The syntax and licensing of Gapping and Fragments

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CHAPTER 3

Licensing ellipsis

1 Introduction

In the previous chapter I showed that the syntax of Gapping and Fragments is virtually identical. I followed Merchant (2004) in arguing for a movement plus deletion approach to ellipsis, under which the derivation of typical cases of Gapping and Fragments come out as follows.

(1) a. Max ate the apple and $[_{\text{DP}}$ Sally$]_i$ $[_{\text{DP}}$ the hamburger$]_j$ ~~$[t_i$ ate $t_j]$~~

b. A: Who did you see?
B: $[_{\text{DP}}$ Bill$]_i$ ~~$[$I saw $t_i]$~~

The syntactic similarity of Gapping and Fragments begs the question whether we have any reason to formally treat Gapping and Fragments as distinct phenomena. Traditionally, Gapping and Fragments have been considered different types of ellipsis. This is mainly due to the observation that Gapping occurs in the second conjunct of a coordination whereas Fragments occurs in a stand-alone sentence.

In principle, there are at least two reasons for which one could distinguish between different ellipsis types. One reason is that the ellipsis types have a different constituent size. Generally, TP, VP and NP ellipsis are considered different ellipsis types. Another reason to distinguish ellipsis types is their distribution. Gapping, for example, only occurs in coordinations and not in subordinations, whereas VP ellipsis fairs fine in both those contexts. This, in fact, has led some authors to suggest that Gapping should not be considered a type of ellipsis at all (e.g. Lobeck, 1995; Johnson, 2004). This is an unfortunate conclusion, as Gapping shows many of the hallmarks of ellipsis, such as strict/sloppy ambiguities and allowing for split antecedents (Coppock, 2001). In this chapter I argue that there is no reason to formally

distinguish between Gapping and Fragments. To arrive at this conclusion, I study the distribution of Gapping and Fragments and show that their distributional patterns are virtually identical. I show, moreover, that Gapping and Fragments are not licensed by a syntactic licensing condition. I propose that Gapping and Fragments are licensed when a particular discourse configuration obtains. With the licensing condition on ellipsis holding at the level of discourse, any syntactic differences (i.e. Gapping occurs in coordinations, Fragments in a stand-alone utterance) are irrelevant for whether or not the licensing condition is satisfied.

In section 2, I discuss the distribution of Gapping and Fragments. In section 3, I discuss ellipsis licensing and show that none of the theories in the literature is capable of extending to Fragments and Gapping. Section 4 presents arguments that show that Gapping is not licensed in the syntax. In section 5, I account for the facts discussed in section 2 and 4. Specifically, I propose a theory in which Gapping and Fragments are licensed when they are in a particular discourse configuration with respect to their antecedent. Section 6 addresses some problems for the account given in section 5. Section 7 concludes.

2 The syntactic distribution of Gapping and Fragments

In this section, I discuss in which contexts Gapping and Fragments can occur. It turns out that the distribution of Gapping and Fragments is very restricted. Significantly, the distributional restrictions well-known to hold for Gapping turn out to hold for Fragments, as well.

As we have seen in chapter 1, Gapping is subject to the Equal Conjunct Requirement, which says that the ellipsis site may not be embedded relative to its antecedent, nor may the antecedent be embedded relative to the ellipsis clause. In (2a), the Gapping clause '*Bill Mary*' is embedded under the matrix clause headed by *know*.[1] (2b) is also ungrammatical. Here ellipsis takes place in a relative clause.

(2) a. * Harry has invited Sue and I know (that) Bill Mary.
b. * John knows a man that caught a salmon on Sunday and Bill knows a man (that) a trout on Thursday.

Interestingly, the no embedding restriction also holds for Fragments (cf. Hankamer, 1979). The similarity between (2) and (3) is remarkable. Nevertheless, this fact has received little attention in the literature.

(3) A: Who has John invited?
B: *I know Mary

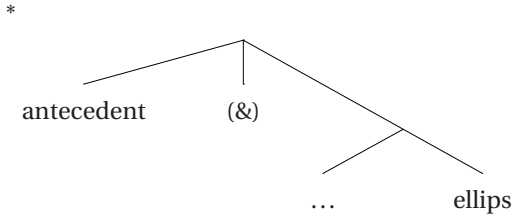
[1] An exception to the no embedding restriction are instances of Gapping under 'bridge verbs' (*say*, *think*, etc.). An example is given in (i). See Temmerman (2013) for a discussion of embedded Fragments in Dutch.

i. Harry has invited Sue and I think Bill Mary.

I discuss this exception to the no embedding restriction in section 6.

The no embedding restriction on the ellipsis clause in Gapping and Fragments is depicted schematically in (4).[2]

(4) *Asymmetrical embedding of ellips*



Significantly, ellipsis types other than Gapping and Fragments are not subject to the no embedding condition. This is illustrated for VP ellipsis in (5a) and for Sluicing in (5b).

(5) a. Harry has invited Sue and I know (that) Bill has ~~invited Sue~~, too.
b. Harry has invited someone, but I don't know who ~~Harry has invited~~.

Johnson (2004, 2009) shows that the antecedent of Gapping cannot be embedded either. The example in (6) is ungrammatical with the bracketing as indicated. In this structure, the Gapping clause is not embedded under *she's said*. The fact that the antecedent for the gap is embedded under *she's said* gives rise to ungrammaticality.

(6) * [She's said [Peter has eaten his peas]] and [Sally ~~has eaten~~ her green beans] so now we can have dessert.

The following examples show that the antecedent for Fragments cannot be embedded either. If it could, we would expect the examples in (7) to be ambiguous between a 'large' and a 'small' antecedent reading, contrary to fact. The instances of Fragments can only take the large antecedent.[3]

[2] Although there is no syntactic connection between the antecedent and the instance of Fragments, for the sake of convenience, I represent it here as such. In section 5, I argue that there is a discourse relation between the Fragments clause and its antecedent.

[3] It should be noted that the examples in (7) are not ruled out because the discourse is incoherent. As shown in (i) and (ii), Fragments with a small antecedent is ruled out, even though the non-elliptical version is perfectly fine.

i. A: What did John say Mary has eaten?
B: Mary has eaten beans, but I'm not sure if that's what John said.
B': *Beans ~~Mary has eaten~~, but I'm not sure if that's what John said.

ii. A: John said Mary has eaten BEANS.
B: He's wrong, Mary has eaten CAVIAR.
B': *He's wrong, CAVIAR ~~Mary has eaten~~.

(7) a. A: What did John say Mary has eaten?
B: Beans. question-answer Fragments
≠ 'Mary has eaten beans.'
= 'John said Mary has eaten beans.'

b. A: John said Mary has eaten BEANS.
B: No, CAVIAR. corrective Fragments
≠ 'Mary has eaten caviar.'
= 'John said Mary has eaten caviar.'

The examples in (6) and (7) show again that asymmetrical embedding is disallowed. This time, however, it is the antecedent that is embedded with respect to the ellipsis clause, as schematically represented in (8).

(8) *Asymmetrical embedding of antecedent*
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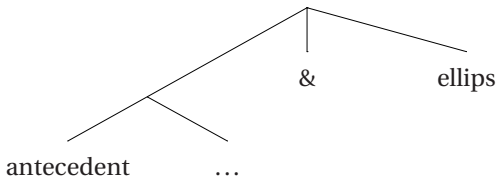


Elaborative Fragments seem to be less sensitive to asymmetrical embedding of the antecedent, as shown in (9).

(9) a. A: John said Mary has eaten something.
B: Yeah, beans. elaborative Fragments
= 'Mary has eaten beans.'
= 'John said Mary has eaten beans.'

The possibility of taking a small antecedent in Fragments seems to track the possibility of taking a small antecedent in Sluicing. As shown for Sluicing in (10), the possibility of resolving ellipsis against a large or a small antecedent is available here, too, just as it is for Fragments in (9).

(10) a. John said Mary has eaten something, but I don't now what.
= 'I don't know what Mary has eaten.'
= 'I don't now what John said Mary has eaten.'

The following example shows that when a small antecedent is unavailable for Fragments, it is also unavailable in Sluicing.

(11) a. A: What did John regret Mary has eaten?
B: Beans. elaborative Fragments
≠ 'Mary has eaten beans.'
= 'John regretted Mary has eaten beans.'

b. John regrets Mary has eaten something, but I don't know what. Sluicing
≠ 'I don't know what Mary has eaten.'
= 'I don't know what John regrets Mary has eaten.'

Whatever it is that makes available the possibility of taking a small antecedent in elaborative Fragments, it should not carry over to question-answer and corrective Fragments. I will leave the exploration of the similarity between eleborative Fragments and Sluicing for future research. Here, I assume that asymmetrical embedding of the antecedent with respect to the ellipsis clause is impossible in Fragments (i.e. (8) holds). In section 6, I discuss several cases where the no embedding restriction on the antecedent is violated. In general, it seems that embedding of the antecedent with respect to the ellipsis clause is more flexible than embedding of the ellipsis clause with respect to the antecedent.

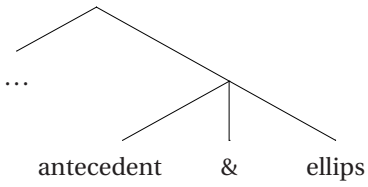
Next, consider the case of VP ellipsis in (12). This example shows that the no embedding restriction does not hold for this ellipsis type. Whether a small antecedent or a large antecedent is chosen to resolve ellipsis depends on the context. It differs in this respect from the Gapping and Fragments cases in (7), where no context, no matter how rich, is sufficient to 'bypass' the no embedding restriction.

(12) John knows that Mary goes skiing in the weekends, but I'm not sure if Bill does, too.
= 'I'm not sure if Bill goes skiing in the weekends, too.'
= 'I'm not sure if Bill knows that Mary goes skiing in the weekends.'

One might suspect at this point that Gapping and Fragments are main clause phenomena. The following example shows for Gapping that it is not. That is, Gapping *can* be embedded, but only if the antecedent is embedded, too. This is illustrated in (13) and depicted schematically in (14).

(13) I know that [[Harry has invited Sue] and [Bill Mary]].

(14) *Symmetrical embedding*

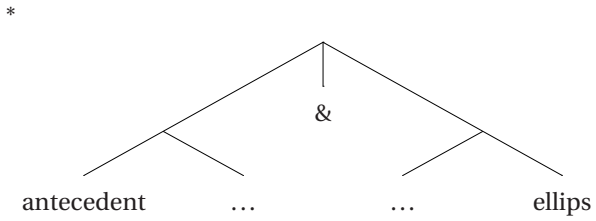


The example in (15) is a case of symmetrical embedding. Nonetheless, ellipsis is ungrammatical in this context.[4]

[4]This shows that there is no 'higher clause matching' in the sense of Rooth (1992) is possible. That is, even though the matrix clauses (*X knows*) match, ellipsis is not possible.

(15) * I know that Harry has invited Sue and Sarah knows Bill Mary.

(16) *Illicit symmetrical embedding*



The generalization seems to be that ellipsis clause and antecedent must be directly 'next to each other' in some way. Being 'next to each other' is not enough, though. The example in (17) illustrates the well-known fact that Gapping cannot occur in an adverbial clause. For this reason, Gapping is often thought to be a 'coordinative ellipsis type' (i.e. it only occurs in coordinations).

(17) a. Max ate the apple and Sally the hamburger.
b. * Max ate the apple, because Sally the hamburger.

Let us now turn to Fragments. It is clear that Fragments cannot occur in a subordinated adverbial clause, since Fragments is an ellipsis type that occurs in a standalone sentence. Two clauses that are not syntactically connected can, however, give rise to a subordinative *interpretation*. Consider the example in (18a). This example has a subordinative reading in which S2 specifies the cause of S1. This same interpretation is the preferred one in (18b). When it comes to their interpretation, (18b) and (18a) are identical. Thus, although only (18a) involves syntactic subordination, both (18a) and (18b) involve subordination at the level of interpretation.

(18) a. [$_{S1}$ John got upset,] because [$_{S2}$ his favorite cookies were sold out.]
b. [$_{S1}$ John got upset.] [$_{S2}$ His favorite cookies were sold out.]

The examples in (19) and (20) show that Fragments is impossible when the sentence receives a cause-effect interpretation, similar to the reading of (18b). Consider the example in (19a). B's response can be interpreted as stating that the fact that John has red hair is due to his parents having red hair. (19b) shows that this subordinative cause-effect interpretation does not license ellipsis. B's Fragments utterance is ungrammatical, even though S1 provides a matching antecedent. Similar considerations hold for (20b). Here, the interpretation of B's utterance is that the sun's shining causes the moon's shining. Again, this subordinative cause-effect interpretation does not license ellipsis, as shown in (20b).

