Agreeing to Remain Silent: The Syntactic Licensing of Ellipsis^{*}

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Taking data from Dutch and British English as a starting point, the present paper presents a theory of ellipsis licensing. Section 1 introduces the two basic approaches to ellipsis, namely proform and deletion, and the extraction test used in the literature to decide between them. In section two I present data from Dutch and British English providing a puzzle for the test. Section 3 puts forward my analysis involving deletion. I argue that ellipsis is syntactically licensed by an Agree relation between an ellipsis feature and a head licensing ellipsis and that it occurs in the course of the derivation, as soon as the licensor is merged. This analysis accounts for the extraction puzzle and can be applied to other elliptical phenomena as well (see Aelbrecht 2010).

1. Background: Proform versus Deletion

Two main approaches have been put forward concerning the syntactic analysis of ellipsis. A first account considers the ellipsis site to be a null proform (e.g. Lobeck 1995; Depiante 2000), while the second one analyzes ellipsis as deletion of a fully specified syntactic structure (Johnson 1996, 2001; Merchant 2001). To decide which analysis is applicable to a certain elliptical phenomenon several tests have been proposed and one of the most reliable ones involves extraction out of the ellipsis site. If extraction is possible, this suggests that the ellipsis site contains enough syntactic structure to host the movement trace or copy. If, on the other hand, no constituent can be extracted from the ellipsis site, ellipsis is claimed to involve a null proform without internal structure.

Consider some concrete examples. VP ellipsis (VPE) in English for instance allows extraction, as is shown in (1), where the *wh*-phrase *which one* is extracted out of the missing VP. Consequently, VPE is analyzed as deletion of a fully-fledged verb phrase (cf. Johnson 2001, Merchant 2001, 2004, 2007, 2008a, 2008b).

(1) I know which puppy YOU should take home, but I don't know which one SHE should [take home t_{which one}]. [example from Schuyler 2002]

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On the other hand, Null Complement Anaphora (NCA), an example of which is given in (2)a, do not allow extraction out the ellipsis site. In (2)b the ellipsis clause cannot be interpreted as *which cocktail he refused to make*, showing that the *wh*-phrase has not been extracted from a missing underlying VP. Hence, the NCA ellipsis site is analyzed as a null proform (Depiante 2000), cf. (2)c.

- (2) a. I asked Dany to make me a mojito, but he refused.
 - b. * I know Dany made a mojito, but I don't remember **which cocktail** he refused [to make t_{which cocktail}].
 - c. I asked Dany to make me a mojito, but he refused [*e*].

The next section presents two elliptical phenomena which provide a puzzle when the extraction test is applied to them: subjects can be extracted, but not objects.

- 2. The Basic Data: An Extraction Puzzle
- 2.1 Dutch Modal Complement Ellipsis (MCE)

Dutch allows the infinitival complement of a modal to be missing, as in (3). I call this phenomenon Modal Complement Ellipsis (MCE, see Aelbrecht 2010).

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

Although MCE is reminiscent of English VP ellipsis, it is only allowed with root modals: *willen* 'want', *mogen* 'be allowed to', *kunnen* 'can', *hoeven* 'need' and *moeten* 'must'. It is illicit with epistemic modals, temporal auxiliaries *zullen* 'will/shall', *zijn* 'be' and *hebben* 'have'.

(4)	A: Komt Thomas ook naar je lezing? – B: Hij moet.	[root]
	comes momas also to your talk ne nas.to	
	'Is Thomas coming to your talk as well?' – 'He has to.'	
(5)	A: Zou Peter nu op zijn bureau zijn?	
	would Peter now on his office be	
	B: *Hij moet wel. Hij werkt altijd op zaterdag.	[epistemic]
	he must PRT he works always on Saturday	
	INTENDED: 'It must be the case that he's in his office.'	
(6)	A: Komt Thomas ook naar je lezing? – B: * Hij zal niet.	
	comes Thomas also to your talk he will not	
(7)	A: Is Thomas ook naar je lezing gekomen? – B: * Nee, hij	is niet.
	is Thomas also to your talk come.PART no he	is not
(8)	A: Heeft Katrien gisteren gebeld? – B: *Ze heeft niet.	
	has Katrien yesterday called she has not	

Applying the extraction test to this elliptical phenomenon leads to a puzzle: Objects cannot be extracted out of the ellipsis site, as (9)a illustrates, so this hints at a proform analysis for MCE. The non-elliptical counterpart in (9)b is fine, showing that the illicitness is the result of ellipsis.

