.* [*raising verb*]
the car seems washed to become
'The car seems to be being washed.'

c. *De auto moet gewassen worden.* [*deontic modal*]
the car has.to washed become
'The car must be washed.'

These diagnostic tests show that deontic modals should not be seen as control verbs, but as raising verbs. Hence, their subject is base-generated inside the infinitival complement and raises to its surface position.

2.2.2 *Dutch modals are merged in V, not in T*

In this section I argue that Dutch modals are not T heads, as has been claimed for English modals (see Ijbema 2002; Wurmbrand 2003). English modals display certain properties that set them apart from regular verbs and even from (temporal) auxiliaries (Palmer 1983, 1986, 1990, 2001). First, they cannot be inflected and second, they are not stackable, i.e., they do not co-occur, unlike other auxiliaries. Concerning the first property, (10a) illustrates that English modals cannot occur in the past tense, nor as a past participle (cf. (10b)) or an infinitive (cf. (10c)). They also do not show present tense inflection for third person singular, as shown in (10d). All of these properties do, however, occur with both regular verbs and auxiliaries. Furthermore, it is expected that English modals cannot co-occur (cf. (10e)), as they do not occur as infinitives.

(10) a. *Peter musted go outside.
INTENDED: 'Peter had to go outside.'
b. *Jasmin has never {could/canned} that.
c. *To can come is important.
d. Adam {*musts/must} come.
e. *Priyesh must can cook.

The literature on English modals accounts for these properties by saying that modals occupy the inflectional head, blocking the presence of inflectional affixes (Chomsky 1957; Jackendoff 1972; Fiengo 1974; Akmajian, Steele & Wasow 1979; Bobaljik 1995; Bobaljik & Thráinsson 1998). English modals being inflectional heads also provides an explanation for why they cannot occur as participles or infinitives: they are base-generated in the position for the finite verb.

Dutch modals on the other hand, do not share these properties with English modals. They behave like regular verbs and auxiliaries when it comes to inflection and stackability, cf. (11).

(11) a. *Hij mocht niet buiten spelen.*
he may.PST not outside play
'He was not allowed to play outside.'

b. *Tom heeft dat nooit gekund.*
Tom has that never can.PRTC
'Tom was never able to do that.'

c. *Pieter zal niet mogen komen.*
Pieter will not may.INF come
'Pieter won't be allowed to come.'

d. *We {moeten/ *moet} nog eten.*
we must.PL must.SG still eat
'We still have to eat.'

e. *Je moet eerst wel MOGEN komen, he.*
you must first PRT be.allowed come PRT
'First of all you have to be ALLOWED to come.'

Hence, I claim that Dutch modals are not base-generated as inflectional heads like English ones, but are simply V heads that select an infinitival complement. What exactly the categorial status of this complement is, is resolved in the next subsection.

2.2.3 *Dutch modals select a non-finite TP complement*

The infinitival complement of a Dutch modal is at least a vP, because it has to contain the base position of the raised subject. Moreover, the sentences in (12) show that infinitival complements of modals can contain aspectual heads. In other words, the complement must at least contain the aspectual layers that dominate vP.[3]

(12) a. *Senne moet zijn kamer opgeruimd hebben.*
Senne must his room clean.PRTC have
'It must be the case that Senne has cleaned his room'
'Senne is obliged to have cleaned his room.'

3. Wurmbrand (2003) provides an argument to decide whether a verb's infinitival complement contains (at least) a structural case position, i.e., a vP-layer, or simply constitutes a VP: long passives. She argues that certain German verbs, such as *versuchen* 'try', take an infinitival complement without a vP-layer, unlike in Dutch or English. Therefore these verbs can occur in the long passive construction, where "the embedded object is not assigned Case by the embedded verb or a functional head in the infinitival complement, but rather the embedded object establishes a Case and agreement relation with a head in the matrix predicate" (Wurmbrand 2003: 23). An example is given in (i). Because Dutch modals cannot be passivized for independent reasons, however, this test is not applicable to my data.

(i) *…dass der Traktor [zu reparieren] versucht wurde.* (German)
that the tractor.NOM to repair try.PRTC became
*'…that the tractor was tried to be repaired.'

b. *Jesse moet zijn huiswerk aan het maken zijn.*
Jesse must his homework on the make be
'It must be the case that Jesse is doing his homework.'
'Jesse is obliged to be doing his homework.'

There is a whole body of literature on the presence or absence of tense in infinitival complements (Karttunen 1971; Stowell 1981, 1982; Pesetsky 1992; Guasti 1993; Rizzi 1993; Haegeman 1995; Martin 1996; Bošković 1995, 1996, 1997; Boivin 1998; Felser 1998; Wurmbrand 2003). In my discussion of modal complements I add to this debate, claiming that modal complements contain tense and hence are TPs.

The main argument for this claim concerns the fact that the infinitival complement of a modal can be modified by a temporal adverbial different from the one modifying the modal itself. This is shown for deontic *moeten* 'must' in (13a), where the time adverbial of the modal *gisteren* 'yesterday' indicates that the obligation is situated prior to the utterance time, while the event time of the performance is one week after the utterance time. The sentence in (13b) also has two different time adverbials, but here the event time of the embedded infinitive is not set in reference to the utterance time, but to the event time of the deontic modal *kunnen* 'can'.[4]

4. As an anonymous external reviewer points out, contradicting adverbials seem to be allowed also in contexts without two TPs, as in (i).

(i) ***Gisteren*** *had hij zijn auto* ***vorige week*** *al verkocht, en vandaag*
yesterday had he his car last week already sold and today
zegt hij dat hij hem morgen pas kan verkopen.
says he that he him tomorrow only can sell
'Yesterday he had sold his car last week already, and today he says he can only sell it tomorrow.'

This sentence, however, has a reading in which *gisteren* 'yesterday' modifies an unexpressed event of saying or claiming, while the aspectual and the participle are modified by *vorige week* 'last week'. It is not the case that the aspectual has a different time specification from the one in the non-finite complement. In the modal cases on the other hand, the modal itself is modified by one time adverbial and its complement by the other. A way to demonstrate this difference is by making the event of saying explicit, as in (ii), and add a third time adverbial. Only in (iib) with the modal does this result in a grammatical and interpretable sentence.

(ii) a. **Gisteren zei hij dat hij eergisteren zijn auto vorige*
yesterday said he that he the.day.before.yesterday his car last
week al verkocht had, en…
week already sold had and…

(13) a. *Gisteren moest ik nog volgende week optreden en nu*
yesterday must.PAST I still next week perform and now
zijn de plannen alweer een week opgeschoven.
are the plans again a week delayed
'Yesterday I had to perform next week still, and now the plans have been delayed another week.'

b. *Vorige vrijdag kon hij de dag erna komen schilderen,*
last Friday could he the day there.after come paint
maar er is weer iets tussengekomen.
but there is again something intervened
'Last Friday he could come paint the day after, but again something intervened.'

These examples illustrate that the infinitival complement of a modal can be modified by a different temporal adverbial from the one in the matrix clause. In other words, modals select a complement that has its own tense specification; hence I argue that that complement is a TP.

2.2.4 *Summary*

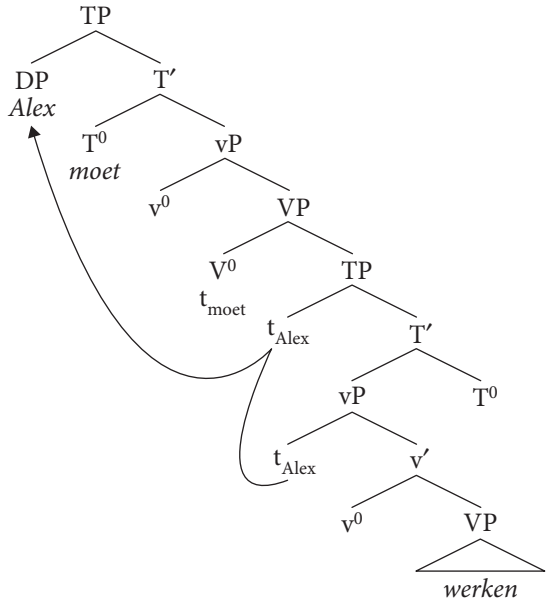
Recapitulating, I have shown that modals are raising verbs, that they are not T heads, and that they select a non-finite TP complement. In other words, an example such as the one in (14) receives the structure in (15). For simplicity's sake I leave out projections and movements that are irrelevant at this point.[5]

(14) *Alex moet werken.*
Alex has.to work

b. *Gisteren zei hij dat hij eergisteren volgende week*
yesterday said he that he the.day.before.yesterday next week
al naar huis mocht, maar nu moet hij nog twee
already to home was.allowed but now must he still two
weken blijven.
weeks stay
'Yesterday he said that the day before yesterday he was allowed to go home next week, and now he has to stay for another two weeks.'