(19) a. A: [$_{S1}$ John has red hair.]
B: (Of course) [$_{S2}$ His parents have red hair.]
b. * A: [$_{S1}$ John has red hair.]
B: (Of course) [$_{S2}$ His parents ~~have red hair~~.]

(20) a. A: [$_{S1}$ The moon is shining.]
B: (Of course) [$_{S2}$ The sun is shining.]

b. * A: [$_{S1}$ The moon is shining.]
B: (Of course) [$_{S2}$ The sun ~~is shining~~.]

Just as with the no embedding condition, VP ellipsis and Sluicing are not subject to the no subordination condition either, as shown in (21a) and (21b), respectively.

(21) a. Harry has invited Sue, because Bill did ~~invite Sue~~, too.

b. I'm convinced Harry has invited someone, although I don't know who ~~Harry has invited~~.

To summarize, both Gapping and Fragments are subject to severe restrictions on their distribution. An approximation of the generalization on the distribution of these ellipsis types, is that they are only possible when the ellipsis clause and antecedent are directly connected and no (semantically) subordinative relation holds between them. These distributional restrictions are absent in VP ellipsis and Sluicing. This difference in distribution raises the question as to what governs the distribution of Gapping and Fragments on the one hand and the distribution of VP ellipsis and Sluicing on the other. I address this question in the next section.

3 Existing theories of ellipsis licensing

It is standardly accepted that a successful instance of ellipsis must obey two preconditions. One is that there must be an identical antecedent available in the discourse. This condition is what we have called the *identity* condition. Intuitively, it is easy to grasp why there is an identity condition on ellipsis (whatever its precise formulation might be): if there is no sufficiently identical antecedent, the deleted material is not recoverable and no interpretation can be assigned to the elliptical clause. The other precondition on ellipsis is the so-called *licensing* condition. The licensing condition is generally thought to govern the distribution of ellipsis. That is, a context in which ellipsis is allowed is a context in which the licensing condition is satisfied. If we want to determine the nature of the licensing condition, we have to study the contexts in which ellipsis can take place and compare these to the contexts in which it cannot. Although the terms 'licensing' and 'distribution' are sometimes used interchangeably, the two are not the same. In many theories, licensing is a formal (grammatical) requirement that must be met for ellipsis to take place successfully. The nature of this formal requirement is often taken to be syntactic. The output of this grammatical operation, in turn, is what determines in which contexts ellipsis can apply (i.e. its distribution).

The evidence for a licensing component in ellipsis is based on the following observations. As is well-known, Sluicing is possible with interrogative *wh*-phrases.

(22) a. Somebody just left – guess who. (Ross, 1969, p.252)

b. Anne invited someone, but I don't know who. (Merchant, 2001, p.40)

Importantly, Sluicing is *only* possible with interrogative *wh*-phrases. Sluicing is impossible, for example, when the sluice is headed by a relative pronoun (cf. van Riemsdijk, 1978; Lobeck, 1995), see (23b). The grammatical case of Sluicing in (23a) differs only minimally from (23b) in that here the *wh*-phrase that heads the sluice is an interrogative *wh*-phrase.

(23) a. Someone has done the dishes, but I don't know who.
b. * Someone has done the dishes, but I don't know the person who.
(Kim, 1997a, p.157)

Similarly, Sluicing is not licensed by *wh*-phrases that head clefts.

(24) a. * We thought it was Abby who stole the car, but it was Ben who.
b. * Somebody stole the car, but noone knew that it was Ben who.
(Merchant, 2001, p.59)

The examples in this section show that Sluicing is dependent on the presence of an interrogative *wh*-phrase, which I refer to as the *licensor*.[5] There are two important questions raised by the idea that ellipsis must be licensed. *How* is ellipsis licensed and *why* must ellipsis be licensed? As for the *how*-question, the question is what the grammatical relation is between licensor and ellipsis site. The more intriguing question is *why* ellipsis needs to be licensed. As said, it is not clear intuitively why ellipsis should be subject to such a condition in the first place.

Two types of approaches can be distinguished in the literature on licensing ellipsis. The first type of approach takes it that a certain syntactic relation must hold between licensor and ellipsis site (e.g. Zagona, 1982, 1988; Chao, 1988; Lobeck, 1995; Merchant, 2001). The second type of approach argues that licensing is a matter of having a proper discourse relation between ellipsis site and antecedent (e.g. Asher, 1993; Hardt, 1993; Hardt and Romero, 2004; Klein, 1987; Prüst et al., 1994). In the next section, I discuss some of these theories and review how and to what extent they answer the *how* and *why* of licensing. In the discussion, I focus on Sluicing, though much of it carries over to other ellipsis types as well.

[5] I will not discuss the licensing condition on VP-ellipsis here. The main reason is that VP ellipsis is typologically rare, unlike clausal ellipsis types such as Sluicing, Gapping and Fragments. How VP ellipsis is licensed can thus only be answered by conducting a cross-linguistic investigation, which is out of the scope of this dissertation.

If we just look at English, though, it is easy to see that licensing plays a role in VP ellipsis. Observe the contrast between (i) and (ii). Whereas VP ellipsis is fine in (i), it is not in (ii). According to Johnson (2001), the correct generalization is that VP ellipsis is impossible in island contexts.This cannot be the whole story, however, since VP ellipsis is not only impossible in islands. As noted in Potsdam (1997), subjunctive clauses also resist VP ellipsis, see (iii). See Lobeck (1995); Johnson (2001); Aelbrecht (2010); Thoms (2010) for theories on licensing VP ellipsis.

i. Mag Wildwood wants to read Fred's story, and I also want to. (Johnson, 2001, p.445)
ii. * Mag Wildwood came to read Fred's story, and I also came to. (Johnson, 2001, p.445)
iii. * We can't count on Josh to be waiting for us at the airport so we request that you be instead. (Potsdam, 1997, p.537)

3.1 Syntactic licensing theories of ellipsis

3.1.1 The Agree approach

Lobeck (1995) adopts the view that ellipsis sites are silent pronouns and that these pronouns need to be identified. In Lobeck's theory licensing ellipsis is on a par with the licensing of empty categories, such as *pro*. Parallel to how *pro* in null subject languages is licensed by the agreement on the verb, ellipsis is licensed by a proper head-governor specified for strong agreement (i.e. productive agreement that is spelled out on either Probe or Goal). For Sluicing, Lobeck argues that a [+WH] feature on C licenses ellipsis. To rule out Sluicing in relative clauses (which, recall, do not allow Sluicing, cf. (23b)), Lobeck follows Rizzi (1990) in assuming that in those cases C is equipped with a [-WH]-feature.[6]

Merchant (2001, 2004) builds on Lobeck's proposal. He argues that ellipsis is licensed by an E-feature, the properties of which are listed in (25).

(25) $\mathrm{E}_{[u\mathrm{F}^*]}$
$[\![\mathrm{E}]\!] = [\lambda \mathrm{p}\text{: e-GIVEN(p). p }]$
$\phi\mathrm{CP} \rightarrow \varnothing/\mathrm{E}$

Under Merchant's theory, ellipsis is licensed when all requirements of [E] are satisfied. One requirement is that the ellipsis must be e-GIVEN. [E] is a partial identity function over propositions. An expression E is e-GIVEN iff there is an antecedent A which entails E and which is entailed by E, modulo ∃-type-shifting (Merchant, 2001). Semantic composition of E and its complement succeeds only if the complement of E is e-GIVEN. This semantic requirement is what I have been referring to as the identity condition. Relevant for our current purposes is that the E-feature also requires that it be checked by a particular syntactic feature F. Merchant (2001) argues for Sluicing that the licensing feature that bears this requirement is a [*u*WH, *u*Q] on C. This licensing feature has an EPP property (indicated by the *), which requires overt movement of the Goal to the specifier of [E]. In effect, the E-feature requires that a *wh*-phrase moves to its specifier and checks its [*u*WH, *u*Q]. For Fragments, Merchant (2004) argues that the E-feature is situated on a covert functional head. [E] furthermore requires that it be checked by a focus-feature, which attracts a focused remnant to its specifier. When this particular checking requirement of [E] is satisfied (and e-GIVENness holds), the E-feature instructs PF not to parse its complement (this is expressed in the last line of (25)).

It is clear that Merchant's and Lobeck's accounts are to a large extent similar (cf. also Aelbrecht, 2010). If we set aside the difference of postulating structure in the ellipsis site, a matter that is largely independent of the licensing question, all of these accounts share the idea that the licensor must be involved in a particular

[6] Merchant (2001) points out that for Rizzi, C in relative clauses can either carry a [+WH] or a [-WH]-feature. For this reason, Merchant assumes that it is a [+WH, +Q] feature that licenses ellipsis and that the C in relative clauses carries a [WH, Q]. Kim (1997a) assumes that the C-head that licenses Sluicing carries a [+WH, +FOCUS]. Since the exact feature content of the licensor is not important for the discussion, I do not discuss it further here.

Agree/checking relation for ellipsis to be licensed.[7]

López (2000) expresses some criticism of Lobeck's account, which extends to Agree approaches to licensing in general. First, it is not clear what the particular Agree relation has to do with the licensing of ellipsis. In the case of licensing *pro*, the agreement on the verb is actually sufficient to retrieve *pro*'s content. Crucially, the licensing agreement relation postulated for ellipsis does not recover the *content* of the ellipsis site. Second, why does an interrogative *wh*-feature license Sluicing whereas other features do not? Essentially, the Agree approaches only answer the *how*-question of licensing, but not the *why*-question. If the Agree relation is a prerequisite for ellipsis, one would like to know why that is the case. It is this criticism that strikes at the heart of the Agree approaches. Under the Agree approach, licensing is an idiosyncretic syntactic condition, where the variation in ellipsis types is governed by variation in the lexicon. The obvious drawback is that any ellipsis type can be 'captured' this way, simply by postulating a(nother) licensor along with its idiosyncretic checking requirement in the lexicon. The Agree approach thus denies that the fact that only interrogative *wh*-phrases license Sluicing is something that needs to be explained. This does not seem correct in light of the fact that many languages have Sluicing with interrogative *wh*-phrases. The fact that Sluicing occurs in typologically unrelated languages (cf. Merchant, 2001) indicates that there is something special about interrogative *wh*-phrases that other (*wh*-)phrases lack. If licensing were just a matter of lexical variation, we would expect to find an even distribution between languages that employ Sluicing with interrogative *wh*-phrases and languages that have Sluicing with, say, relative pronouns. Although this type of ellipsis does exist, observe the examples in (26), this type of ellipsis is very rare among the world's languages (Lipták and Aboh, 2013).

(26) a. Ezért tartunk ott, ahol
this.for be.PRES.3PL there REL.where
lit. 'For this reason we are wherever we are.'

b. Kòfí ná yrɔ' mɛ̀ ɖé àmɔ́n má nyɔ́n mɛ́ ɖɛ̌ wɛ̀
Kòfí FUT call person IND but 1SG.NEG know person REL FOC
lit. 'Kofi will call someone, but I don't know the person who.'
(Lipták and Aboh, 2013, p.105)

The rarity of the Sluicing type in (26) and the wide-spread occurrence of Sluicing with interrogative *wh*-phrases indicates that interrogative *wh*-phrases have some property that sets them apart from non-interrogative *wh*-phrases when it comes to licensing ellipsis. If we can tease apart what that property is, we are a step closer to answering what licenses Sluicing.

Gapping and Fragments pose another problem for the Agree approaches. The main problem for the Agree approaches is that they cannot predict the distribution of Gapping and Fragments. Take, for example, the contrast in (27) between the fragment in B and B'. The Agree approaches cannot predict this difference. This is so,

[7] One difference is that in Merchant's implementation of Lobeck's theory, licensing is no longer a general grammatical principle on licensing empty categories (i.e. the ECP), but an ellipsis specific syntactic condition.

because the ellipsis clause is identical in B and B'. Therefore, if the Agree relation that licensing ellipsis is satisfied in B (for Merchant (2004), for example, [E] must be checked by a focus-feature), it should also be satisfied in B'.