(9) a. * Ik weet niet wie Sarah MOET uitnodigen, maar ik weet wel wie I knownot who Sarah has.to invite but I know AFF who ze niet MAG [uitnodigen twie]. she not is.allowed invite Ik weet niet wie Sarah MOET uitnodigen, maar ik weet wel wie b. I knownot who Sarah has.to invite but I know AFF who ze niet MAG [uitnodigen t_{wie}]. is allowed invite she not 'I don't know who Sarah has to invite, but I do know who she isn't allowed to.'

Subject extraction, on the other hand, is allowed. In order to show this, I claim that modals are raising verbs (see also Barbiers 1995, Wurmbrand 2003). Evidence for this prerequisite claim comes from weather expletives, for example:

(10) Het moet regenen. it has.to rain 'It has to rain.'

This implies that the subject of the modal is actually base-generated in the infinitival complement and raises up to its surface position. Consequently, in MCE the subject has moved out of the ellipsis site. This is possible with all kinds of lexical verbs:

a.	Ik wil je helpen, maar ik kan niet [t _{ik} je helpen]. [transitive]
	I want you help but I can not you help
	'I want to help you, but I can't.'
b.	Mina komt, maar Tom mag niet [komen t _{Tom}]. [unaccusative]
	Mina comes but Tom is allowed not come
	'Mina will come, but Tom isn't allowed to.'
c.	Die broek moet niet gewassen worden, maar hij mag wel
	that pants has to not washed become but he is allowed PRT
	[gewassen worden t _{hii}]. [passive]
	washed become
	'Those pants don't have to be washed, but they can be.'
	a. b. c.

Hence, unlike the object extraction data, subject extraction shows that the ellipsis site has to contain deleted structure; otherwise the subject does not have a base position.

2.2 British English *do* (BE *do*)

The same puzzle is encountered with another elliptical phenomenon, British English do (BE do), an example of which is given in (12).

(12) Mina will run the race and Bettina will **do**, too.

Baltin (2004, 2005, 2007) observes that objects cannot be extracted (cf. (13)a), contrary to regular VP ellipsis (without *do*). Again, this points towards a proform analysis. Subjects, however, can be extracted out of the elided VP, as (13)b illustrates.

- (13) a. * Although I don't know who Ed will visit, I know who Tim will do [visit t_{who}].
 - b. ? The river will freeze solid and the lake will do [freeze solid t_{the lake}], too.

I claim that both MCE and BE *do* involve deletion of a full syntactic structure. The ban on object extraction is due to the fact that ellipsis occurs during the derivation. My analysis is presented in more detail in the next section.

3. Licensing Ellipsis via Agree

The core ingredients of the theory of ellipsis licensing I propose are the following:

- (14) a. Ellipsis is licensed via an Agree relation between an ellipsis feature [E] and the ellipsis licensing head.
 - b. Ellipsis occurs in the course of the derivation, as soon as the licensing head is merged. At this point the ellipsis site becomes inaccessible for further syntactic operations, and vocabulary insertion at PF is blocked.
- 3.1 Licensing via Agree

In this section and in 3.2 both claims are discussed in greater detail. First I introduce a previous account by Merchant (2001), licensing ellipsis in a head-complement relation. Then, I show that there can be material between the ellipsis site and the licensor and 3.1.3 presents an alternative analysis which licenses ellipsis via Agree.

3.1.1 Merchant (2001)

Merchant (2001) develops an account for sluicing, and argues that ellipsis is licensed by an ellipsis feature [E] that occurs on the licensing head and triggers deletion at PF of its complement. The syntax, semantics and phonology of [E] for sluicing are given in (15) (see Merchant 2001, 2004 for more details).