5. Note that in Dutch embedded clauses TP is head-final. This fact is irrelevant for the analysis as such, but I incorporate it in the trees to get the right word order. For most sentences in this paper the word order would not even differ, however.

(15)



2.3 Ellipsis: Deletion or proform?

The two most prominent structural accounts of ellipsis in the literature are (1) that the ellipsis site is a null proform (e.g. Fiengo & May 1994; Chung et al. 1995; Lobeck 1995; Wilder 1997; Depiante 2000; Beavers & Sag 2004; Fortin 2007, and many others),[6] and (2) that ellipsis is deletion at PF of a fully-fledged syntactic structure (Ross 1969; Johnson 1996, 2001; Merchant 2001, among many others).[7] One of the main arguments for deciding between these analyses is based on extraction out of the ellipsis site. If such extraction is possible, the ellipsis site has to contain enough

6. Among the accounts assuming a null proform two points of view can still be distinguished. One approach argues for a null anaphor that is interpreted like overt pronouns (see Wasow 1972; Shopen 1972; Hardt 1993, 1999; Lobeck 1995; Depiante 2000) and the other claims that the antecedent is copied into the ellipsis site at LF, providing the proform with the right interpretation (i.e., LF-copy; see Fiengo & May 1994; Chung et al. 1995; Wilder 1997; Beavers & Sag 2004 and Fortin 2007). I will not go into this distinction in more detail here.

7. There are also non-structural accounts of ellipsis, the most influential of which is Culicover and Jackendoff (2005), but see also Ginzburg and Sag (2000) and Schlangen (2003). They argue that there is nothing more in the sentence than what is pronounced; no deleted structure, no null proforms. Consequently, they need a richer syntax-semantics interface to map utterances to the interpretation they get. I will not consider these non-structural approaches in this paper.

structure to host the trace of the movement. In other words, ellipsis then involves deletion of syntactic structure. On the other hand, if extraction is not possible, the ellipsis site is more likely to be analyzed as a null proform.

Applying this test to Dutch MCE leads to a puzzle, however: objects cannot extract out of the ellipsis site, while subject extraction is allowed. These extraction facts are presented below. Note that this is not an isolated case: there are other elliptical phenomena where the extraction data disrupt the clear pattern. Baltin (2007) discusses a construction he calls British English *do* (BE *do*) and observes the same contrast between object and subject extraction as in Dutch MCE.[8]

2.3.1 *Objects cannot extract out of MCE*

Dutch MCE does not allow objects to move out of the ellipsis site. This is illustrated for *wh*-objects in (16a) and for object scrambling in (17a). The sentence in (16b) shows that movement of the *wh*-object is fine without ellipsis, while (17b) illustrates that object scrambling across negation is obligatory in non-elliptical sentences.[9]

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8. An example of BE *do* is given in (i), and the extraction contrast is exemplified in (ii).

(i) Nao will run the race and Nana will do [~~run the race~~], too.

(ii) a. *I don't know who Ed will invite, but I know who Aga will do [~~invite t_{who}~~].
b. The lake will freeze solid and the river will do [~~freeze solid $t_{the\ river}$~~], too.

9. Marcel den Dikken (p.c.) notes that for him *wh*-extraction in MCE cases is also degraded if the *wh*-element does *not* originate in the ellipsis site. He provides the following examples:

(i) a. *Ik weet niet waarom Thomas Marie per se MOET uitnodigen, maar ik weet wel waarom Peter niet MAG.
I know not why Thomas Marie per se must invite but I know PRT why Peter not is.allowed

b. *Ik weet niet van wie Thomas Marie MOET uitnodigen, maar ik weet wel van wie hij niet MAG.
I know not of who Thomas Marie must invite but I know PRT of who he not is.allowed

However, I do not agree with these judgments: for me (and other informants) both sentences are perfectly fine. I suspect that ellipsis when there is a *wh*-dependency present is subject to interspeaker variation. I will not address this issue in the present paper, because, as den Dikken also observes, the ban on object extraction out of the MCE ellipsis site still stands even if we do not take the *wh*-extractions into account: object scrambling out of the ellipsis site is disallowed.

(16) a. *Ik weet niet wie Thomas moet uitnodigen, maar ik
I know not who Thomas must invite but I
weet wel wie hij niet MAG.
know AFF who he not is.allowed
'I don't know who Thomas HAS to invite, but I do know who he isn't ALLOWED to.'

b. Ik weet niet wie Thomas MOET uitnodigen, maar ik
I know not who Thomas must invite but I
weet wel wie hij niet MAG uitnodigen.
know AFF who he not is.allowed invite
'I don't know who Thomas HAS to invite, but I do know who he isn't ALLOWED to.'

(17) a. *Ik wil je helpen, maar ik kan je niet.
I want you help but I can you not
'I want to help you, but I can't.'

b. Ik wil je helpen, maar ik kan ⟨je⟩ niet ⟨*je⟩ helpen.
I want you help but I can you not you help
'I want to help you, but I can't help you.'

2.3.2 *Subjects can extract out of MCE*

Subjects on the other hand, can survive the ellipsis, regardless of whether the embedded verb is transitive, unergative, unaccusative or passive (cf. (18)). Moreover, (19) shows that subject *wh*-items can be extracted as well. Given that modals are raising verbs, these subjects are all base-generated in the modal complement and have raised out of it prior to ellipsis.[10]

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10. An anonymous reviewer notes that an analysis in which modals can be raising verbs in some contexts and control verbs in others is also conceivable. If that is the case, it could well be that modals in MCE are control verbs, which means the subject is not base-generated in the infinitival complement. Consequently, MCE sentences could be analysed as containing a null proform instead of a full infinitival complement, parallel to sentences such as *Jan kan dat* 'John can do that' with an overt proform *dat* 'that'.

However, if the tests to distinguish raising and control verbs are applied to MCE, the modals still pattern with raising verbs: for instance, they allow weather expletive subjects and impersonal passives, cf. (i). Hence, the subject in MCE can indeed be base-generated in the modal complement, which means MCE must allow for subject extraction out of the ellipsis site.

(i) a. Zou het regenen morgen? – Het mag niet!/Het moet!
would it rain tomorrow it is.allowed not it has.to
'Would it rain tomorrow?' – 'It can't!/It has to!'

(18) a. *Ik wil je wel helpen, maar ik kan niet.* [*transitive*]
I want you PRT help but I can not
'I do want to help you, but I can't.'

b. *Tom wou niet werken, maar hij moest.* [*unergative*]
Tom wanted not work but he must.PAST
'Tom didn't want to work, but he had to.'

c. *Mina kan komen, maar Tom kan niet.* [*unaccusative*]
Mina can come but Tom can not
'Mina can come, but Tom can't.'

d. *Die broek moet niet gewassen worden vandaag, maar*
that pants must not washed become today but
die rok moet wel. [*passive*]
that skirt must PRT
'Those pants don't need to be washed, but that skirt does.'

(19) *Ik weet dat er iemand niet* MOCHT *komen, maar*
I know that there someone not be-allowed.PAST come but
wie moest er ook weer?
who must.PAST there also again
'I know that someone wasn't ALLOWED to come, but who HAD to again?'

2.4 Summary

This section presented the basic data considered in this paper: Dutch modal complement ellipsis (MCE). This construction is only allowed with root modals, not with epistemics or temporal auxiliaries. I argued that Dutch modals are raising verbs that are not base-generated in T, unlike English modals. Their infinitival complement is a non-finite TP.

When trying to decide whether MCE should be analysed as involving a null proform or rather deletion of a full structure at PF, the extraction facts, which constitute an important argument in this discussion, pointed both ways.[11] Objects

b. *Er mag gedanst worden vanavond, maar er moet niet.*
there is.allowed danced become tonight but there must not
'People are allowed to dance tonight, but they don't have to.'

11. The possibility of extraction is not the only argument to test whether an ellipsis site contains syntactic structure. Hankamer and Sag (1976) in their discussion of deep and surface anaphora list several arguments such as pragmatic control, syntactic identity and missing antecedents. Other tests are *there*-expletives, inverse scope, sloppy readings and split antecedents (see for instance Baltin 2007; Elbourne 2001, 2008). Although these are all very interesting, I restrict myself to the extraction argument due to limits of space.

are not allowed to extract out of the ellipsis site, which suggests that there is a null proform. Subjects, however, can extract, a fact that can only be accounted for if the ellipsis site contains enough syntactic structure to host the movement trace. In the next section I claim that ellipsis involves deletion at PF, and Section 4 shows how this approach can account for the ban on object extraction.

3. Ellipsis is deletion

The present section presents the basic mechanisms behind my analysis of ellipsis. The main characteristics of this analysis are listed in (20).

(20) a. Ellipsis requires the presence of a specific licensing head, which establishes an Agree relation with the elided phrase.
b. Ellipsis involves deletion at PF and is an instance of cyclic Spell-out: the ellipsis site is sent to PF for non-pronunciation instead of pronunciation. This happens in the course of the derivation, as soon as the licensing head is merged.