(27) A: Who came?
B: [John]$_i$ F$_{[E]}$ [~~t$_i$ came~~]
B': *I know [John]$_i$ F$_{[E]}$ [~~t$_i$ came~~]

To give one more illustration, consider the example in (28) which illustrates the ban on Gapping in adverbial clauses. As shown, the syntax of the Gapping clause in (28a) and (28b) is identical. The difference between the two, and thus the cause of the contrast, is the difference in connectives. A conjunction headed by *and* allows Gapping, but a subordination headed by *because* does not. The agreement approaches, however, are unable to predict this difference, since the Agree relation (whatever it is) is satisfied within the ellipsis clause and should therefore not be sensitive to the relation the ellipsis clause bears to its antecedent.

(28) a. John invited Mary and [Paul]$_i$ [Suzan]$_j$ [~~t$_i$ invited t$_j$~~]
b. * John invited Mary, because [Paul]$_i$ [Suzan]$_j$ [~~t$_i$ invited t$_j$~~]

One of the problems for the Agree approaches regarding Gapping and Fragments is is that there is no licensing element in these ellipsis types. What surfaces in Fragments and Gapping are just the remnants of ellipsis. These phrases cannot be the licensors, as they can be XPs of any category and thus do not form a natural syntactic class. For this reason, Merchant (2004) argues that Fragments is licensed by an [E] on a covert functional head. The Agree relation here is argued to involve focus-features. Since neither the functional head that [E] sits on nor the Agree relation has any morphological reflex, I consider this proposal as another indication that the Agree approach to licensing is too flexible in that it can capture any ellipsis type by simply postulating an Agree relation. Even if we grant that there is an Agree relation in Gapping and Fragments, we end up with the same problem, namely that, at the point at which the Agree relation is established in the ellipsis clause, it is not clear what relation ellipsis clause and antecedent will ultimately bear to each other.

3.1.2 The move + delete approach

Thoms (2010) presents another syntactic licensing account. Thoms's account, however, is not based on establishing a particular Agree relation to license ellipsis. Instead, the account generalizes ellipsis licensing to the deletion of copies left by movement. Unlike the Agree approaches, therefore, Thoms' account does not postulate an ellipsis specific licensing mechanism. Thoms argues that ellipsis is licensed by non A-movement (A'- and head-movement). A non A-moved element can trigger ellipsis of its sister. In (29) for example, *who* A'-moves to spec,CP and triggers ellipsis of its complement, C'.

(29) Anne invited someone, but I don't know [$_{\text{CP}}$ [who]$_i$ [~~$_{C'}$ Anne invited t$_i$ ~~]]

Thoms adopts Kayne's (1994) Linear Correspondence Axiom (LCA), which says that if an element A c-commands B, A will come to precede B at the point of Linearization. From the LCA, it follows that A cannot c-command B and B c-command A at the same time, as that would lead to contradictory ordering statements. This means that in a configuration in which A has moved over B, resulting in [A B A], copy deletion must target one of the occurences of A. This is typically the lower copy (cf. Nunes, 2004). Thoms argues that, instead of deleting the lower copy of A, the complement of the higher instance of A may be deleted. In other words, ellipsis obtains when, instead of copy deletion, deletion of the complement of the moved element is resorted to. The reason why ellipsis only occurs in movement contexts, is because Delete (of which copy deletion and complement deletion are instances) is a costly operation and can only apply when a violation of the LCA would otherwise arise. Under Thoms' account there is no ellipsis specific licensing condition, as ellipsis is simply an instance of *Delete*. Ellipsis occurs when complement deletion is chosen over copy deletion in a movement configuration.

Although a theory that dispenses with licensing is to be preferred over a theory that does postulate it, the obvious downside is that the different licensing contexts are no longer accounted for. Recall that Sluicing is only possible with interrogative *wh*-phrases and not possible in relative clauses and clefts, see (23b and (24a), repeated here as (30a) and (30b), respectively. On Thoms' movement account, all of these involve A'-movement and are predicted to license ellipsis. In other words, Thoms' account overgenerates, because complement deletion is not sensitive to the precise content of the moved element. As long as this element has undergone non-A movement, ellipsis is predicted to be licensed.

(30) a. * Someone has done the dishes, but I don't know the person [who]$_i$ ~~[t$_i$ has done the dishes]~~

b. * We thought it was Abby who stole the car, but it was Ben [who]$_i$ ~~[t$_i$ stole the car]~~

Like the Agree approaches, Thoms' account also suffers from the problem that it cannot account for the distribution of Gapping and Fragments. The reason, again, is that the licensing requirement on ellipsis, whether it involves Agree or movement, is a local relation between licensor and ellipsis site. Hence, the licensing condition is already satisfied at a point when there is no relation yet between ellipsis site and antecedent.

(31) a. * Harry has invited Sue and I know (that) [$_{DP}$ Bill]$_i$ [$_{DP}$ Mary]$_j$ ~~[t$_i$ has invited t$_j$]~~

b. * John ate a hamburger because [$_{DP}$ Sally]$_i$ [$_{DP}$ an apple]$_j$ ~~[t$_i$ ate t$_j$]~~

Under Thoms' movement account, movement of *Mary* in (31a) and movement of *an apple* in (31b) should license ellipsis (i.e. complement deletion). In both (31a) and (31b), the relation between licensor and ellipsis site is already established at a point where it is not yet clear what relation the antecedent will bear to the ellipsis clause (embedded, subordinated, etc.).

3.2 Discourse licensing theories of ellipsis

3.2.1 The Question under Discussion approach

Next to syntactic licensing theories, there are theories that hold that ellipsis is licensed when the ellipsis clause and the antecedent satisfy a particular discourse condition. One such theory has it that the remnants of ellipsis must answer the *Question under Discussion*, or QUD for short (see Weir (2013) for Fragments, Reich (2007) for Gapping and Fragments and Ginzburg and Sag (2000) for Sluicing). Informally, the QUD can be viewed as the question obtained by replacing the focused phrases in an utterance by *wh*-phrases. In (32), for example, *Bill* and *Harry* are focused. If we replace these focused phrases with *wh*-phrases, we get a QUD of the form 'who met whom?'. Roberts (1996) proposes that participants develop the discourse by making a contribution to the QUD.

(32) BILL met HARRY.
Implicit QUD: who met whom?

According to the QUD licensing theory of ellipsis, ellipsis is licensed when the current QUD is answered by the remnants. This QUD can be overt, as in question-answer Fragments, but the QUD may also be implicit, as in the case of Gapping and elaborative and corrective Fragments. In the Gapping case in (33), the QUD of the antecedent is 'who met whom?' (cf. (32)). Since '*Sue Sally*' is an answer to this QUD, ellipsis is licensed.

(33) BILL met HARRY and SUE SALLY.
Implicit QUD: who met whom?

A problem for the QUD approaches arises when we consider Gapping in embedded contexts. In (34), assuming focus is on the object, the QUD is 'what did I review?'. Under the QUD approach, a 'secondary' QUD must be assumed to be evoked by the focus structure of the embedded antecedent, namely 'who read the paper when?'. Although this is possible in principle, intuitively it is far from clear that there is a 'secondary' QUD that is guiding the discourse here. Since embedding is recursive and, in principle, possibly infinite, the number of QUDs is predicted to be possibly infinite, as well. From the perspective that answering the QUD is an overarching common goal of participants, we must wonder what the explanatory value of a QUD theory is if the number of QUDs were indeed to grow with every level of embedding.

(34) I reviewed a paper which [[Harry read yesterday] and [Bill last week]].

Even if we grant that QUDs can be embedded, the QUD approach wrongly predicts ellipsis in embedded clauses to be fine, as well. In (35), *Bill Mary* answers the QUD 'who invited whom', which is provided by the antecedent. Yet, ellipsis is not licensed here.[8]

[8] One might oppose that the answer to the QUD is embedded under the predicate *know* and that the QUD should, for this reason be, as well (Dan Hardt, pc). Note, however, that the non-elliptical version

(35) * [Harry has invited Sue] and [I know [(that) Bill Mary]].
QUD: Who invited whom?

Even though the QUD approach cannot account for (35), for many cases it seems that the QUD, set by the antecedent, gets answered by the Gapping or Fragments clause. Can we explain these facts without making recourse to the QUD? To answer this question, I compare, in the next section, the QUD approach to the Parallelism approach adopted in this dissertation (cf. chapter 1, section 1.2).

3.2.2 The QUD approach versus Parallelism

As noted, the QUD is obtained by replacing the focused phrases in the antecedent with *wh*-phrases. Therefore, the prediction is that the focus structure of the ellipsis clause is determined by the QUD. That is, according to the QUD approach to licensing, the general requirement of focus congruence between question and answer determines that the remnants of ellipsis must be focused, because their correlates in the antecedents are focused. In principle, it could be the other way around. In fact, in the next chapter, I argue that remnants of ellipsis must be focused in order to escape ellipsis. If correct, this means that the remnants of ellipsis must be focused independent of the focus structure in the antecedent.

In chapter 1, I have adopted the view that ellipsis can take place when it has a parallel antecedent, see the notion of Parallelism in (36) (cf. Rooth, 1992; Tancredi, 1992; Fox, 1999). Given (36), the tendency for the focus structure of the ellipsis clause to be parallel to the focus structure of the antecedent is explained by the fact that the antecedent must be a member of the focus value of the ellipsis clause.

(36) **Parallelism:**
Every phonologically reduced (elliptical or deaccented) sentence E requires that the discourse will contain an antecedent sentence A, which belongs to the focus value of E ($A \in \mathrm{F}(E)$).[9] (adapted from Fox, 1999, p.73)

In many cases, the QUD approach and the Parallelism account make the same predictions. Consider the following example.

(37) JOHN gave Bill A BOOK and PETER A CD.

Under the QUD approach, the focus structure in the antecedent evokes a QUD 'Who gave Bill what?' Since the ellipsis clause answers this QUD, the example is

of (35) is fine. If the QUD were not answered by the embedded clause, then the prediction is that the discourse should be incoherent, contrary to fact. It is possible that there is, in fact, an incoherent discourse here, but that accommodation 'takes care of this'. In that case, however, the null hypothesis is that accommodation is available for the elliptical sentence, too.

[9] For convenience sake, I give here the definition of focus semantic value, repeated from chapter 1, section 2.1.

> **Focus semantic value of α, F(α):**
> The set of denotations produced by substituting all elements of the appropriate semantic type for every focused element in α. (Rooth, 1985)

correctly predicted to be grammatical. Under the Parallelism account, the ellipsis clause must have an antecedent that belongs to the focus value of the ellipsis clause. This is the case here, since the antecedent *John gave Bill a book* is a member of the focus set $[\textit{Peter}]_F$ *gave Bill* $[\textit{a CD}]_F$ (= $\exists x \exists y[x \text{ gave Bill } y]$). To differentiate between the two approaches we need to find cases in which the QUD is not answered, but the antecedent is nonetheless a member of the focus value of the ellipsis clause. It turns out such cases are quite common.[10]

(38) a. A: What did the cat eat?
B: The cat ate RICE. Not THE DOG, though.

b. A: What are we having for dinner?
B: We are having SPAGHETTI for dinner.
C: ME, too?

These examples show that answering the QUD is not a necessary condition on ellipsis.[11] In (38a), the antecedent gives rise to a QUD of the form 'what did the cat eat?'. The ellipsis clause '*not the dog*', however, is a (partial) answer to a QUD of the form 'which animal ate rice?'. The QUD approach to licensing therefore wrongly predicts this example to be ungrammatical. Similarly, in (38b), the QUD evoked by the focus structure of the antecedent (i.e. B's utterance) is 'what are we having for dinner?' C's response, in turn, is itself a question (something like 'am I having spaghetti, too?'), clearly not an *answer* to the QUD. Under the Parallelism account, these examples receive a straightforward explanation. In (38a), abstracting away from the negation, the antecedent *the cat ate rice* is a member of the focus set of the ellipsis clause $[\textit{the dog}]_F$ *ate rice* (= $\exists x[x \text{ ate rice}]$). In (38b), ellipsis is licensed because 'we are having spaghetti for dinner' is of the form 'x is having spaghetti for dinner'.

I conclude that the fact that the ellipsis clause often seems to answer the QUD is an epiphenomenon of focus theory and the identity condition in (36), rather than a condition on its occurrence. Before we carry on, however, we must consider (39),

[10] I do not discuss a class of examples that fall under the rubric of Sprouting. These cases are more complex in that the remnant of ellipsis has no (overt) correlate.

i. A: John is jealous.
B: Yeah, of Bill ~~[John is jealous]~~.