(15)	a.	The syntax of E _S :	$E_{S}[uwh^{*}, uQ^{*}]$
	b.	The phonology of E _S :	$\varphi TP \rightarrow O/E_{S}$
	c.	The semantics of E _S :	$[[E_S]] = \lambda p : e-GIVEN (p) [p]$

The syntax of the ellipsis feature for sluicing implies that it can only occur on the interrogative C head found in *wh*-questions, which is where sluicing is possible. This C head is the licensor and the phonology of $[E]_s$ ensures that PF does not pronounce its complement TP. An concrete example is given in (16).

(16) a. Addie was reading something, but I don't know what.

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Merchant's proposal implies, however, that the licensor and the elided part are always in a head-complement relation. The next section shows that this is not the case.

3.1.2 Material between the Ellipsis Site and the Licensor

I show that there can be material between the licensor and the ellipsis site using VP ellipsis (VPE). VPE is licensed by finite T (Sag 1976; Williams 1977; Zagona 1982, 1988a, 1988b; Martin 1992, 1996; Lobeck 1995). Nonfinite auxiliaries as such cannot license ellipsis, as (18) illustrates.

- (17) a. He said he wouldn't buy me a coffee, but he **did**.
 - b. I'm going to take Italian classes and she **should**, too.
- (18) a. * I hadn't been thinking about it, but I recall Diana having been.
 - b. * Kim having shown up at the game and Alice not **having** was a surprise to everyone.

Unlike what Merchant's (2001) predicts, however, the finite auxiliary and the elided VP are not necessarily adjacent: the nonfinite auxiliaries *have* and *been* intervene in (19). Hence, ellipsis cannot be licensed via a head-complement relation. Instead, I argue it is licensed via Agree. The next section elaborates on this claim.

- (19) I hadn't been thinking about it, but I should have been [thinking about it].
- 3.1.3 An Agree Relation in Ellipsis

Because the licensor and the ellipsis site are adjacent in Merchant's account, his [E]feature identifies both at once. As that is impossible now, I argue for a more complex [E]. I propose that heads are feature bundles with the feature structure in (20), where the CAT feature specifies the category of the head, and the SEL feature its selectional criteria. A head also has INFL(ectional) features, which in case they are uninterpretable have to be checked against the category feature of another head.

(20)
$$\begin{pmatrix} CAT [...] \\ INFL [...] \\ SEL [...] \end{pmatrix}$$

A sentence like (21)a would get the structure in (21)b, where the uninterpretable Φ -feature on T is checked against the 3rd person singular category feature of the subject.



If [E] is such a feature bundle, it would have the following specification (cf. (22)): It selects a head X on which it occurs and from which it takes over the category. Moreover, it bears an uninterpretable inflectional feature F that has to be checked via Agree against a head L of category F, which is then the licensor. After the checking relation is established, [E] marks the complement of X for ellipsis at PF in the same way as Merchant's [E]-feature. This is depicted in (23).

- 3.2 Derivational Ellipsis

In the previous section I explained how ellipsis can be licensed by Agree. There is a second aspect of the theory of ellipsis licensing I propose, however, which I have not elaborated on, namely the fact that ellipsis happens during the derivation.

I argue that ellipsis is licensed via an Agree relation. Checking Theory (Chomsky 1999) requires that features be checked as soon as possible. In the case of ellipsis, [E] is checked as soon as the licensor enters the structure. However, this still leaves us with two options: Either the [E]-feature on a head X is checked, but its effect, i.e. ellipsis of X's complement, only takes place when the derivation is finished; or it occurs immediately, as soon as the licensor checks [E]. I claim the latter

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to be the case: Ellipsis takes effect as soon as the licensor is introduced. At that point [E] is checked, and the ellipsis site is frozen for further syntactic operations and lexical insertion at PF is blocked.

The way this is implemented is the following: As a first step, take a head X that bears an ellipsis feature. [E] has to be checked against a head L of category F because it has an uninterpretable inflectional [uF]-feature, as is shown in (24)a. When L is merged, it establishes an Agree relation with [E] and the ellipsis site is frozen for any syntactic operations ((24)b). Then the rest of the derivation is built up. Such an analysis predicts that only what moves out of the ellipsis site prior to the merger of the licensor can escape ellipsis. As a consequence, the projections between the elided constituent and the licensing head play a crucial role in determining the extraction possibilities out of the ellipsis site (cf. (24)c).