I discuss both characteristics in detail. First, what does 'licensing head' mean? Following Zagona (1982, 1988), Lobeck (1993, 1995), Johnson (2001) and Gergel (2006), I assume that ellipsis has to be licensed by a head with a particular feature specification. When a head licenses ellipsis, this means that without the presence of this head (with its specific feature specification) in the structure, ellipsis is not allowed. For English VP ellipsis (VPE), for instance, the licensor is considered to be the finite inflectional head, because without a finite auxiliary, modal or dummy *do*, the verb phrase cannot be elided (Zagona 1982, 1988; Lobeck 1993, 1995; Martin 1992, 1996; Johnson 2001).

(21) a. Alice wasn't drinking tea, but I think Yaron was [~~drinking tea~~].
b. *Alice likes tea, but I don't think that Yaron.
c. *Alice likes drinking tea, and I think that Yaron likes too.
d. Alice likes tea, and I think that Yaron does too.

Example (21a) displays a normal case of VPE, with the finite auxiliary *was* as licensor in T. In (21b), on the other hand, there is no lexical element filling the T-position, turning the sentence ungrammatical. Finally, in (21c) there is a finite verb, but it is not an auxiliary. Finite main verbs in English, unlike auxiliaries, do not surface in T, but stay inside vP (Emonds 1976, 1978; Pollock 1989; Lasnik 1995). This leaves the T head without lexical material to attach to. Again, ellipsis of the verb phrase is illicit. If there is no auxiliary present, dummy *do* can be inserted, as in (21d), in order to license VPE. That it is indeed a finite auxiliary that

needs to be present and not simply any auxiliary is shown in (22). Non-finite *have* and *be* do not license VPE.[12]

(22) a. *I hadn't been thinking about it, but I recall Max having been.
b. *I hadn't thought about it, but I recall Max having.
c. *Morgan having come to dinner, and Jessi not having, we decided to wait for her.

Consequently, in the example in (23), it is *should* that licenses VPE, and not the non-finite auxiliaries *have* or *been*.[13]

(23) I hadn't been thinking about that. – Well, you should have been [~~thinking about that~~]!

The sentence in (23) is crucial evidence for my claim that ellipsis is licensed through Agree, and not through a head-complement relation as is commonly assumed (Lobeck 1995; Merchant 2001, 2004; Johnson 2001). Since there are non-finite auxiliaries to the right of the licensor, this sentence shows that the ellipsis site and the licensing head do not have to be adjacent. Ellipsis licensing cannot be thought of as a licensing head which allows its complement to be deleted. Instead I argue that it involves an Agree relation between the licensor and the head selecting the ellipsis site. Limitations of space prevent me from explaining how this Agree relation is to be conceived exactly and which features are involved, but I refer the reader to Aelbrecht (2009, 2010) for more details. In the tree structures the Agree relation is marked with a dotted line between probe and goal.

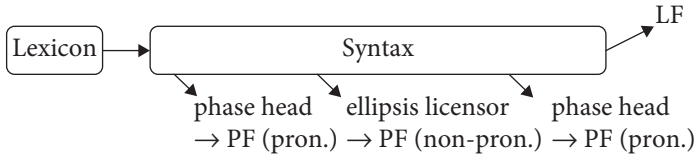
Second, I claim that ellipsis involves deletion at PF, following Ross (1969b), Tancredi (1992); Chomsky and Lasnik (1993); Klein (1993); Merchant (2001); Hartmann (2002); Johnson (2001); Gengel (2007) and many others. In other words, the ellipsis site is a fully-fledged syntactic structure that is interpreted at LF in the same way a non-elliptical sentence is. Only, at PF it is marked for non-pronunciation: it is there, but its phonological features are null, or lexical insertion is prevented. Furthermore, I argue that the ellipsis site is sent off to PF *during* the

12. The infinitival marker *to* can also license VPE. I will not talk about these cases here, but see Lobeck (1993, 1995, 1999) and Johnson (2001) for a detailed discussion.

13. As an anonymous reviewer correctly remarks, the sentences in (22) show that *having* and *been* cannot license VPE, but not that infinitival *have* cannot license it. However, what is crucial for my analysis is that there can be material between the licensing head and the ellipsis site, which (23) shows to be the case even if *have* were indeed a potential licensor.

derivation.[14] In the Minimalist framework it has been argued that parts of the structure – i.e., phasal domains – branch off to PF before the derivation is complete. This is known as cyclic or derivational spell-out, and it is triggered by the merger of a phase head. The analysis of ellipsis presented in this paper takes ellipsis to be another instance of 'branching off to PF'. The difference is that the trigger is not a phase head, but the head licensing ellipsis and that the part that is sent to PF is marked for non-pronunciation. The schema in (24) shows that in an elliptical sentence there is an additional point at which a part of the structure branches off to PF, namely when the licensor is merged.

(24)



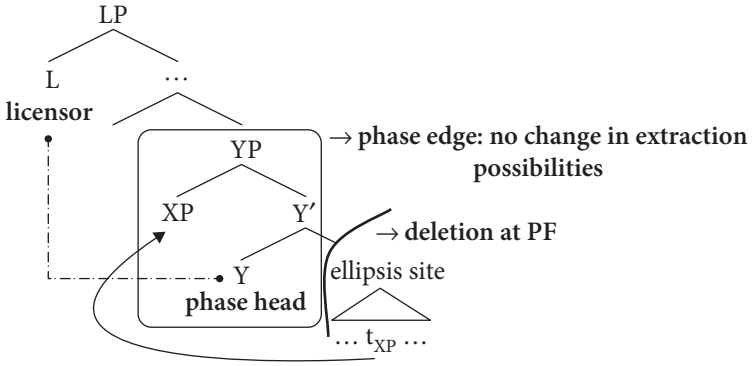
Such an analysis has consequences for extraction. A phrase is accessible for syntactic operations as long as the domain of cyclic spell-out that contains it has not branched off yet, and a phase head can attract phrases with unvalued features to the phase edge, i.e., its specifier, to prevent them from being sent off prematurely (Chomsky 1999, 2000, 2001). In the case of ellipsis, the ellipsis site is only accessible for syntactic operations until the licensor is merged. Because I claim that ellipsis is licensed by Agree and not through a head-complement relation, there can be positions between the licensor and the ellipsis site, and these positions play a crucial role in determining the extraction possibilities of elliptical constructions: phrases attracted to one of these positions remain accessible to syntax after the licensor is merged and the ellipsis site branches off to PF, while phrases that do not have such an escape hatch are deleted. Consequently, the interaction between phase heads and the ellipsis licensor is important. There are two cases to consider: (1) there is a phase head between the ellipsis site and the licensor, or (2) there is no phase head between the ellipsis site and the licensor.[15] The first case is depicted in (25), where

14. Baltin (2007) proposes a similar analysis for *BE do*, although he assumes deletion takes place in narrow syntax, while I argue for deletion at PF.

15. Because Agree relations are subject to the Phase Impenetrability Condition (*PIC*), the intervening phase head can only be the head selecting the ellipsis site, which is the head with which the licensor agrees. If another head between the licensor and the ellipsis site were a phase head, the Agree relation licensing ellipsis would have to cross a phase boundary and violate the locality condition on Agree. Alternatively, if the licensor itself is a phase head, no limited extraction is expected either: all operations triggered by the same

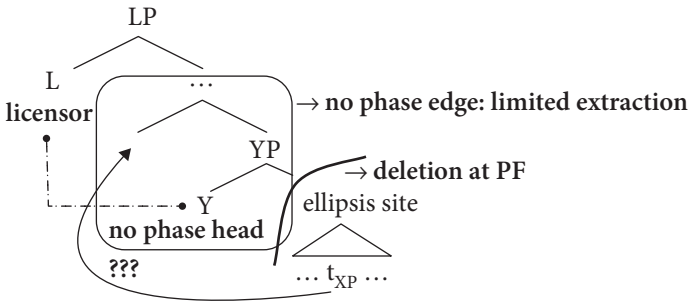
L is the ellipsis licensing head and Y is a phase head. A constituent XP in the ellipsis site that has to move to a position higher up in the structure is attracted to the phase edge [Spec, YP] to remain accessible for further syntactic operations. When the ellipsis licensor L is merged, XP is no longer in the ellipsis site. Hence, the extraction possibilities in ellipsis do not differ from those in non-elliptical cases here: the phase edge acts as an escape hatch out of the ellipsis site for any constituent that needs to undergo further operations.

(25)



The second option is having no phase edge between the licensor and the ellipsis site. In that case there is no automatic escape hatch attracting all phrases that need to undergo further operations prior to the merger of the ellipsis licensor. Consequently, extraction possibilities can be more limited than in non-ellipsis: only those phrases that are attracted to a position outside of the ellipsis site before the licensor is merged, survive ellipsis. What can be extracted thus strongly depends on which positions are in between. This is shown schematically in (26) where Y is not a phase head.