It should be clear, though, that the fragment of B does not answer the QUD. If A's utterance is out of the blue, the QUD could be of the form 'who is jealous?' or 'what is John?', neither of which B's response is an answer to. Rather, B's response is an answer to 'Whom is John jealous of?', which does not follow from the focus structure of A's utterance. It is thus not clear how the QUD approach would handle the example in (i).

[11] Reinhart (1991) presents cases very similar to the ones in (38) for Stripping, where the correlates in the antecedent are not focused, see (i) and (ii) (via Van der Heijden, 1999).

i. A: Where is the ice cream?
B: I ATE it, and the cake too.

ii. A: What happened to Felix?
B: We lost track of him on our way back, and of Lucie too.

which is not ruled out by the identity condition in (36), but is correctly predicted to be ungrammatical by the QUD approach.

(39) * JOHN gave Bill A BOOK and PETER SUSAN.

Under the QUD approach, (39) is ruled out, because the focus structure of the antecedent gives rise to a QUD of the form 'who gave Bill what?' whereas the ellipsis clause provides an answer to the question 'Who gave whom a book?'. Under the Parallelism account, on the other hand, ellipsis should be allowed, since *John gave Bill a book* is of the required form *x gave y a book*. The key difference between this example and the cases in (38) is that the remnants in (39) are contrastively focused. As pointed out by Griffiths and Lipták (2014), contrastively focused remnants of clausal ellipsis require contrastively focused correlates (this has been noted for Gapping in Sag, 1976; Hartmann, 2000; Repp, 2009). The following felicity condition on ellipsis captures this (adapted from Griffiths and Lipták, 2014).

(40) **Felicity condition on contrastive remnants:**
Contrastive remnants are only felicitous if their correlate is contrastively focused.

The condition in (40) is a condition independent from Parallelism. Whatever the source of the condition in (40), it is this condition that rules out (39). If we were to tighten the Parallelism condition to rule out (39), we would no longer be able to account for (38), as those examples crucially require a 'loose' notion of identity in which the antecedent must match the ellipsis clause but not (also) the other way around.

3.2.3 The discourse-linking approach of López (2000)

López (2000) develops an account in which ellipsis licensors are functional categories that have the property of connecting with a discourse topic.[12] Licensors in this conception are D(iscourse)-linking elements, where D-linking is syntactically encoded with a D-linking feature on the licensing head. For the sake of the discussion I will again concentrate on Sluicing in what follows. For Sluicing, López argues that the licensor is C. This means that C is equiped with a D-linking feature that instructs the interpretative component to 'connect with a discourse topic'. Note that D-linking here should not be understood in the sense of Pesetsky (1987). Pesetsky sets out to explain the differences between D-linked *wh*-phrases, such as *which DP*, and non D-linked *wh*-phrases, such as *who* and *what*. In López' proposal, all interrogative *wh*-phrases are taken to be D-linking (except for aggressively non-D-linked ones, see below). For López, the elliptical category is an X^0 pro-form. This pro-form has to adjoin to the licensing head. The derivation of a typical case of Sluicing is given in (41).

(41) [Ann invited someone] but I don't know who [pro_i $C_{[D-linking]}$] t_i]

[12] AnderBois (2011) proposes a D-linking account for Sluicing. His account is targeted to capture Sluicing, but not all ellipsis types. I will not discuss the account here, but I will discuss it in chapter 5.

According to López, the adjunction of *pro* to C is necessary, as it locates the pro-form in the checking domain of C (i.e. the licensing head). Being in the checking domain, the pro-form is resolved by the discourse topic that the D-linking feature on the licensing head links to. The guiding idea here is that a null pronoun cannot retrieve an antecedent in and of itself. The licensing head mediates the establishment of the discourse link that connects the pro-form to its antecedent. López' account is in part based on the observation that aggressively non D-linked *wh*-phrases do not license Sluicing, as shown in (42). Assuming C does not have a D-linking feature in this case, ellipsis is correctly predicted to be ungrammatical. If C lacks a D-linking feature (i.e. the ability to connect to a discourse topic), this means it lacks the ability to mediate the link between pro-form and antecedent that is necessary to license ellipsis.

(42) * I know Pat wants to buy something, but I don't know what the hell. (López, 2000, p.185)

What is unclear in López' account is why Sluicing is impossible in (30), repeated here as (43), where the sluice is headed by a non-interrogative *wh*-phrase. As it stands, the property of D-linking (i.e. being able to connect with a discourse topic) is simply encoded as a feature. For the account to be explanatory, the presence of this feature on a functional head should follow from an independent property that is inherent to this head.

(43) a. * Someone has done the dishes, but I don't know the person $[\text{who}]_i$ ~~[t_i has done the dishes]~~

b. * We thought it was Abby who stole the car, but it was Ben $[\text{who}]_i$ ~~[t_i stole the car]~~

Setting aside the problem that (43) poses for López' account, it is clear that López' specific implementation is incompatible with our current assumptions. Specifically, the idea that the ellipsis site is a pro-form is problematic, since in chapter 2 I have adopted and argued for the view that there is a full-fledged syntactic structure in the ellipsis site. Hence, the idea of the ellipsis site moving to the licensing element cannot be adopted, as this would mean that an XP (the ellipsis site) would move to a head position (adjoined to the licensing head). This problem, however, does not seem insurmountable. One could, for example, assume that the *wh*-phrase itself has the D-linking property (cf. AnderBois, 2011).

Ignoring the problems for López' account for the moment and turning to Gapping and Fragments, the D-linking theory shows some promise in that it postulates that a certain relation must hold between the ellipsis clause and the antecedent. As we have seen, Gapping and Fragments are sensitive when it comes to the relation they bear to their antecedent. It should be noted, though, that just as for the other theories of ellipsis licensing, the D-linking theory does not directly carry over to Gapping and Fragments. Since there is no licensing element in Gapping and Fragments, the necessary D-linking relation between a Gapping/Fragments clause and

an antecedent cannot be established. Hence, ellipsis is predicted to be ungrammatical in Gapping and Fragments, as no antecedent can be retrieved from the discourse. I show in section 5 that a theory that bears a strong resemblance to López' D-linking theory can account for the distribution of Gapping and Fragments.

3.3 Summary

In this section, I reviewed the literature on licensing ellipsis. I compared two types of approaches, the syntactic approach and the discourse approach. The main problem for the syntactic approaches is that they overgenerate when it comes to Gapping and Fragments. In general, it seems to be the case that one cannot simply postulate that whatever licenses Sluicing and VP-ellipsis also licenses Gapping and Fragments, as it would lead to the prediction that Gapping and Fragments have the same distribution as Sluicing and VP-ellipsis. This being said, the discourse licensing accounts seem the most promising to pursue for Gapping and Fragments, since they postulate that a particular relation must hold between ellipsis clause and antecedent. We saw in section 2 that a Gapping or Fragments clause must indeed be in a particular relation with regard to its antecedent. In section 5, I present an account of Gapping and Fragments inspired by the D-linking approach. To set the stage, I first present in the next section evidence that the distribution of Gapping is not determined by syntax.

4 The role of boolean connectives in Gapping

In this section, I present two arguments that show that Gapping is not licensed in the syntax. In section 4.1, I report on the observation by Van der Heijden and Klein (1995) that the connectives that allow for Gapping do not form a uniform syntactic class. Therefore, it is impossible to refer to a particular class of syntactic environments that allow for Gapping. In section 4.2, I show that asymmetric coordinations are really coordinations syntactically. Nonetheless, they do not allow Gapping. Since what distinguishes asymmetric from symmetric coordinations cannot be syntax, the factor that determines whether Gapping is allowed can also not be syntactic.

4.1 The connectives that allow for Gapping

According to Van der Heijden and Klein (1995), the generalization that Gapping is only possible in coordinations is a simplification of the facts. They show that Gapping is licensed in any conjunction headed by, what they call, an 'arithmetic connective'. These connectives are divalent semantic operators and can be described by symbols from arithmetics, classical logic or set theory.

(44)	**Linguistic sign:**	**Arithmetic sign:**
	and	+, ∧ (logic), ∩ (intersection, set theory)
	nor	¬p ∧ ¬q (logic), $A^* \cap B^*$ (set theory)
	or	∨ (logic), ∪ (union, set theory)
	except	–, B/A (difference, set theory)
	instead of	$A \cap B^*$ (logic)
	as…as	=
	than	<

As illustrated in (45) for *en* 'and', in (46) for *in plaats van* 'instead of' and in (47) for *dan* 'than' (Dutch), arithmetic connectives can connect constituents of any type. In other words, arithmetic connectives are boolean operators. These are operators that take two arguments of a boolean type (i.e. $<\alpha,t>$) and return something of type *t*.

(45) a. $[_{DP}$ Jan] en $[_{DP}$ Marie]
'John and Mary'

b. $[_{PP}$ op de tafel] en $[_{PP}$ onder de stoel]
'on the table and under the chair'

c. $[_{AP}$ slim] en $[_{AP}$ mooi]
'smart and pretty'

d. $[_{VP}$ praat] en $[_{VP}$ luistert]
'talks and listens'

e. $[_{CP}$ Jan praat] en $[_{CP}$ Marie luistert]
'John talks and Mary listens'

(46) a. $[_{DP}$ Jan] in plaats van $[_{DP}$ Marie]
'John instead of Mary'

b. $[_{PP}$ op de tafel] in plaats van $[_{PP}$ onder de stoel]
'on the table instead of under the chair'

c. $[_{AP}$ slim] in plaats van $[_{AP}$ mooi]
'smart instead of pretty'

d. $[_{VP}$ praat] in plaats van $[_{VP}$ luistert]
'talks instead of listens'

e. $[_{CP}$ Jan praat] in plaats van $[_{CP}$ dat Marie luistert]
'John talks instead of Mary listens'

(47) a. liever [$_{DP}$ Jan] dan [$_{DP}$ Marie]
'rather John than Mary'
b. liever [$_{PP}$ op de tafel] dan [$_{PP}$ onder de stoel]
'rather on the table than under the chair'
c. liever [$_{AP}$ slim] dan [$_{AP}$ mooi]
'rather smart than pretty'
d. liever [$_{VP}$ praat] dan [$_{VP}$ luistert]
'rather talks than listens'
e. liever [$_{CP}$ dat Jan praat] dan [$_{CP}$ dat Marie luistert]
'rather that John talks than that Mary listens'

What is important to note is that, syntactically, boolean connectives do not form a uniform class; they can be coordinators and subordinators alike. *En*, for example, conjoins two main clauses. This can be concluded from (45e), where two verb second clauses are connected. Subordinators do not select verb-second clauses, but verb final clauses headed by a complementizer. As can be seen in (46e) for *in plaats van* and in (47e) for *dan*, then, these connectives are subordinators syntactically. Even though the connectives in (44) do not form a uniform syntactic class, they nonetheless allow for Gapping, see (48).

(48) a. Max ate the apple and Sally the hamburger.
b. Max didn't eat the apple nor Sally the hamburger.
c. Max ate the apple or Sally the hamburger.
d. Everybody ate the apple except Sally.
e. Max ate the apple instead of Sally.
f. Max eats apples as often as Sally hamburgers.
g. Max eats more often apples than Sally hamburgers.

Lechner (2004) argues at length that comparatives allow for Gapping. He also notes, however, that comparatives introduce subordinated clauses and that, given that Gapping is licensed in coordinations, it is therefore unexpected that they allow for Gapping. Lechner therefore proposes that a syntactic transformation assimilates comparatives to coordinative structures. Below, I propose an alternative.

Just like there are syntactic subordinators that allow for Gapping, there are cases of coordinators that do not allow for Gapping. A case at hand is *want* 'because' in Dutch. *Want* constitutes an instance of a syntactic coordinator which gives rise to a subordinative interpretation. *Want* is not a boolean connective. Instead, *want* conjoins two clauses in which the second conjunct is specifying the reason for the event in the first conjunct. The restriction that *want* can only select for clausal arguments might therefore follow from its semantics. It does not rule out the possibility that *want* is syntactically a coordinator. Indeed, the following tests show that *want* passes coordination tests.

Van der Heijden (1999, p.199) notes that *want* fails the inversion test, a clear indication that *want* is, in fact, a (syntactic) coordinator. (49b) shows that the clause

headed by *want* cannot invert with the first conjunct, cf. (49a). Compare this to (50b) where the clause headed by the subordinator *omdat* can invert with the root clause, cf. (50a) (the examples in (49) and (50) are adapted from Van der Heijden (1999, p.199)).