4. Back to the Extraction Puzzle

In the present section this theory of ellipsis licensing is applied to the two elliptical phenomena that are the main focus in the paper, MCE and BE *do*, to see whether it captures the extraction data. In both cases I first establish what is the licensing head and what is the ellipsis site, and then I discuss the empirical data.

- 4.1 Dutch Modal Complement Ellipsis
- 4.1.1 The Licensor and the Ellipsis site

Consider Dutch modals first: A non-elliptical sentence with a modal taking an infinitival complement, as in (25)a, is structured as shown in (25)b. The subject *Lara* raises from the embedded vP through the embedded [Spec, TP] to its surface position.

(25)Lara moet werken. a. Lara has.to work 'Lara has to work.' b. TP DP T' Lara Т ModP moet TP Mod tmoet T t_{Lara} vP t_{Lara} werken

Ellipsis of the infinitival clause is only possible in the presence of a (root) modal, hence I claim that the modal Mod itself is the licensor (cf. Aelbrecht 2010). Establishing the ellipsis site is less straightforward. Therefore I first explore what is included in MCE. As (26) illustrates, MCE deletes the infinitive, the objects and also aspectual and passive auxiliaries.

Т

(26)A: Fien heeft haar kamer nog altijd niet opgeruimd! a. Fien has her room still always not cleaned 'Fien still hasn't cleaned up her room!' B: Tegen vanavond moet ze wel [haar kamer opgeruimd hebben] tonight has.to she PRT her room cleaned bv have 'By tonight she'll have to have cleaned it.' b. Die rok moet niet gewassen worden, maar hij mag wel that skirt must not washed become but he is.allowed PRT [gewassen worden]. al already washed become 'That skirt doesn't have to be washed, but it can be.'

However, not the entire infinitival clause is elided. If the modal complement is modified by a time adjunct, it is not deleted, for instance. This is shown in (27). Since the adverbial modifies the embedded TP, it is situated lower than the modal, probably adjoined to TP. Consequently, not the whole infinitival clause is deleted.

(27) Gisteren moest ik vandaag langskomen, en vandaag moet ik morgen yesterday had.to I today pass.by and today have.to I tomorrow pas [langskomen t_{ik}].
only pass.by
'Yesterday I had to drop by today, and today I only have to tomorrow.'

Moreover, the associate of a there-expletive subject is not elided either. Iemand 'someone' in (28) can therefore not be in its vP-internal base position, and I assume it sits in the embedded [Spec, TP].

- (28)A: Wie gaat er naar carnaval morgen? who goes there to carnival tomorrow 'Who's going to the carnival tomorrow?'
 - moet toch IEMAND [naar carnaval gaan morgen]. B: Goh, er well there must PRT someone carvival ga to tomorrow 'Well, SOMEONE has to at least.'

Thus, I claim that MCE elides the complement of the embedded T head. This gives us the [E]-feature in (29)a for Dutch MCE. [E] occurs in T, as is specified in the selectional features and needs a root modal to check its uninterpretable inflectional feature. The tree structure in (29)b shows what happens in ellipsis.



4.1.2 Explaining the Extraction Data

Now that the proposal is laid out, it is time to return to the extraction puzzle in MCE. Recall that ellipsis is derivational: Only what moves to a position between the ellipsis site and the licensor can escape ellipsis. In MCE objects cannot be extracted, while subjects can, as is repeated in (30).

(30)	a.	*	Ik weet niet wie Sarah moet uitnodigen, maar ik weet wel wie I know not who Sarah has.to invite but I know AFF who ze niet mag $[uitnodigen t_{wie}]$.
	b.		bie broek moet niet gewassen worden, maar hij mag that pants has.to not washed become but he is.allowed wel [gewassen worden t _{hij}]. PRT washed become 'Those pants don't need to be washed, but they can be.'