(26)



head happen simultaneously, hence the licensor can attract phrases to the phase edge and still trigger ellipsis.

In short, a phase edge between licensor and ellipsis site guarantees that all extraction that is possible in non-elliptical sentences will be fine in the ellipsis counterpart as well, while absence of a phase edge there might result in more limited extraction.

Summing up, the main characteristics of the analysis I propose are that ellipsis requires licensing by a specific licensing head. This head and the ellipsis site do not need to be adjacent, but an Agree relation has to be established between the licensor and the head selecting the ellipsis site. Once the licensor is merged and the Agree relation is established, the ellipsis site branches off to PF, marked for non-pronunciation. Hence, ellipsis is viewed as deletion at PF. Furthermore, because this branching off to PF is triggered by the merger of the licensing head, ellipsis happens *during* the derivation and not at the end. This has consequences for extraction: a phrase in the ellipsis site is only accessible until the licensor is merged. The positions between the licensor and the ellipsis site can provide an escape hatch. Consequently, a phase edge in such a position makes sure that the extraction possibilities in ellipsis do not differ from the ones in non-ellipsis, while having no phase edge there might result in more limited extraction. The next section discusses the analysis specifically for Dutch MCE, accounting for the extraction contrast between subjects and objects.

4. The analysis of Dutch MCE

The previous section introduced the general mechanisms of ellipsis. The present section applies these mechanisms to Dutch MCE and shows how this analysis captures the puzzling extraction data. First, however, I determine the main ingredients, namely the identity of the licensor and the size of the ellipsis site.

4.1 The licensing head and the size of the ellipsis site

I claim that the licensing head of Dutch MCE is the root modal. Only the infinitival complement of a root modal can be deleted; epistemic modals or temporal auxiliaries do not license ellipsis. The relevant examples were given in (2), (3) and (4) above.

Establishing the size or category of the ellipsis site is less straightforward. First, it is obvious that MCE deletes more than just the infinitive; it also takes away any internal arguments, cf. (27). Moreover, MCE also deletes the aspectual heads and the passive auxiliary, cf. (28).

(27) *Ik wou hem dat boek helemaal niet geven, maar ik*
I wanted him that book at.all not give but I

moest [~~*hem dat boek geven*~~].
must.PST him that book give
'I didn't want to give him that book at all, but I had to.'

(28) a. *Adam moet zijn kamer opgeruimd hebben vanavond en James moet ook (*hebben).*
Adam must his room cleaned have tonight and James must also have
'Adam must have cleaned his room by tonight, and James must have as well.

b. *Die broek moet nog niet gewassen worden, maar hij mag wel al (*worden).*
those pants must still not washed become but he is.allowed PRT already become
'Those pants don't have to be washed yet, but they can be.'

On the other hand, there are data showing that the TP projection of the modal complement is not included in the ellipsis site. Recall that the complement of a modal can contain its own temporal modifier, which is considered to adjoin high in the structure, presumably as high as TP (see Cinque 1999, among others). As it turns out, such high adverbs are not elided in MCE, as shown in (29).

(29) *Gisteren moest ik vandaag komen en vandaag moet ik volgende week pas.*
yesterday must.PAST I today come and today must I next week only
'Yesterday I had to come today and today I only have to next week.'

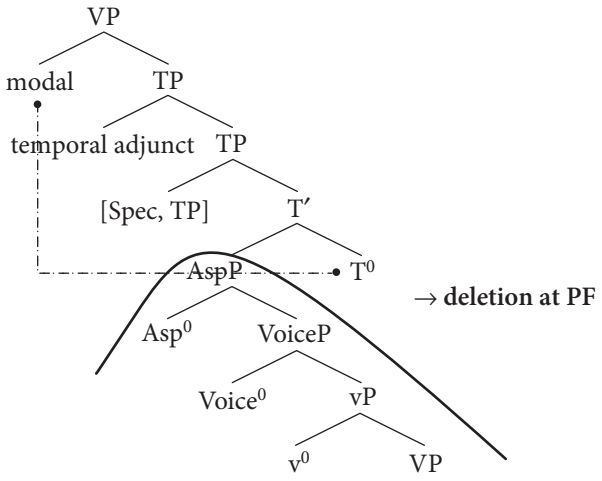
There is also evidence showing that [Spec, TP] is not included in the ellipsis site, involving MCE in sentences with a *there*-expletive subject. Consider (30).

(30) *Ik was niet af vanavond! Nu moet er echt eens iemand anders.*
I wash not off tonight now must there really once someone else
'I am not doing the dishes tonight! It's really someone else's turn.'

The associate of *er* 'there' is *iemand anders* 'someone else', which is base-generated as the external argument of the deleted infinitive *afwassen* 'do the dishes'. In MCE this associate is not elided. Because *er* 'there' occupies the matrix subject position, I claim that *iemand anders* 'someone else' has moved out of the vP to the embedded [Spec, TP] and surfaces there, and that this position is not part of the ellipsis site.

The tree structure in (31) schematizes this: MCE is licensed by a root modal and elides as much as the aspectual phrase, but the TP projection stays. Next, I demonstrate how this analysis accounts for the extraction data in Dutch MCE.

(31)



4.2 The extraction data

Recall that objects cannot be extracted out of the MCE ellipsis site, while subjects can. I show that this pattern of data follows from the assumption that ellipsis takes place derivationally. I first illustrate why both *wh*-object extraction and object scrambling are not allowed and then I make clear how the subject survives the ellipsis.

4.2.1 Wh-*object extraction*

The ungrammaticality of (32a), which involves movement of the *wh*-object *wie* 'who' out of the elided infinitival clause, is solely caused by ellipsis. In the non-elliptical counterpart object extraction is perfectly fine, witness the contrast with (32b).

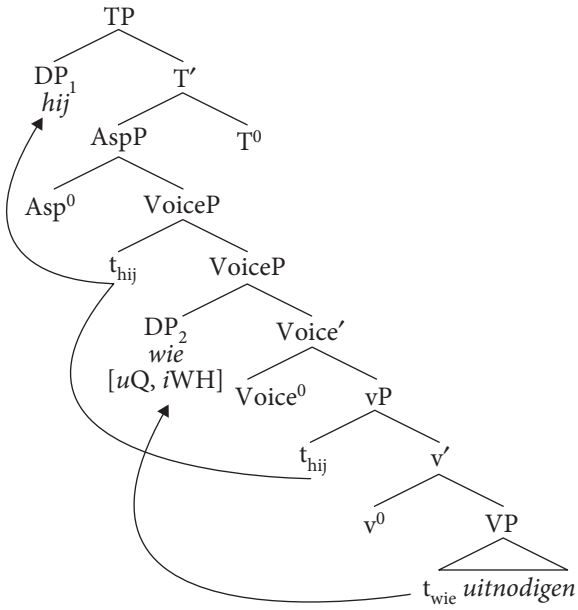
(32) a. **Ik weet niet wie Thomas moet uitnodigen, maar ik*
I know not who Thomas must invite but I
weet wel wie hij niet MAG.
know AFF who he not is.allowed
'I don't know who Thomas HAS to invite, but I do know who he isn't ALLOWED to.'

b. *Ik weet niet wie Thomas* MOET *uitnodigen, maar ik weet*
I know not who Thomas must invite but I know

wel wie hij niet MAG *uitnodigen*.
AFF who he not is.allowed invite
'I don't know who Thomas HAS to invite, but I do know who he isn't ALLOWED to.'

I go over the derivation of this sentence step by step, accounting for the ungrammaticality. The tree in (33) represents the modal TP complement, because until then the derivation does not differ from non-elliptical cases. An assumption I make, following Baltin (2007), is that Voice^0 is the clause-internal phase head instead of v^0 (see Baltin 2007, Aelbrecht 2009, 2010 for arguments and discussion). This assumption will not be of any consequence in the analysis of Dutch MCE, but will prove to be important in English VPE. Nevertheless, I consistently take Voice^0 to be the phase head in both English and Dutch.