(49) a. Ik blijf thuis, want het regent.
I stay home, because it rains
'I'm staying home, because it is raining.'

b. * Want het regent, ik blijf thuis.
because it rains I stay home

(50) a. Ik blijf thuis, omdat het regent.
I stay home, because it rains
'I'm staying home, because it is raining.'

b. Omdat het regent, blijf ik thuis.
because it rains I stay home

As noted above, one test for Dutch that distinguishes coordinators from subordinators is that coordinators conjoin verb second clauses, as in (51a). Subordinators, on the other hand, introduce a clause with verb final word order, see (51b). *Want* patterns with coordinators in this respect (51c).

(51) a. Jan nodigt Marie uit *en* Peter nodigt Mark uit.
John invites Mary PRT and Peter invites Marc PRT

b. Jan nodigt Marie uit, *omdat* Peter Mark uitnodigt.
John invites Mary PRT because Peter Marc invites

c. Jan nodigt Marie uit, *want* Peter nodigt Mark uit.
John invites Mary PRT because Peter invites Marc PRT

Another indication that *want* heads a syntactic coordination is provided by the contrast between (52a) and (52b). The example in (52a) with *omdat* is ambiguous. It has a reading in which negation takes scope over the *omdat*-clause and a reading with the inverse scope. The example with *want* in (52b), on the other hand, is not ambiguous.

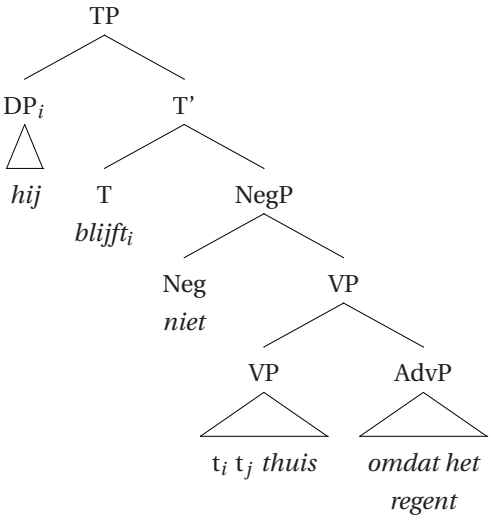
(52) a. Hij blijft niet thuis omdat het regent.
he stays not home because it rains.
= 'The reason he does not stay home, is because it is raining.' *omdat*< ¬
= 'It is not the case that he stays home because it is raining.' ¬ <*omdat*

b. Hij blijft niet thuis want het regent.
he stays not home because it rains.
= 'The reason he does not stay home, is because it is raining.' *want*< ¬
≠ 'It is not the case that he stays home because it is raining.' ¬ < *want*

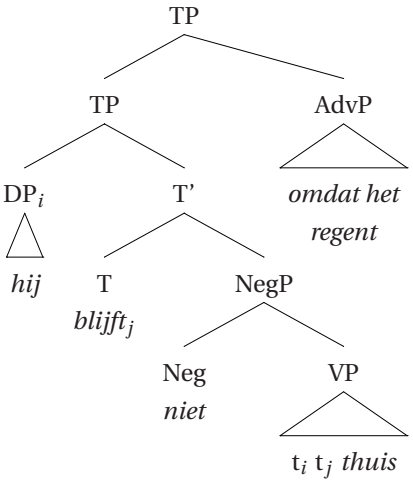
The contrast immediately falls out from the difference in syntax between coordinators and subordinators. As for the case of subordination in (52a), the ambiguity

stems from the fact that the adverbial clause can adjoin high (TP adjunction) or low (VP adjunction). In the case of low attachment, as in (53a), negation takes scope over the purpose clause, which gives rise to the reading 'it is not the case that he stays home because it is raining'. In the case of high attachment, see (53b), negation scopes below the purpose clause instead, giving rise to the reading 'the reason he does not stay home, is that it is raining'.

(53) a. *niet < omdat*

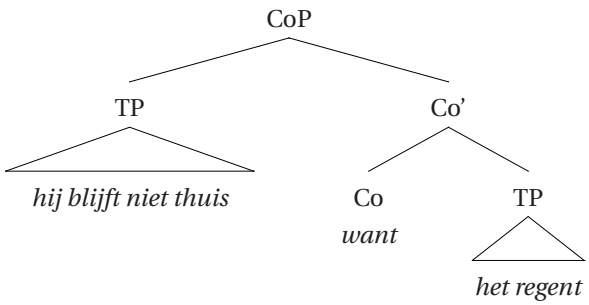


b. *omdat < niet*



If *want* is a coordinator, it must head a coordination phrase in which the first conjunct c-commands the second conjunct, as shown in (54). It is clear from this structure that the negation does not take scope over the *want*-clause, as it does not c-command the *want*-clause. For this reason, the example in (52b) is not ambiguous in the way (52a) is.

(54)



The three tests above all indicate that *want* is a coordinator. Nonetheless, Gapping is impossible in a conjunction headed by *want*, as shown in the following example, (adapted from Van der Heijden, 1999, p.201).

(55) a. De generaal groette de soldaat want de soldaat groette de generaal.
The general greeted the soldier because the soldier greeted the general
'The general greeted the soldier, because the soldier greeted the general.'

b. * De generaal groette de soldaat want de soldaat de generaal.

4.2 Asymmetric coordinations

Cases which look very similar to coordinations headed by *want* are so-called 'asymmetric coordinations'. By definition, these are coordinations in which the meaning changes when the order of the conjuncts is reversed (cf. Ross, 1967; Schmerling, 1975; Lakoff, 1986; Deane, 1992).

(56) a. John is the smart one and Sally is the pretty one.
= Sally is the pretty one and John is the smart one.
symmetrical coordination

b. John got home and Sally called John.
≠ Sally called John and John came home. *asymmetrical coordination*

According to this definition, the following examples constitute instances of asymmetrical coordination. These constructions are characterized by giving rise to an asymmetric interpretation, as indicated by the paraphrases.

(57) a. Open the car door again and I'll slap you. *conditional*
'If you open the car door again, I'll slap you.' (Chaves, 2007, p.29)

b. Sue became upset and Dan became downright angry *cause-effect*
'Because Sue became upset, Dan became downright angry.'
(Levin and Prince, 1986)

c. You hide that loot right now or we're in big trouble. *threat*-or
'Unless you hide that loot right now, we're in big trouble.'
(Culicover and Jackendoff, 1997)

The fact that asymmetric coordinations give rise to a subordinative interpretation has led Goldsmith (1985) and Postal (1993) to propose that asymmetric coordinations actually have subordinative syntax. As argued at length by Culicover and Jackendoff (1997, 2005), however, asymmetric coordinations are, in fact, coordinations in the syntax. Among others, they use the following tests to show this. *And* plus the 'subordinated clause' cannot precede the first conjunct, compare (58a) to (58b). This is unlike subordinated clauses which can precede their 'host clause', compare (59a) and (59b).

(58) a. It was slippery, and John fell.
b. * And John fell, it was slippery.

(59) a. John fell, because it was slippery.
b. Because it was slippery, John fell.

Another indication that asymmetric coordinations have coordinative syntax, is that *and* introduces a main clause, unlike subordinators. The fact that *and* introduces a main clause can be seen from the fact that it allows for subject-auxiliary inversion (60). Subordinated clauses strongly resist such inversion, as shown by the attempts in (61).

(60) You so much as mention the Minimalist Program and how loud does she scream? (Culicover and Jackendoff, 1997, p.210)

(61) a. * Who does if Big Louie visits, the whole gang goes nuts?
* Who if does Big Louie visits, ...
* If who does Big Louie visits, ...
b. * What does if he mention, she kicks him out of her office?
* What if does he mention, ...
* If what does he mention, ... (Culicover and Jackendoff, 1997, p.210)

Culicover and Jackendoff (1997, 2005) conclude that asymmetric coordinations are syntactic coordinations that give rise to a 'subordinative' interpretation. They propose that syntactic coordinations can be mapped onto a subordinative interpretation at Conceptual Structure, but the exact details remain a little unclear. The conclusion that there is no one-to-one correspondence between syntax and semantics

in conjunction gains support by the work of Cormack and Smith (2005) and Blühdorn (2008).

What is relevant for our current purposes is that asymmetric coordinations do not allow for Gapping (cf. Levin and Prince, 1986; Kehler, 1994, 2000; Culicover and Jackendoff, 1997, 2005). Although Gapping in asymmetrical coordinations does not result in ungrammaticality per se, the subordinative reading of asymmetric coordinations disppears under ellipsis (hence the *). This is a clear indication that Gapping is only licensed in symmetric coordinations and not in asymmetric coordinations.

(62) a. Big Louie steals one more car radio and Little Louie *(steals) the hubcaps. (Culicover and Jackendoff, 1997), *conditional*-and

b. Sue became upset and Dan *(became) downright angry.
(Levin and Prince, 1986), *cause-effect*

c. You kill Georgie, or Big Louie *(kills) your dog.
(Culicover and Jackendoff, 1997), *threat*-or

To sum up, I have considered the class of connectives that allow for Gapping in section 4.1. I concluded that this class of connectives does not form a uniform syntactic class. In this section, I considered asymmetric coordinations. These constructions show that Gapping is sensitive to whether or not a coordination has a symmetric or an asymmetric interpretation. Two conclusions can be drawn from the discussion. First, there is no one-to-one correspondence between syntactic coordination and symmetric interpretation, nor between syntactic subordination and asymmetric interpretation. This is summarized in the following table.

(63)

SEMANTICS \ SYNTAX	**coordination**	**subordination**
symmetrical	boolean conjunction (*and, or, but*)	comparatives, *except, instead of*
asymmetrical	asym. coordination, *want*	adverbial clauses (*because, before*)

The second conclusion is that Gapping is not sensitive to the syntactic distinction between coordination and subordination. Gapping is sensitive, however, to the semantic properties of the conjunction. The question now is how we can characterize the contexts in which Gapping can take place. In order to answer that question, we have to consider when a symmetrical or asymmetrical interpretation arises. In this section, we saw that a symmetrical interpretation arises when both conjuncts are symmetrically conjoined by a boolean connective. In that case, there is no direct relation between the conjuncts, as both conjuncts are arguments of the connective and therefore have equal status. In cases where there is an asymmetrical interpretation, on the other hand, there is an asymmetrical *relation* between the two conjuncts. According to Bierwisch (2003), in subordinations, the subordinated clause

takes the root clause as its argument, creating a semantic asymmetry between the conjuncts.

If licensing is a matter of having the right relation between ellipsis clause and antecedent in the discourse, as anticipated in section 3, we would like to know how the facts discussed in this section can be interpreted from a discourse perspective. This question will be addressed in the next section.

5 A discourse licensing theory of Gapping/Fragments

The discussion of the distribution of Gapping and Fragments in section 2 revealed that it is important that the ellipsis clause and the antecedent in Gapping and Fragments bear a certain relation to each other. In section 4, we saw that this relation should not be characterized in terms of syntax. From the discussion on licensing ellipsis in section 3, the most promising account of licensing was one where ellipsis licensing is a matter of having the right discourse relation between the ellipsis clause and the antecedent. In section 5.2, I show how this idea can be fleshed out for Gapping and Fragments. In the next section, I first introduce my assumptions about the discourse component and how semantically symmetrical and semantically asymmetrical relations are encoded there.

5.1 Setting the scene: coordination, subordination and discourse representation

In the discourse literature, a distinction is generally made between coordination and subordination (or 'nuclei' and 'satellites' in *Rhetorical Structure Theory*, Mann and Thompson (1988)). To avoid confusion in terminology, I reserve the terms 'coordination' and 'subordination' to describe syntactic structures and use the terms 'hierarchical' (i.e. semantically asymmetrical) and 'non-hierarchical' (i.e. semantically symmetrical) to describe discourse structure (following Blühdorn, 2008). In what follows, I adopt a syntax-centered discourse perspective, in which syntactic structures form the input to the discourse component. Discourse structures are built by extending the syntactic tree beyond the sentence boundary (cf. Hardt, 2013; Buch-Kromann, 2006a,b). I assume furthermore that discourse relations can be established in two ways. First, a discourse relation between two clauses S1 and S2 can be established by the use of a connective like *and* or *because* that connects S1 and S2. Alternatively, a discourse relation between S1 and S2 can be established anaphorically through the use of discourse anaphors such as *therefore*, *then*, *otherwise*, *instead*, etc., see Webber et al. (2003).