Running through the derivation step by step, take the TP complement clause of a modal with an [E]-feature on T. Subjects – also derived subjects – move to [Spec, TP], and [E] has an uninterpretable feature that needs to be checked against a root modal, as in (31)a. When a root modal is merged, the Agree relation is established and the complement of T is blocked for any further syntactic operations. It is sent to PF, marked for ellipsis, i.e. lexical insertion is prevented, cf. (31)b.



Because the subject moves out of the ellipsis site prior to the merger of the root modal, it is not included in the ellipsis. Objects do not have such an escape hatch and are deleted. Hence, MCE can be analyzed as involving deletion of a fully-fledged syntactic structure. The ban on object extraction is due to the timing of ellipsis. In the next section I argue that the same analysis captures the extraction data in BE *do*.

4.2 British English *do*

4.2.1 The Licensor and the Ellipsis site

Haddican (2006) and Baltin (2007) show that the *do* occurring in BE *do* is not dummy *do* because it can occur in nonfinite form (cf. (32)a), but it is not main verb *do* either, as it is compatible with a stative antecedent predicate such as *feel better*, cf. (32)b, unlike main verb *do* in *do it* (cf. (32)c). Hence, they argue that it is the little v head, resulting in the structure in (33).

- (32) a. Kay has run the race and Ezra has done, too.
 - b. Kay will feel better and Ezra will do, too.
 - c. * Kay will feel better and Ezra will do it, too.



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I claim that the licensor of BE do is this little v head do itself (see Aelbrecht 2010), because unlike regular VP ellipsis, BE do is allowed in the absence of T, as long as there is a v[do]:

(34) ?Kim having shown up at the game and Charlotte not having **done** was a surprise to everyone.

As BE *do* deletes the verb and its objects, and *do* in v obviously is not elided, the ellipsis site is VP. According to the analysis that means little v *do* bears an [E] which has to be checked against little v head *do* as well, as (35) shows. In other words, the head bearing [E] is the licensor in this case, so [E] is checked immediately (cf. (36)).



The fact that [E] occurs on the licensor correctly predicts that ellipsis is obligatory when little v do occurs:

(37) *Luis will run the race and Nana will do run the race, too.

4.2.2 Explaining the Extraction Data

Following Baltin (2007) I assume that the clause-internal Phase Head (PH) is not little v, but the Voice head. Together with this assumption the analysis developed in section 3 can account for the extraction data in BE *do*. Recall that objects cannot be extracted out of the ellipsis site, while (derived) subjects can, as is repeated in (38).

- (38) a. * Although I don't know who Ed will visit, I do know **who** Tim will do [visit t_{who}].
 - b. ? The river will freeze solid and the lake will do [freeze solid t_{the lake}], too.

Consider the example with object extraction first. The structure is depicted in (39). The subject of the transitive verb is base-generated in the specifier position of vP, outside the ellipsis site. Because ellipsis happens as soon as do is merged, the object does not have an escape hatch and is deleted.



When the verb is unaccusative, the subject is base-generated in the VP. Following Baltin (2007), I assume that the derived subject moves to [Spec, vP] before moving to its surface position (see also Aelbrecht 2010). This results in the structure in (40): the derived subject has an escape hatch out of the ellipsis site.



5. Conclusion

Summing up, this paper claims that ellipsis is licensed by an Agree relation between an ellipsis feature and the licensor and that it occurs in the course of the derivation. When the licensor is merged, the Agree relation is established and the ellipsis site becomes inaccessible for syntax. This implies that from that moment on nothing can move out of the ellipsis site anymore. In other words, the projections between the ellipsis site and the licensor play a crucial role in determining the extraction possibilities of an elliptical phenomenon. With this analysis I can account for the extraction contrast between objects and subjects in Modal Complement Ellipsis and British English *do*: objects do not have an escape hatch out of the ellipsis site, while subjects do.

A further implication of this approach to ellipsis licensing is that the extraction test for deleted syntactic structure can only be applied unidirectionally: If extraction is possible, the ellipsis site contains deleted structure. If extraction is impossible, this could be due to a lack of escape hatches.

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