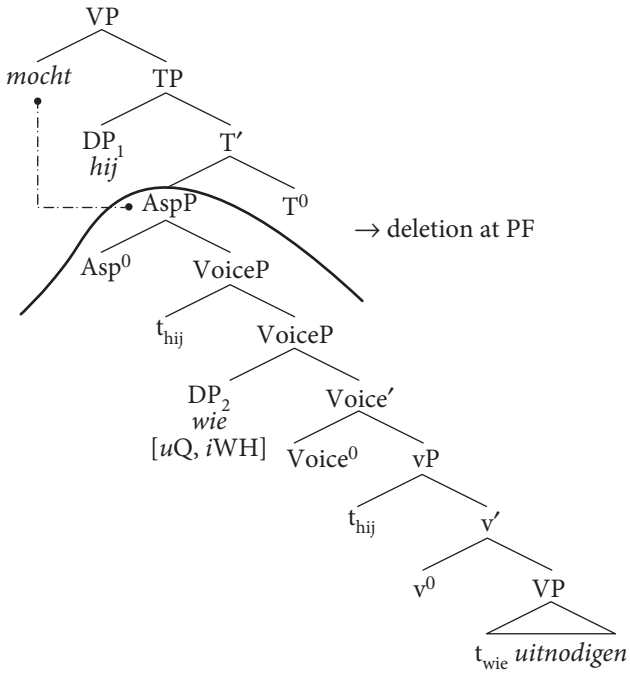
(33)



In (33) the *wh*-object is attracted to the phase edge [Spec, VoiceP], because it is expected to move to a higher [Spec, CP], to check its uninterpretable [Q]-feature, just like in the non-elliptical counterpart (see Merchant 2001). The subject A-moves from its base-generated position via the phase edge to the specifier of the embedded TP to satisfy the EPP-requirement on the embedded T. In the next step the modal *mocht* 'was allowed to' is merged, cf. (34). Because it is a root modal, it can establish an Agree relation with the head selecting the ellipsis site and trigger MCE. In other words, at this point AspP is sent off to PF for non-pronunciation.

The subject is not elided, since it sits in a position just outside the ellipsis site. Because there is no phase edge between the ellipsis site and the licensor providing an escape hatch for the *wh*-object, the latter is stuck and is deleted with the rest of the clause.

(34)



This causes the derivation to crash later on, when C^0 [*i*Q, *u*WH] is merged. In the non-elliptical variant this head would attract the *wh*-object to its specifier to check its uninterpretable WH-feature (as well as the uninterpretable Q on the object). Because in the MCE case, the *wh*-object is already deleted at this point and is hence inaccessible for any syntactic operations, the [*u*WH] on C^0 cannot be checked. Consequently, the derivation crashes.[16]

4.2.2 *Object scrambling*

The second derivation to look at involves object scrambling. I argue that the object scrambles to a position in the matrix clause, higher than the base position of the modal. Empirical evidence for this claim is provided in two steps. Firstly, the data in (35) shows that objects scramble across negation in non-elliptical sentences.

16. Moreover, deleting the object means deletion of focused material, which is illicit.

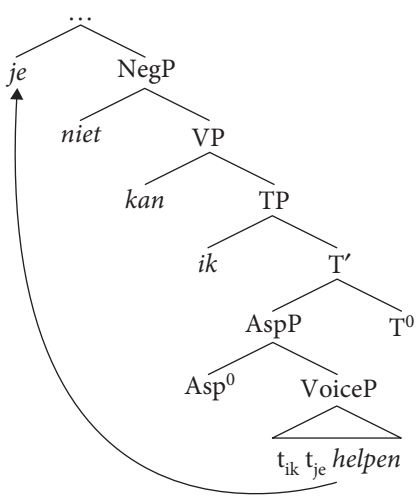
(35) *Ik kan ⟨je⟩ niet ⟨*je⟩ helpen.*
I can you not you helpen
'I can't help you.'

Secondly, in (35) this negation is normally interpreted in the matrix clause, not in the complement, as (36) illustrates.

(36) *Ik kan je niet helpen.*
I can you not help
= 'I am not able/available to help you.'
≠ 'I am able/available to not help you.'

Consequently, if the negation is part of the matrix clause and the scrambled object precedes it, then object scrambling must take the object to a position in the matrix clause as well, higher than the modal, cf. (37). Which position this is exactly is irrelevant in this discussion.

(37)

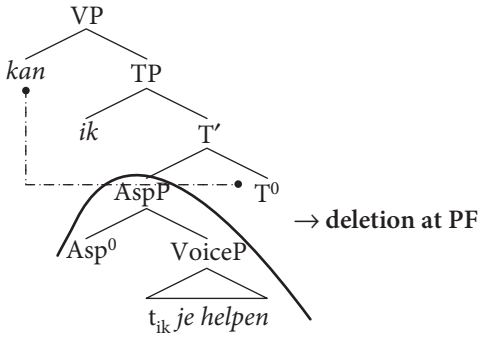


In MCE this means that object scrambling out of the modal complement has not yet taken place when the modal is merged into the structure. Hence, the object is still in the ellipsis site and is deleted, as (38) shows.[17]

17. Because object scrambling is not obligatory with all kinds of objects, I assume that it is not triggered by any uninterpretable feature higher up in the structure, but by some feature on the scrambling object itself – a feature which indefinite objects, for instance, lack. Consequently, the absence of object scrambling in MCE does not render the sentence ungrammatical, as it did with *wh*-objects. The sentence without the object is perfectly fine:

(i) *Ik wil je wel helpen, maar ik kan (*je) niet.*
I want you PRT help but I can you not
'I want to help you, but I can't.'

(38)



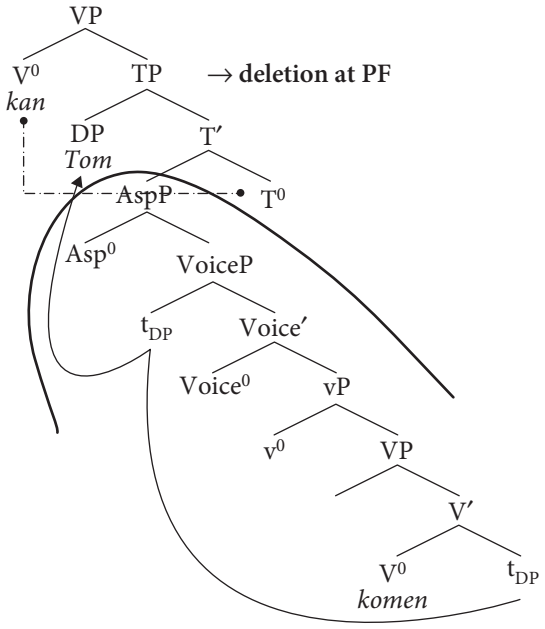
4.2.3 *Subject extraction*

Although the examples with object extraction already make it clear that the subject can escape the ellipsis, I illustrate subject extraction once more with the grammatical sentence in (39).

(39) *Mina kan komen, maar Tom kan niet.* [*unaccusative*]
Mina can come but Tom can not
'Mina can come, but Tom can't.'

In this sentence, the derived subject is base-generated in the complement position of the main verb *komen* 'come'. It first lands in [Spec,VoiceP] and then A-moves on to [Spec,TP]. The licensing head *kan* 'can' is only merged after the subject has escaped from the ellipsis site. Note that from its position in [Spec,TP] the subject is free to undergo further operations, such as A'-extraction to [Spec, CP] if it is a *wh*-item.

(40)



4.3 Summary

I argued that Dutch MCE is licensed by a root modal and that the target of the ellipsis is AspP, the complement of T. Hence, the complement of the modal is not entirely deleted: the TP projection, with [Spec, TP] and temporal adverbials, is not included in the ellipsis site. Furthermore, I have demonstrated how this explains why objects cannot be extracted out of the MCE ellipsis site, while there is no such restriction on subjects: there is no phase edge between the licensor, i.e., a root modal, and the ellipsis site. The subject has an escape hatch of its own, namely [Spec, TP], but the object has no position to move to outside of the ellipsis site before MCE takes place.

The next section has a closer look at VP ellipsis in English, which is very similar to MCE at first sight, but does allow object extraction. If we apply the analysis I presented above to English VPE, however, this difference is accounted for.

5. English VP ellipsis

5.1 The licensing head and the ellipsis site

Recall that while MCE is only allowed with root modals, English VPE is possible after finite auxiliaries, modals and dummy *do*, as in (41).

(41) a. Alice wasn't drinking tea, but Peter was [~~drinking tea~~].
b. Jasmin can draw a snake and Ryan can [~~draw a snake~~] too.
c. Adam doesn't sing well, but Jessi does [~~sing well~~].

Hence, I assume that T^0 is the licensing head in English VPE (see also Zagona 1982, 1988; Martin 1992, 1996 & Lobeck 1995).

With respect to the size of the ellipsis site, Merchant (2007, 2008) claims that VPE is in fact vP-ellipsis. The evidence he provides comes from the lack of argument structure mismatches (see also Sag 1976; Johnson 2004; Houser, Mikkelsen & Toosarvandani 2007). Some verbs, such as *break* or *freeze*, have multiple possible argument structures, i.e., they can be used both as an unaccusative and as a transitive verb (for the original observation and analysis, see Perlmutter 1978. See also Alexiadou et al. 2005 for discussion). Whether a verb assigns an Agent-role or not, is encoded in little v^0. Alternations between intransitive/unaccusative and transitive versions of such verbs are allowed in non-elliptical clauses (cf. (42a)), but the intransitive *freeze* in the first sentence in (42b) cannot serve as an antecedent for the elided verb phrase in the second sentence (see Johnson 2004: 7).

(42) a. This can [$_{vP\langle unacc\rangle}$ freeze]. Please [$_{vP\langle trans\rangle}$ freeze this].
b. This can [$_{vP\langle unacc\rangle}$ freeze]. *Please do [$_{vP\langle trans\rangle}$ ~~freeze this~~].