Under the hypothesis that syntactic structures feed the discourse component, whether a hierarchical or a non-hierarchical relation holds between two clauses, could in principle be a matter of 'reading off' this relation from the syntactic structure. We have seen, however, that whether or not a relation is hierarchical (i.e. semantically asymmetrical), cannot be determined by consulting the syntactic structure (cf. section 4). Also, 'reading off' whether a relation is hierarchical or not is

only possible when there is already a syntactic relation between S1 and S2. In the absence of syntactic conjunction, the same problem arises, namely; is the relation between S1 and S2 hierarchical or not? I follow Culicover and Jackendoff (1997, 2005) in assuming that there is a mapping procedure which determines whether a syntactic conjunction is interpreted hierarchically or non-hierarchically. I assume furthermore that this mapping procedure also determines whether a relation between S1 and S2 is hierarchical or not, when S1 and S2 are not conjoined in the syntactic componenent. To make these assumptions clear, consider the following examples.

(64) a. $[_{S1}$ John lives in Italy$]$ and $[_{S2}$ Mary lives in Spain$]$
b. $[_{S1}$ John got upset$]$ because $[_{S2}$ his favorite cookies were sold out$]$

In (64a), S1 and S2 have equal status, as neither S1 nor S2 selects or modifies the other. In (64b), on the other hand, the interpretation is hierarchical in that S2 specifies the reason for S1. (64a) maps onto a discourse representation in which S1 and S2 are interpreted non-hierarchically, whereas (64b) maps onto a discourse representation in which there is a hierarchical relation between S1 and S2. For expository purposes, I adopt Asher's (1993) notation in which a non-hierarchical relation is marked as '→' and a hierarchical relation is marked as '↓'. It should be noted that the outcome of the mapping procedure is not structurally reflected in the discourse representation. '→' and '↓' are used for convenience to reflect the interpretative relation between two conjuncts, not their structural relation.

(65) a. **Non-hierarchical relation:** b. **Hierarchical relation:**

Culicover and Jackendoff (1997, 2005) argue that, since syntax provides no unambiguous clues as to which representation (64a,b) map onto (cf. the table in (63), section 4), there must be a semantically driven process that underlies this mapping. I assume that the mapping procedure which maps (64a,b) to one of the structures in (65) is the same mapping procedure that determines whether there is a hierachical or non-hierarchical relation between S1 and S2 when they are not conjoined in the syntax. Consider the examples in (66).

(66) a. $[_{S1}$ John lives in Italy$]$ $[_{S2}$ Mary lives in Spain$]$
b. $[_{S1}$ John got upset$]$ $[_{S2}$ His favorite cookies were sold out$]$

In these examples, S1 and S2 bear no syntactic relationship to each other. In the discourse component, however, a relation will be established between S1 and S2. Specifically, it must be established whether a hierarchical or non-hierarchical interpretation holds between S1 and S2. I suggest that the mapping procedure that determines whether the relation between S1 and S2 is hierarchical or non-hierarchical

in (64) is the same mapping procedure that determines whether the relation between S1 and S2 in (66) is hierarchical or non-hierarchical. In (66a), S1 and S2 have equal status. Both S1 and S2 are asserted and neither S1 nor S2 selects or modifies the other. The mapping procedure that determines whether a relation is hierarchical or non-hierarchical therefore maps (66a) onto a discourse representation in which there is a non-hierarchical relation between S1 and S2, as in (65a). For (66b), the most salient reading is one in which S2 specifies the cause for S1 ('John got upset, because his favorite cookies were sold out'). Like (64a), therefore, the mapping procedure maps (66b) onto the discourse representation in (65b). What is important here is that both (64a) and (66a) map onto the discourse representation in (65a) and both (64b) and (66b) map onto the discourse representation in (65b). From a discourse perspective, then, (64a) and (66a) are fully equivalent, as are (64b) and (66b).

In section 2, I showed that Gapping and Fragments are subject to a no subordination restriction. However, we saw in the previous section that the distribution of Gapping is not determined in the syntax. Given what we have said so far in this section, we expect that what Gapping and Fragments are actually sensitive to is the output of the mapping procedure that determines whether a relation is hierarchical or non-hierarchical. To find out more precisely when ellipsis is possible and when it is not, I consider now when two clauses are mapped onto a hierarchical discourse relation and when they are mapped onto a non-hierarchical relation. From a cross-linguistic perspective, it is clear that a multitude of syntactic constructions may reflect either a hierarchical or a non-hierarchical interpretation (cf. Van Gijn et al., 2011). This should come as no surprise given that there is no one-to-one correspondence between coordination/subordination and non-hierarchical/hierarchical interpretation (Culicover and Jackendoff, 1997; Blühdorn, 2008, cf. also section 4). The basic intuition behind the notion of hierarchical interpretation is that it encodes a state of affairs in which one of the two clauses is conceptually part of the state of affairs encoded by the other (Hale, 1976; Cristofaro, 2003; Mithun, 2009). The notion of hierarchy plays a central role in many theories, though the specifics vary. As reported in Cristofaro (2008), this asymmetry between events has been described in terms of asserted versus non-asserted information (Harris and Campbell, 1995, ch.10), backgrounded versus foregrounded information (Reinhart, 1984; Thompson, 1987; Tomlin, 1985) or figure versus ground (Talmy (2000, ch.5–6) and Croft (2001, ch.1)).

In what follows I adopt Blüdorn's (2008) characterization of the difference between hierarchical and non-hierarchical relations in terms of relational symmetry. Non-hierarchical relations are symmetrical in that the related discourse units have equal semantic weight. Symmetrical relations obtain when the two discourse units bear no thematic relation to each other. Two discourse units are in a hierarchical relation, on the other hand, if they have different relational (thematic) roles (in the case of hierarchical relations, the discourse units will typically be clauses). In that case, one of them is being connected (the *trajector*) to the other (the *landmark*) (Langacker's (1987, 231ff) terminology). It should be clear that under this view, a hierarchical interpretation does not refer to any particular syntactic construction.

Instead, hierarchy refers to the semantic relation that two discourse units bear to each other. Three types of hierarchical relations can be distinguished (see Blühdorn (2003, 19f), Blühdorn (2005, 315f)): a *situating* relation, a *conditional* relation and a *causal* relation. The following examples illustrate these three types.

(67) **Illustration of hierarchical relations**

a. John had dinner, before Mary came home. *situating relation*

b. If John already had dinner, Mary doesn't have to cook. *conditional relation*

c. Mary didn't cook, because John already had dinner. *causal relation*

Situating relations assign a place in a conceptual domain to the trajector, which is described by a relation to the landmark. In (67a), John's having had dinner is the trajector. This trajector is situated on the time scale in relation to the landmark, namely the event of Mary coming home. Each of these events has its fixed position in time, but the position of the landmark determines the position of the trajector. (67b) exemplifies a conditional relation. In this relation, the landmark event not only situates the trajector event, but it also influences the value of the trajector event. That is, whether the trajector event will be realized in the actual world depends on whether the landmark event will be realized in the actual world. In (67b), whether Mary has to cook depends on whether John already had dinner. (67c) illustrates a causal relation. Here, the trajector event is realized in the actual world, but the landmark event has influenced the realization of the trajector. In short, then, a hierarchical relation obtains when two discourse units bear one of the relations in (67). With this background, I now turn to my proposal as to how Gapping and Fragments are licensed.

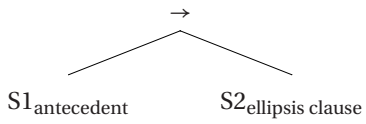
5.2 The licensing of Gapping/Fragments and the role of non-hierarchical relations

The distribution of Gapping and Fragments discussed in section 2 showed that the ellipsis clause and the antecedent in Gapping and Fragments must bear a certain relation to each other. From the discussions in sections 3 and 4 it became clear that the most promising account of licensing is one where ellipsis licensing is a matter of having the right discourse relation between the ellipsis clause and the antecedent. In this light, I propose the licensing condition in (68) for Gapping and Fragments to account for the distributional properties discussed in section 2.

(68) **Non-hierarchical Licensing Condition on Gapping and Fragments (NLC):** Gapping and Fragments are licensed when antecedent and ellips are in a non-hierarchical relation in the discourse component.

(68) expresses that Gapping and Fragments are licensed when the following configuration holds in the discourse structure.

(69) **Discourse configuration that licenses ellipsis:**



With the NLC in place, I now show how (68) captures the facts discussed in section 2 and 3.4. Let's first consider how (68) captures the grammatical cases of Gapping we have considered in (48), repeated here.

(70) a. [$_{S1}$ Max ate the apple] and [$_{S2}$ Sally the hamburger.]
b. [$_{S1}$ Max didn't eat the apple] nor [$_{S2}$ Sally the hamburger.]
c. [$_{S1}$ Max ate the apple] or [$_{S2}$ Sally the hamburger.]
d. [$_{S1}$ Everybody ate the apple] except [$_{S2}$ Sally.]
e. [$_{S1}$ Max ate the apple] instead of [$_{S2}$ Sally.]
f. [$_{S1}$ Max eats apples] as often as [$_{S2}$ Sally hamburgers.]
g. [$_{S1}$ Max eats more often apples] than [$_{S2}$ Sally hamburgers.]

Since Gapping is licensed here, these cases should be in accordance with the NLC. This means that S1 and S2 may not be in a hierarchical relation with S2. This is indeed the case. Since S2 is not embedded with respect to S1 in the discourse structure, S1 and S2 are in a relation. Furthermore, in none of these cases is there a hierarchical relation between S1 and S2 (cf. (67)). Therefore, all cases in (70) map onto the representation in (69) which licenses ellipsis according to the NLC in (68).

The same explanation straightforwardly carries over to Fragments. In all of the cases in (71), S1 and S2 are in a relation in the discourse component, as S2 is not embedded with respect to S1. Moreover, this relation between S1 and S2 is not a hierarchical relation (cf. (67)). Therefore, all cases in (71) map onto the discourse structure in (69) and ellipsis is correctly predicted to be licensed in these examples.

(71) a. A: [$_{S1}$ Who did you see?]
B: [$_{S2}$ Bill.] question-answer Fragments
b. A: [$_{S1}$ I saw someone.]
B: [$_{S2}$ Yeah, Bill.] elaborative Fragments
c. A: [$_{S1}$ You saw John.]
B: [$_{S2}$ No, Bill.] corrective Fragments

(68) predicts that Gapping and Fragments are out when a hierarchical relation holds between the two conjuncts. This is borne out. Recall that adverbial clauses, asymmetric coordinations and coordinations headed by *want*, 'because' in Dutch, do not allow for Gapping, see (72). In all cases in (72), there is a hierarchical relation between the conjuncts; a causal relation in (72a,c) and a conditional relation in (72b). Therefore, all cases in (72) map onto the discourse representation in (73), which does not license ellipsis according to the NLC (cf. the structure in (69)).

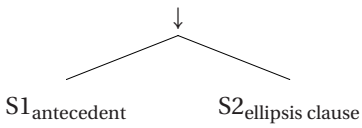
(72) a. * Max ate the apple, because Sally the hamburger.

b. * Big Louie steals one more car radio and Little Louie the hubcaps.
(*conditional* reading)

c. * De generaal groette de soldaat want de soldaat de generaal.
The general greeted the soldier because the soldier the general
'The general greeted the soldier, because the soldier the general.'

(73) **Discourse representation of (72a,b,c):**

*



In section 2, I presented the examples in (74) and (75) to argue that the no subordination restriction also constrains the occurrence of Fragments. We can now see why this is so. Two clauses that are not syntactically connected can be in a hierarchical discourse relation, as the example in (66b) showed. Because the examples in (74) are mapped onto the discourse representations in (65b), ellipsis is correctly predicted not to be possible, because the configuration in (65b) is not one that licenses ellipsis.

(74) a. A: [$_{S1}$ John has red hair.]
B: (Of course) [$_{S2}$ His parents have red hair.]

b. * A: [$_{S1}$ John has red hair.]
B: (Of course) [$_{S2}$ His parents ~~have red hair~~.]

(75) a. A: [$_{S1}$ The moon is shining.]
B: (Of course) [$_{S2}$ The sun is shining.]

b. * A: [$_{S1}$ The moon is shining.]
B: (Of course) [$_{S2}$ The sun ~~is shining~~.]