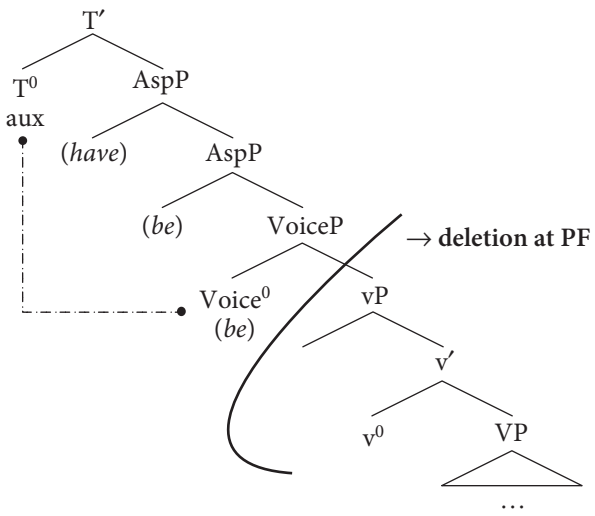
Merchant (2007, 2008) concludes from these data that v^0, marked as transitive or unaccusative, is included in the ellipsis site. Consequently, the argument structure specification of the elided clause cannot differ from the one in the antecedent clause; otherwise it would not be recoverable.

The aspectual and Voice auxiliaries on the other hand, are not deleted in VPE, as is illustrated in (43).

(43) a. I hadn't been thinking about that. – Well, you should have been [~~thinking about that~~]. (perfective *have* and progressive *be*)
b. I hadn't thought about it. – Well, you should have [~~thought about it~~]. (perfective *have*)
c. I'm not even thinking about it. – Well, you'd better be [~~thinking about it~~]. (progressive *be)*
d. The trash is taken out whenever it's apparent that it should be [~~taken out~~]. (passive *be*)

Hence, I follow Merchant (2007, 2008) in claiming that VPE elides vP. The general ellipsis mechanism laid out in Section 3 for MCE is also applicable to VPE: ellipsis occurs as soon as the licensor (in this case finite T^0) is merged. At that moment the ellipsis site is sent off to PF for non-pronunciation, as is represented in (44).

(44)



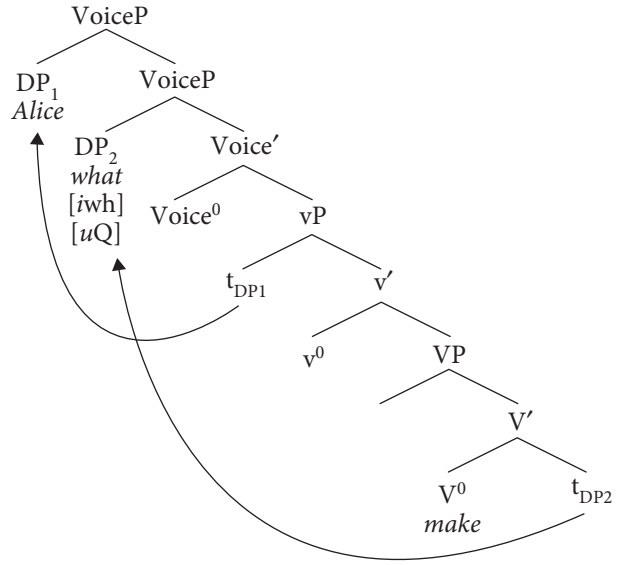
5.2 The extraction data

English VPE allows for extraction of both objects and subjects, as well as of adjuncts (cf. Schuyler 2002; Merchant 2008), as is shown in (45).

(45) a. Wh-*object extraction*: I don't know what Ryan could make for our Valentine's Tea, but I know what Alice could [~~make~~ $t_{~~what~~}$ ~~(for our Valentine's Tea)~~].
b. *Derived* wh-*subject extraction*: If Gerald won't come tonight, then who will [~~come~~ $t_{~~who~~}$ ~~(tonight)~~]?
c. *Derived subject extraction*: This shirt has been washed but these pants should be [~~washed~~ $t_{~~these\ pants~~}$] too.
d. Wh-*adjunct extraction*: I know how fast Adam could run, but I don't remember how fast Hilary could [~~run~~ $t_{~~how\ fast~~}$].

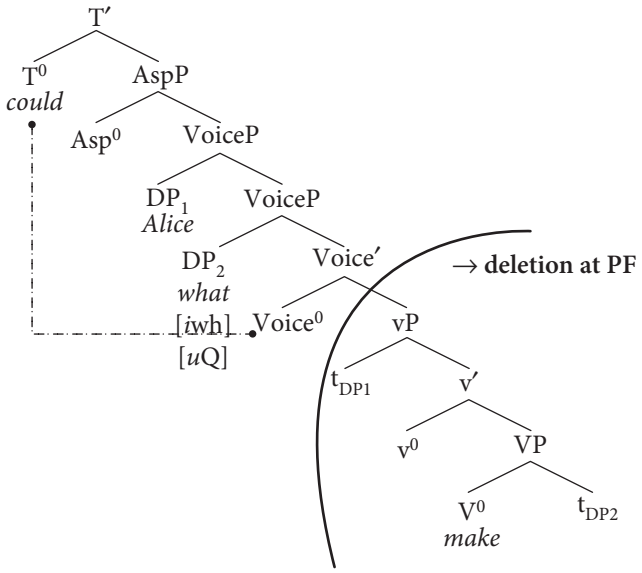
The analysis proposed for VPE in the previous section accounts for these extraction data as well. First, a sentence with a *wh*-object is derived and then I go over the derivation of an example with a derived subject. In (45a) the *wh*-object *what* has moved out of the ellipsis site to [Spec, CP]. We start our derivation with VoiceP (cf. (46)), which I assume constitutes the clause-internal phase, as mentioned before (see also Baltin 2007 and Aelbrecht 2009, 2010) The *wh*-object is attracted by the phase edge [Spec, VoiceP] because it has a [*u*Q]-feature that it still has to check (see Chomsky 1999, 2000, 2001). The subject has not received case yet and also moves to [Spec, VoiceP] to remain accessible for movement to the surface subject position.

(46)



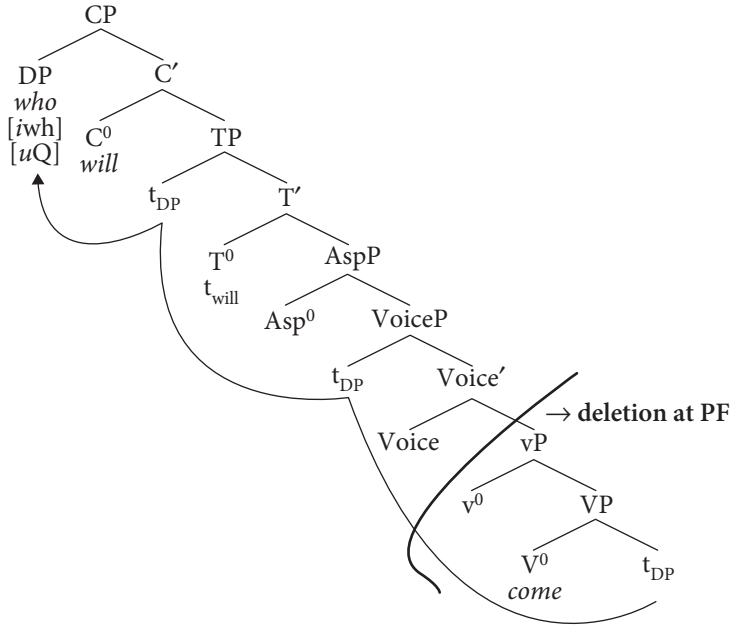
Next, the modal auxiliary in T^0, the licensor of VPE, is merged, as in (47). At this point, T^0 Agrees with the ellipsis site and the latter is sent off to PF for non-pronunciation. The object is already outside of the ellipsis site. When in the final step C^0 is introduced, the *wh*-object is still accessible to be attracted to [Spec, CP], and the derivation converges.

(47)



Hence, the analysis can account for the grammaticality of object extraction in English VPE, in contrast with Dutch MCE. Moreover, when the subject is a derived subject, it survives VPE in a similar way. Consider the sentence in (45b), where the internal argument of the unaccusative verb *come* raises to [Spec, CP]. Just like the *wh*-object, it raises to [Spec, VoiceP] and out of the ellipsis site. Then it moves on to [Spec, TP] and finally lands in its surface position, as illustrated in the tree in (48).