The NLC also captures the fact that the ellipsis clause and the antecedent may not be embedded with respect to each other. Consider again the following examples which illustrate this.

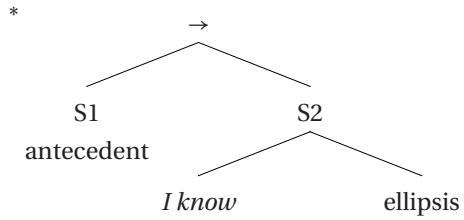
(76) * [$_{S1}$ Harry has invited Sue] and [$_{S2}$ I know [(that) Bill Mary.]]

(77) a. [$_{S1}$ Who has John invited?]

b. * [$_{S2}$ I know [Mary]]

The discourse representation for (76) and (77) is given in (78). Ellipsis is ruled out in (76) and (77), because the configuration in (78) does not license ellipsis. For ellipsis to be licensed, the antecedent S1 needs to be in a relation to the ellipsis clause (as in (69)), which is not the case in (78), since the antecedent S1 is in a relation with S2 instead.

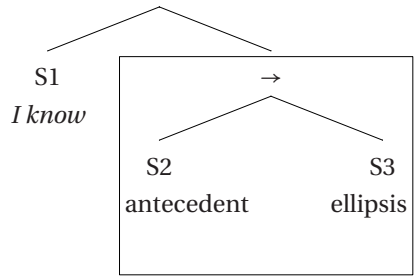
(78) **Discourse tree of (76) and (77):**



Also correctly predicted to be grammatical by the NLC are the cases of symmetrical embedding. The case of embedded Gapping in (79) is mapped onto the discourse representation shown in (80). The boxed sub-tree corresponds to the discourse representation in (69) which licenses ellipsis.

(79) $[_{S1}$ I know that $[[_{S2}$ Harry has invited Sue$]$ and $[_{S3}$ Bill Mary$]]$.

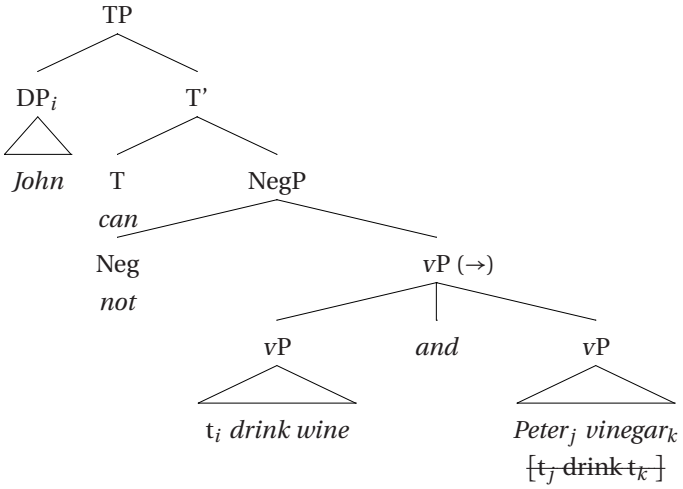
(80) **Discourse tree of (79):**



I have now shown that the proposed licensing condition for Gapping and Fragments in (68) correctly captures their distributional restrictions discussed in section 2. Recall from chapter 2, though, that Gapping is possible in coordinations of different sizes (*v*P, TP and CP coordination). The account proposed in this section provides a homogeneous account for this distribution. In a syntax-centered view of discourse in which syntactic structures are input for the discourse component, the cues for establishing discourse relations are lexical items (such as connectives and discourse adverbials), and the expressions to be related can in principle be any constituent in the discourse structure. This is the key to explaining the apparent heterogeneous behavior of Gapping. The NLC together with the idea that any constituent can be a 'discourse unit' correctly predicts the possibility of Gapping in coordinations of varying size. We have already considered above some cases in which two clauses (TPs or CPs) are coordinated in the syntax (e.g. (70)). Let's consider now, then, an example of Gapping in a *v*P coordination.

(81) a. [$_{TP}$ John can't [$_{vP}$ [$_{vP}$ drink wine] and [$_{vP}$ Peter vinegar]]] (that would be preposterous)!

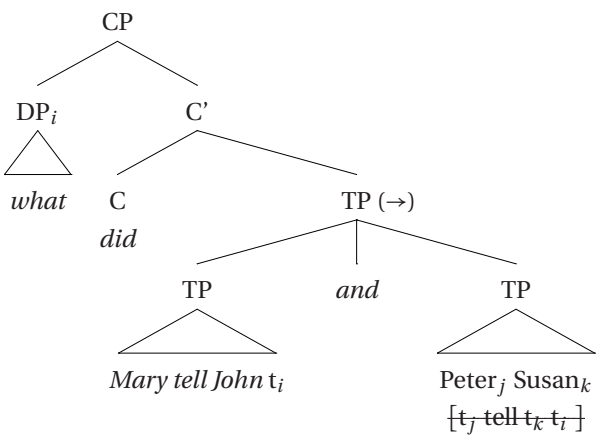
b. **Discourse tree:**



Ellipsis is licensed in (81) in accordance with the NLC. Recall that syntactic conjunction and subordination structures form the input for the mapping procedure that determines whether a relation is hierarchical or non-hierarchical (with the connective serving as an important cue). The *v*P coordination in (81b) maps onto a discourse configuration in which there holds a non-hierarchical relation between the *v*P conjuncts. In other words, at the level of discourse the *v*P coordination corresponds to the configuration in (69) in which ellipsis is licensed. For completeness sake, I also consider an example of Gapping in a TP coordination dominated by a CP projection (I ignore movement of the auxiliary here).

(82) a. [$_{CP}$ What did [$_{TP}$ [$_{TP}$ Mary tell John] and [$_{TP}$ Peter Susan]]?
Discourse tree:

b.



The reasoning for (82) is similar to that for (81): ellipsis is licensed here, because the relation between ellipsis clause and antecedent is non-hierarchical at the level of discourse.

The proposal that ellipsis is licensed at the level of discourse has two advantages that speak for it. First, it eliminates the obstacle that has withheld the linguistic tradition from unifying Gapping and Fragments. The obstacle has been that Gapping has been considered a 'coordinative' phenomenon, whereas Fragments has been considered an ellipsis type that takes place in a stand-alone utterance. What stands in the way of unification, then, is the different syntactic contexts in which Gapping and Fragments occur. If, however, the level at which ellipsis is licensed is the level of discourse, the relevant factor for ellipsis licensing, namely hierarchical versus non-hierarchical relationships, holds identically for Gapping and Fragments. Second, by postulating ellipsis licensing at the level of discourse, the heterogeneous syntax of Gapping and Fragments identified in chapter 2 (i.e. the size of the elided constituent varies) comes out as homogeneous behavior at the level of discourse. What matters is that two discourse units are in a non-hierarchical relation, and for that the syntactic category of these units is not of relevance.

6 Exceptions to the NLC: embedded ellips/antecedent

In this section, I discuss some problems for the proposal that Gapping and Fragments are licensed by the NLC. All of the cases in this section involve embedding of the ellipsis clause relative to the antecedent clause, or the other way around. That is, in all cases the ellipsis clause and the antecedent are not directly conjoined in the discourse structure. For the cases in which the ellipsis clause is embedded with respect to the antecedent, I argue that there is reason to believe that the embedding is only apparent. In these cases, the NLC is thus satisfied. For the cases where the antecedent is embedded relative to the ellipsis clause, I argue that they involve accommodation. I show that, although an antecedent may be embedded with respect to the ellipsis clause, this is only possible when there is no antecedent available that is not embedded relative to the ellipsis clause.

6.1 Apparent exceptions to the NLC

6.1.1 Embedded ellipsis clauses

The NLC, as stated in (68), predicts that the ellipsis clause is always resolved by the clause it is non-hierarchically conjoined to. In the majority of cases this prediction is borne out. (83) provides a typical illustration. The ellipsis clause 'Peter too' can only be resolved by S1 and not by S3, in accordance with the NLC.[13] This is because

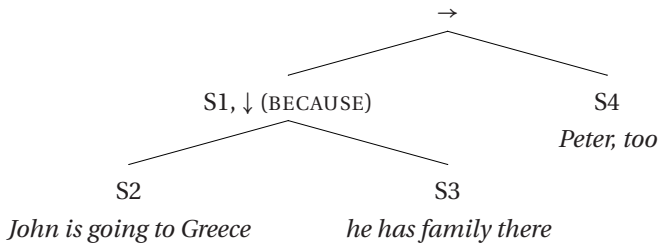
[13] Griffiths and Lipták (2014) point out that in Fragments, it is always possible to add, repeat or contrast a fragment with a sentence final constituent, as in (i). Since such cases of Fragments are likely to be licensed differently, the examples in the text feature cases where the fragment has a subject correlate (which are not sentence final).

i. A: John is going to Greece, because he has family there.

S3 is not in a relation with the ellipsis clause, as illustrated in (84). (85), on the other hand, shows that the non-elliptical version is well-formed.

(83) A: [$_{S1}$ [$_{S2}$ John is going to Greece] because [$_{S3}$ he has family there.]]
B: [$_{S4}$ Peter, too.]
= Peter is going to Greece, because he has family there.
≠ Peter has family there, too.

(84)



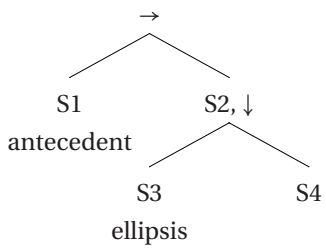
(85) A: John is going to Greece, because he has family there.
B: Peter has family there, too.

Although ellipsis clause and antecedent are in a (non-hierarchical) reltation in the majority of grammatical ellipsis cases, there appear to be some exceptions. One type of exception concerns cases where the ellipsis clause is embedded with respect to the antecedent. The following examples illustrate this.

(86) a. [$_{S1}$ John will get a gift for his birthday], but [$_{S2}$ [$_{S3}$ not Peter] because [$_{S4}$ he already celebrated his birthday last week.]]
b. [$_{S1}$ John ran the marathon.] [$_{S2}$ [$_{S3}$ Peter too] after [$_{S4}$ he had trained a year.]]

These examples seem to indicate that ellipsis is licensed, even though the ellipsis clause and its antecedent are not in a relation. (87) is a plausible structure for the cases in (86). The NLC dictates that ellipsis should not be licensed here, since the ellipsis clause is not in a (non-hierarchical) relation with the antecedent.

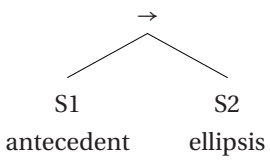
(87)



B: A lover, too.
= 'John has a lover there, too.'

I argue that ellipsis is licensed here, because there is a point when the NLC is satisfied. This is the point where the discourse contains just the antecedent and the ellipsis clause, i.e. when the discourse tree looks like (88).

(88)



At this point, the discourse parser encounters the ellipsis site and tries to resolve it immediately. Ellipsis is licensed, because an antecedent is available that is in a non-hierarchical relation with the ellipsis site. The idea that clausal discourse units are attached upon encounter seems inescapable, since postponing attachment implies that there will come a natural point at which attachment would be better suited. No such point seems to exist, however, because there are often no cues for what is about to come. At the point when a third clause enters the discourse, then, the discourse tree is reanalyzed into the tree in (87). The illusion of an embedded ellipsis site in (87) is thus a consequence of the fact that discourse is build incrementally. If this idea is correct, the prediction is that ellipsis is not possible in S4 in (87) (with S1 still the antecedent). This prediction is borne out, as the examples in (89) show.

(89) a. * John won the jackpot. Susan is always lucky and, as expected, she ~~won the jackpot~~ as well.

b. * Jan eet een hamburger. Suzan vindt hamburgers ook lekker, maar
John eats a hamburger Susan finds hamburgers also nice but
zij niet ~~eet een hamburger~~. [Dutch]
she not eats a hamburger
'John is eating a hamburger. Susan also likes hamburgers, but she isn't eating a hamburger.'

6.1.2 Bridge verbs

Consider again the examples in (2) and (3) from section 2, repeated here. These examples show that Gapping and Fragments cannot be embedded relative to their antecedent.

(90) a. * Harry has invited Sue and I know (that) Bill Mary.

b. * John knows a man that caught a salmon on Sunday and Bill knows a man (that) a trout on Thursday.

(91) A. Who has John invited?

B. * I know Mary

Somewhat surprisingly in light of (90) and (91), there is a class of verbs that allows Gapping in their complement (as has been noticed by Morgan (1973), Ebert et al.