(48)



6. Conclusions and further research

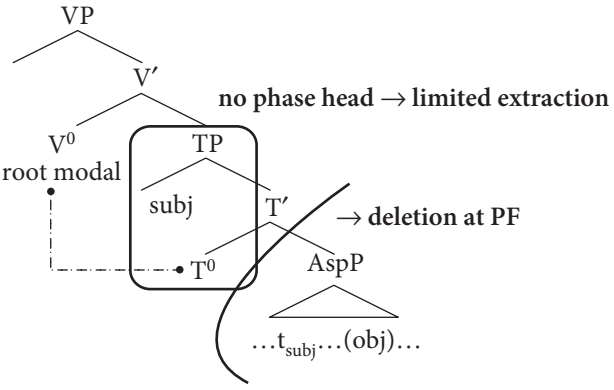
This paper discusses a previously unnoticed elliptical construction in Dutch, namely modal complement ellipsis (MCE). The infinitival complement of a root modal can be left unpronounced, which at first sight looks a lot like English VP ellipsis.

MCE is remarkable in not allowing object extraction out of the ellipsis site, while subjects can be extracted. Consequently, it produces a puzzle: the ban on object extraction is straightforwardly explained if we assume that the ellipsis site is a null proform. The fact that subject extraction is possible, however, contradicts this approach and provides evidence in favor of a deletion account. I argue that MCE involves deletion, while still accounting for the limited extraction possibilities. The analysis of ellipsis I propose is the following:

(49) a. Ellipsis requires the presence of a licensing head, which establishes an Agree relation with the elided phrase.
b. Ellipsis involves deletion at PF, and is an instance of cyclic Spell-out: the ellipsis site is sent to PF for non-pronunciation instead of pronunciation. This happens in the course of the derivation, at the moment the licensing head is merged.

A consequence of the analysis is that the only constituents that can survive ellipsis are those that move out of the ellipsis site before the licensing head is merged. In other words, the projections in between the licensor and the ellipsis site are possible escape hatches. In Dutch MCE, only the subject has the chance to move out of the ellipsis site prior to the merger of the modal licensor, cf. (50). The object on the other hand is trapped inside the ellipsis site.

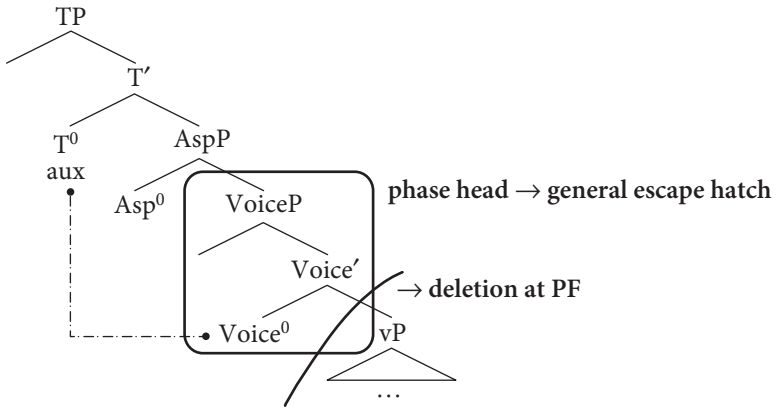
(50)



Furthermore, the account was also applied to English VPE, which allows extraction of all kinds of phrases. Because in this case there is a phase edge between

the ellipsis site and the licensing head T^0 (cf. (51)), the extraction possibilities in English VPE do not differ from the ones in the non-elliptical counterpart.

(51)



Aelbrecht (2009, 2010) shows that this analysis can also be applied to sluicing, pseudogapping and British English *do*. Whether it extends further to NP ellipsis, stripping or gapping I leave as a topic for further research.

References

Aelbrecht, Lobke. 2009. You Have the Right to Remain Silent: The Syntactic Licensing of Ellipsis. Ph.D. dissertation, Catholic University Brussels/Hogeschool Universiteit Brussel.

Aelbrecht, Lobke. 2010. *The Syntactic Licensing of Ellipsis* [Linguistik Aktuell/Linguistics Today 149]. Amsterdam: John Benjamins.

Akmajian, Adrian, Steele, Susan & Wasow, Thomas. 1979. The category AUX in Universal Grammar. *Linguistic Inquiry* 10: 1–64.

Alexiadou, Artemis, Elena Anagnostopoulou & Everaert, Martin (eds). 2004. *The Unaccusativity Puzzle: Explorations of the Syntax-lexicon Interface*. Oxford: OUP.

Baltin, Mark. 2007. Deletion versus Pro-forms: A false dichotomy? Ms, New York University.

Barbiers, Sjef. 1995. The Syntax of Interpretation. Ph.D. dissertation, Leiden University.

Barbiers, Sjef. 1996. Complementen van modale werkwoorden. *Nederlandse Taalkunde* 1(2): 135–154.

Beavers, John & Sag, Ivan. 2004. Coordinate ellipsis and apparent non-constituent coordination. In *Proceedings of the HPSG04 Conference*, Stefan Müller (ed.), 48–69. Stanford CA: CSLI.

Becker, Misha. 2005. Learning verbs without arguments: The problem of raising verbs. *Journal of Psycholinguistic Research* 34: 165–191.

Bhatt, Rajesh. 1998. Obligation and possession. In *The Proceedings of the UPenn/MIT Workshop on Argument Structure and Aspect* [MITWPL 32], Heidi Harley (ed.), 21–40. Cambridge MA: MITWPL.

Bobaljik Jonathan. 1995. Morphosyntax: The Syntax of Verbal Inflection. Ph.D. dissertation, MIT.

Bobaljik Jonathan & Thráinsson, Höskuldur. 1995. Two heads aren't always better than one. *Syntax* 1: 37–71.

Bobaljik, Jonathan & Wurmbrand, Susi. 1999. Modals, raising and A-reconstruction. Lecture presented at the HIL Linguistics Seminar, Leiden, October.

Boivin, Marie-Claude. 1998. Complementation and interpretation: The concrete and imaginative readings of visual perception verbs. In *The Interpretive Tract* [MITWPL 25], Uli Sauerland & Orin Percus (eds), 103–123. Cambridge MA: MITWPL.

Bošković, Željko. 1995. Principles of Economy in Non-finite Complementation. Ph.D. dissertation, University of Connecticut, Storrs. (Published as Bošković 1997).

Bošković, Željko. 1996. Selection and the categorial status of Infinitival Complements. *Natural Language and Linguistic Theory* 14: 269–304.

Bošković, Željko. 1997. *The Syntax of Nonfinite Complementation*: *An Economy Approach*. Cambridge MA: The MIT Press.

Brennan, Virginia. 1993. Root and epistemic modal auxiliary verbs in English. Ph.D. dissertation, University of Massachusetts, Amherst.

Chomsky, Noam. 1957. *Syntactic Structures*. The Hague: Mouton.

Chomsky, Noam. 1986. *Barriers*. Cambridge MA: The MIT Press.

Chomsky, Noam & Lasnik, Howard. 1993. The theory of principles and parameters. In *Syntax: An International Handbook of Contemporary Research,* Vol. 1, Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld & Theo Vennemann (eds), 506–569. Berlin: Walter de Gruyter. (Reprinted in Noam Chomsky, *The Minimalist Program*. Cambridge MA: The MIT Press, 1995).

Chomsky, Noam. 1999. *Minimalist Inquiries: The Framework* [MIT Occasional Papers in Linguistics 15]. Cambridge MA: MITWPL.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by Step. Essays on Minimalist Syntax in Honour of Howard Lasnik*, Roger Martin, David Michaels & Juan Uriagereka (eds), 89–155. Cambridge MA: The MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A Life in Language*, Michael Kenstowicz (ed.), 1–52. Cambridge MA: The MIT Press.

Chung, Sandra, Ladusaw, William & McCloskey, James. 1995. Sluicing and logical form. *Natural Language Semantics* 3: 239–282.

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. Oxford: OUP.

Culicover, Peter & Jackendoff, Ray. 2005. *Simpler Syntax*. Oxford: OUP.

Davies, William & Dubinsky, Stanley. 2004. *The Grammar of Raising and Control: A Course in Syntactic Argumentation*. Oxford: Blackwell.

Depiante, Marcela. 2000. The Syntax of Deep and Surface Anaphora: A Study of Null Complement Anaphora and Stripping/bare Argument Ellipsis. Ph.D. dissertation, University of Connecticut, Storrs.

Elbourne, Paul. 2001. E-type anaphora as NP-deletion. *Natural Language Semantics* 9(3): 241–288.

Elbourne, Paul. 2008. Ellipsis sites as definite descriptions. *Linguistic Inquiry* 39(2): 191–220.

Emonds, Joseph. 1976. *A Transformational Approach to English Syntax*. New York NY: Academic Press.

Emonds, Joseph. 1978. The verbal complex V'-V in French. *Linguistic Inquiry* 9: 151–175.

Felser, Claudia. 1998. Perception and control: A minimalist analysis of English direct perception complements. *Journal of Linguistics* 34: 351–385.

Fiengo, Robert. 1974. Semantic Conditions on Surface Structure. Ph.D. dissertation, MIT.
Fiengo, Robert & May, Robert. 1994. *Indices and Identity*. Cambridge MA: The MIT Press.
Fortin, Catherine. 2007. Indonesian Sluicing and Verb Phrase Ellipsis: Description and Explanation in a Minimalist Framework. Ph.D. dissertation, University of Michigan, Ann Arbor.
Ginzburg, Jonathan & Sag, Ivan. 2000. *Interrogative Investigations: The Form, Meaning, and Use of English Interrogatives*. Standford CA: CSLI.
Gengel, Kirsten. 2007. Phases and ellipsis. In *Proceedings of the 37th Meeting of the North East Linguistic Society*, Emily Elfner & Martin Walkow (eds). Amherst MA: GLSA.
Gergel, Remus. 2006. Interpretable features in vP-ellipsis: On the licensing head. In *Proceedings of Console XIV*, Sylvia Blaho, Erik Schoorlemmer & Luis Vicente (eds). ⟨http://www.sole.leidenuniv.nl⟩
Guasti, Maria Teresa 1993. *Causatives and perception verbs: a comparative approach*. Turin: Rosenberg and Sellier.
Haegeman, Liliane. 1994. *Introduction to Government and Binding Theory,* 2nd edn. Oxford: Blackwell.
Haegeman, Liliane. 1995. *The Syntax of Negation*. Cambridge: CUP.
Haegeman, Liliane. 1996. Finite V-movement in embedded clauses in West-Flemish. *South African Journal of Linguistics* 29: 69–104.
Hankamer, Jorge & Sag, Ivan. 1976. Deep and surface anaphora. *Linguistic Inquiry* 9: 66–74.
Hardt, Daniel. 1993. Verb Phrase Ellipsis: Form, Meaning and Processing. Ph.D. dissertation, University of Pennsylvania.
Hardt, Daniel. 1999. Dynamic interpretation of verb phrase ellipsis. *Linguistics and Philosophy* 22: 185–219.
Hartmann, Katharina. 2002. Background matching in right node raising constructions. In *The Interfaces: Deriving and Interpreting Omitted Structures* [Linguistik Aktuell/Linguistics Today 61], Kerstin Schwabe & Susanne Winkler (eds), 121–151. Amsterdam: John Benjamins.
Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30(1): 69–96.
Hornstein, Norbert. 2003. On control. In *Contemporary Grammatical Theory*, Randall Hendrick (ed.), 6–81. Oxford: Blackwell.
Houser, Michael, Mikkelsen, Line & Toosarvandani, Maziar. 2007. Verb phrase pronominalization in Danish: Deep or surface anaphora? Ms, University of California, Berkeley. (To appear in *Proceedings of the Western Conference on Linguistics (WECOL) 2006*).
IJbema, Aniek. 2002. Grammaticalization and infinitival complements in Dutch. Utrecht: LOT Dissertation Series.
Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge MA: The MIT Press.
Johnson, Kyle. 2001. What VP-ellipsis can do, and what it can't, but not why. In *The Handbook of Contemporary Syntactic Theory*, Mark Baltin & Chris Collins (eds), 439–479. Oxford: Blackwell.
Johnson, Kyle. 2004. How to be Quiet. Paper presented at the 40th annual meeting of the Chicago Linguistics Society.
Karttunen, Lauri. 1971. Implicative verbs. *Language* 47: 340–358.
Kayne, Richard. 1992. Italian negative imperatives and clitic climbing. In *Hommages à Nicolas Ruwet*: *Communication and Cognition*, Liliane Tasmowsky & Anne Zribi-Hertz (eds), 300–312. Ghent: Communication and Cognition.

Klein, Wolfgang. 1993. Ellipse. In *Syntax: An International Handbook of Contemporary Research,* Vol. 1, Joachim Jacobs, Arnim von Stechow, Wolfgang Sternefeld & Theo Vennemann (eds), 763–799. Berlin: Walter de Gruyter.

Lasnik, Howard. 1995. Verbal morphology: Syntactic structures meets the minimalist program. In *Evolution and Revolution in Linguistic Theory*, Héctor Campos & Paula Kempchinsky (eds).Washington DC: Georgetown University Press.

Lobeck, Anne. 1993. Strong agreement and identification: Evidence from ellipsis in English. *Linguistics* 31:777–811.

Lobeck, Anne. 1995. *Ellipsis. Functional heads, licensing and identification*. Oxford: OUP.

Martin, Roger. 1992. On the distribution and case features of PRO. Ms, University of Connecticut.

Martin, Roger. 1996. A minimalist theory of PRO and control. Ph.D. dissertation. University of Connecticut: Storrs.

Merchant, Jason. 2001. *The Syntax of Silence. Sluicing, Islands and the Theory of Ellipsis.* Oxford: OUP.

Merchant, Jason. 2004. Fragments and Ellipsis. *Linguistics and Philosophy* 27:661- 738.

Merchant, Jason. 2007. Voice and ellipsis. Ms, University of Chicago.

Merchant, Jason. 2008. An asymmetry in voice mismatches in VP-ellipsis and pseudogapping. *Linguistic Inquiry* 39(1):169–179.

Miller, Philip. 2006. The position of English causatives in the object-control versus raising-to-object dichotomy. Talk presented at *Colloque International: Constructions verbales et production de sens*, Besançon, January.

Palmer, Frank R. 1977. Why auxiliaries are not main verbs. *Lingua* 47:1–25.

Palmer, Frank R. 1983. *Modality and the English modals*. London: Longman.

Palmer, Frank R. 1986. *Mood and Modality*. Cambridge: CUP.

Palmer, Frank R. 1990. *Modality and the English Modals*. London: Longman.

Palmer, Frank R. 2001. *Mood and Modality,* 2nd edn. Cambridge: CUP.

Perlmutter, David. 1978. Impersonal passives and the Unaccusative Hypothesis. In *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society,* 157–189.

Pesetsky, David. 1992. Zero syntax II: An essay on infinitives. Ms, MIT.

Pollock, Jean-Yves. 1989. Verb movement, Universal Grammar and the structure of IP. *Linguistic Inquiry* 20:365–424.

Rizzi, Luigi. 1993. Some notes on Romance cliticization. Paper presented at the ESF workshop on clitics, Durham.

Roberts, Ian. 1985. Oblique case in the history of English [Southern California Occasional Papers in Linguistics 10], Gary Gilligan, Mohammad Mohammad & Ian Roberts (eds), 143–160. Los Angeles CA: UCLA.

Ross, John R. 1969a. Auxiliaries as main verbs. In *Studies in Philosophical Linguistics,* Vol. 1, William Todd (ed.). Evanston IL: Great Expectations Press.

Ross, John R. 1969b. Guess who? In *Papers from the Fifth Regional Meeting of the Chicago Linguistic Society*, Robert Binnick, Alice Davidson, Georgia Green & Jerry Morgan (eds), 252–286. Chicago: CLS.

Sag, Ivan. 1976. Deletion and Logical Form. Ph.D. dissertation, MIT.

Sag, Ivan & Wasow, Thomas. 1999. *Syntactic Theory*. Stanford CA: CSLI.

Schlangen, David. 2003. A Coherence-Based Approach to the Interpretation of Non-Sentential Utterances in Dialogue. Ph.D. dissertation, University of Edinburgh.

Shopen, Timothy. 1972. A generative theory of ellipsis. Ph.D. dissertation, UCLA.

Stowell, Tim. 1981. Origins of Phrase Structures, Ph.D. dissertation, MIT.
Stowell, Tim. 1982. The tense of infinitives. *Linguistic Inquiry* 13: 561–570.
Tancredi, Christopher. 1992. Deletion, Deaccenting and Presupposition. Ph.D. dissertation, MIT.
Vanden Wyngaerd, Guido J. 1994. *PRO-legomena. Distribution and Reference of Infinitival Subjects.* Berlin: Mouton de Gruyter.
Wasow, Thomas. 1972. Anaphoric relations in English. Ph.D. dissertation, MIT.
Wilder, Chris. 1997. Some properties of ellipsis in coordination. In *Studies in Universal Grammar and Typological Variation* [Linguistik Aktuell/Linguistics Today 13], Artemis Alexiadou & Tracy Alan Hall (eds), 59–107. Amsterdam: John Benjamins.
Wurmbrand, Susanne. 2003. *Infinitives: Restructuring and Clause Structure*. Berlin: Mouton de Gruyter.
Zagona, Karen. 1982. Government and Proper Government of Verbal Projections. Ph.D. dissertation, University of Washington.
Zagona, Karen. 1988. Proper government of antecedentless VPs in English and Spanish. *Natural Language and Linguistic Theory* 6: 95–128.
Zanuttini, Raffaella. 1991. Syntactic Properties of Sentential Negation: A Comparative Study of Romance Languages. Ph.D. dissertation, University of Pennsylvania, Philadelphia.
Zubizarreta, Maria Luisa. 1982. On the Relationship of the Lexicon to Syntax. Ph.D. dissertation, MIT.