(2003) and Valmala (2007)). I will refer to this class of verbs as 'bridge verbs'. The following examples illustrate that Gapping and Fragments are fine in the complement of bridge verbs.[14]

(92) [Harry has invited Sue] and [John said [(*that) Bill Mary]].

(93) A. Who has invited Sue?
B. Bill said (*that) Harry.

The class of verbs that allow embedded ellipsis corresponds to the class of verbs that can head *reduced parenthetical clause constructions* (RPCs) (cf. also Temmerman, 2013). RPCs can be divided into two types, *report* and *attitude* type (Griffiths, to appear a). *Report RPCs* describe the actions of the speaker or another agent (94). *Attitude RPCs* express the attitude of the speaker (95).

(94) a. Bob$_i$'ll make chief cameraman by July, *he$_i$ reckons*.
b. Clint mustn't, *I thought yesterday*, blame himself.
c. Dick must, *I've been told*, re-mortgage his house. (Griffiths, to appear a)

(95) a. It'll be shot in analogue, *I hope*.
b. All Fassbinder's films, *I declare*, are utter rubbish.
c. Eastwood will retire at ninety, *I'd have thought*.
(where the RPC means 'I think') (Griffiths, to appear a)

As the examples in (96) illustrate, Gapping and Fragments are possible in the complement of these types of verbs.

(96) a. John invited Bill and, *I* {*reckon* / *hope* / *heard*}, Mary Susan.
b. A: Who did John invite?
B: I *I* {*reckon* / *hope* / *heard*} Bill.

These examples of ellipsis embedded under bridge verbs seem to challenge the claim that Gapping and Fragments are only possible when they are in a non-hierarchical relation with their antecedent. In order to see whether bridge verbs pose a real problem for the NLC, or only an apparent problem, we have to consider the discourse structure of cases in which verbs allow Gapping and Fragments to be embedded.

[14] Bridge verbs are ambiguous between a parenthetical (or 'reportative') use and a non-parenthetical use. The examples in (ia) and (ib) illustrate this ambiguity. The example in (ii) shows that only the parenthetical use licenses ellipsis.

i. John heard that Mary was singing.
= John came to know that Mary was singing.
= John heard (physically) that Mary was singing.

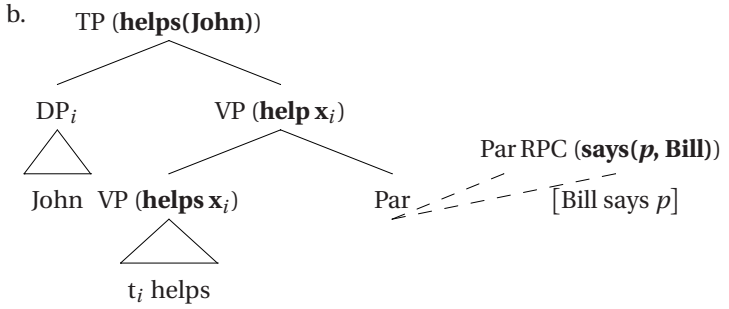
ii. A: Who was singing this morning?
B: John heard Mary.
= John came to know that Mary was singing this morning.
≠ John (physically) heard Mary singing this morning.

6.1.3 Bridge verbs and parenthetical syntax

Griffiths (to appear b) presents the following analysis for the syntax of RPCs. He argues that RPCs are simultaneously clausal adjuncts and independent speech acts. The adjunction of an RPC in the syntactic structure does not influence the semantic composition of the host clause. As Griffiths notes, this can be achieved in a number of ways. One way is to adopt De Vries' *par*-merge (Vries, 2007, 2008, 2012).[15] Par-merge leads to *behindance*, where part of the structure is 'behind' the syntactic tree, giving rise to a 3D-tree. Leaving irrelevant details aside, (97a) has the tree-structure in (97b).

(97) a. John helps, *Bill says*.

b.



At first sight, behindance might seem to provide a solution to our problem, as the material that prevents the ellipsis clause from being in a relation with the antecedent (i.e. the '*Bill says*' part) is now in a behindance relation to the rest of the clause. The important question, then, is how the RPC is integrated in the discourse structure. Griffiths argues that the order of the speech acts is dictated by derivation timing. He argues that dominated XPs will be Transferred (Chomsky, 2004) before undominated XPs (i.e. root clauses). If α is Transferred before β, α precedes β in the discourse. If correct, RPCs are fully integrated into the discourse representation at the discourse component. If so, behindance does not provide a solution to our problem that bridge verbs can embed Gapping and Fragments.

There are independent reasons to believe that an analysis in terms of behindance is not on the right track. First, sentence-first RPCs are sensitive to whether the host clause precedes or follows them. In Dutch, for example, if the elliptical host clause follows the RPC, then the word order is subject-verb, see (98a). If, on the other hand, the elliptical host clause precedes the RPC, the order is verb-subject, as in (98b). If the RPC is syntactically independent of the host clause, the word order within the RPC should not be sensitive to the RPC's position in the host clause.[16]

[15] Another way is to postulate a compositional rule such as Pott's (2005, p.66) *isolated CI application*.

[16] It should be noted that, if Gapping indeed occurs in the complement of *dacht* 'thought' in (98b), then the expectation is that what underlies this example is (i). If (i) involves CP topicalization, the question arises why the complementizer can be absent here. In chapter 2, we saw that complementizer drop is strictly impossible when the CP hosting it undergoes movement.

(98) a. Jan gaf een CD aan Marie en [ik dacht] Peter aan Suzan.
John gave a CD to Mary and I thought Peter to Susan

b. Jan gaf een CD aan Marie en Peter aan Suzan [dacht ik].
John gave a CD to Mary and Peter to Susan thought I

A second reason to suspect that bridge verbs that allow ellipsis in their complement are part of the host clause, rather than in a behindance relation with it, is that Fragments for some speakers of Dutch (though not all, hence the %) can 'move into' the RPC (Barbiers, 2000, 2002; Corver and Thiersch, 2001; Temmerman, 2013). This is illustrated in (99). This example shows that the fragment is part of the RPC, which strongly suggests that the RPC is part of the root clause.

(99) A. Wie had Carl gedacht dat de wedstrijd zou winnen?
who had Carl thought that the contest would win
'Who did Carl think would win the contest?'

B. % Hij had Kim gedacht.
he had Kim thought.
(Int.) 'He (had) thought that Kim would win the contest.'

I conclude that ellipsis embedding bridge verbs are part of the root clause and that an analysis of RPCs as adjuncts that are in a behindance relation with the root clause is not feasible. I therefore turn to another possibility.

6.1.4 Bridge verbs and reportative verbs

It has recently been pointed out that attributive phrases pose a problem for the idea that discourse is structured via trees (Buch-Kromann et al., 2011; Hardt, 2013). Interestingly, this problem is independent of ellipis, but is remarkably similar, as will become clear shortly. As Dinesh et al. (2005) point out, in the following example, *although* indicates a contrast relation between S1 and S3, even though *although* relates S1 and S2 in the syntax. Cases like (100) thus constitute a syntax-discourse mismatch. This is a problem for the idea that syntactic structures are the input for the discourse component.

(100) [$_{S1}$ The current distribution arrangement ends in March 1990], although [$_{S2}$ Delmed said [$_{S3}$ it will continue to provide some supplies of the peritoneal dialysis products to National Medical], the spokeswoman said.
(Dinesh et al., 2005)

Buch-Kromann et al. (2011) present two attempts to retain the idea that syntactic structures form the input for the discourse component. One solution involves a modification of the composition function of the connective. The basic idea is that in the compositional semantics, the attributions are part of the composition function

i. Peter gaf een CD aan Suzan, dacht ik.
Peter gave a CD to Susan thought I

of the connective. The discourse units that this connective conjoins, then, do not actually contain the attributions.[17]

Although Buch-Kromann et al.'s account works for attributive cases involving bridge verbs like *say* in (100), it is not clear how the account could be extended to handle attitude bridge verbs. In (101), for example, there is no attribution.

(101) A: Who will come to the party?
B: I hope John.

Moreover, it is unclear how the account could distinguish between bridge verbs like *say* and non-bridge verbs like *know*. Hence, although this solution by Buch-Kromann et al. works for the problem that attribution poses for the idea that discourse representations involve trees, it does not straightforwardly extend to our problem at hand, namely the fact that only some verbs allow ellipsis to be embedded.

Another solution proposed by Buch-Kromann et al. (2011) is to say that *although* in (100) indeed relates S1 and S2, rather than relating S1 with S3. The contrast relation expressed by *although* holds between S1 and S2 (= Delmed said S3). Buch-Kromann et al. (2011) note that it is typical for contrastive relations to arise between conflicting propositions from different sources. They argue that the source of S1 is implicitly associated with the speaker. If the contrast relation holds between 'speaker says S1' and 'Delmed said S2' then the syntax-discourse mismatch is eliminated. This solution is worked out further in Hardt (2013). Unfortunately, this account does not solve our problem that bridge verbs pose for the NLC. Even if the antecedent clause were to contain an implicit source, this only eliminates the syntax-discourse mismatch. Crucially, it does not provide an answer as to why ellipsis can be embedded in violation of (68). Moreover, although this account works for reportative bridge verbs, it does not straightforwardly extend to cases involving attitude bridge verbs like (101).

6.1.5 Bridge verbs do not embed Gapping and Fragments

A final solution I consider here, is to say that the embedded instances of Gapping and Fragments do not actually involve Gapping or Fragments. Under that scenario, bridge verbs would be ellipsis licensors and the ellipsis in their complement would therefore not be licensed by the NLC. There is some empirical support for distinguishing 'bridge verb ellipsis' from Gapping and Fragments. First, these types have

[17] The compositional solution of Buch-Kromann et al. (2011) goes as follows. "[S]uppose we have a discourse of the form '$X\ C\ Y$' where X and Y may contain a chain of attributions (i.e., Y could be of the form 'Delmed said Z', 'Delmed said Ann claimed Z, 'Delmed said Ann claimed Bob believed Z', etc.). Let c denote the standard composition function associated with C, and suppose π is an operator that given an epistemic formula $K_a\phi$ ('ϕ is known by agent a') returns ϕ. In order to handle attributions in the compositional semantics, we only have to assume that instead of letting C have a single composition function c which given arguments X',Y' computes a meaning representation $c(X',Y')$, it has a whole family of composition functions c_{ij} defined by $c_{ij}(X',Y') = c(\pi^i(X'),\pi^j(Y'))$ where i,j cannot exceed the length of the attribution chain in X,Y. When computing the compositional semantics, we then have to disambiguate not only the correct relation associated with C, but also the correct choice of i,j."

a different distribution. We have seen that in bridge verb ellipsis, the ellipsis site is embedded relative to the antecedent. Interestingly, it turns out that the bridge verb clause itself can be embedded, as well. This is shown in the examples in (102).

(102) a. Who arrived? *I know you said* Bill, but I'd like to hear you say it again.
b. Jan verzamelt postzegels, maar ik ken een man die dacht munten.
John collects stamps but I know a man that thought coins
'John collects stamps, but I know a man who thought he collected coins.'

Most solutions we reviewed above to attempt to solve the problem that bridge verbs embed ellipsis have in common that the clause headed by the bridge verb is somehow 'severed' from its complement. If we apply these accounts to the examples in (102), all of the material dominating the bridge verb clause must be severed from the bridge verb's complement (i.e. the ellipsis clause), too. Under a behindance analysis of bridge verbs, for example, the material dominating the bridge verb must be in a behindance relation to the root clause, as well. Looking at the examples in (102), this seems unlikely, as the material dominating the bridge verb does not have to be parenthetical, but can be a non-bridge verb, like *know* in (102a), or a relativized nominal, as in (102b).

Another reason to distinguish bridge verb ellipsis from Gapping and Fragments, is that bridge verb ellipsis is possible in hierarchical discourse relations, see (103), in contrast to Gapping and Fragments.

(103) I hope John will win, even though the expert thinks Bill.

The example in (103) shows that, even if the clause headed by the bridge verb can be 'ignored' for the purposes of ellipsis, the antecedent and the ellipsis clause would still be in a hierarchical relation (unless the connective is ignored as well, but what then would the relation be between ellipsis clause and antecedent?).

In this section, I have reviewed several accounts that could potentially provide a solution to the problem that ellipsis under bridge verbs poses for the NLC. All accounts have in common that the root clause is severed from the ellipsis clause. Intuitively this seems like an attractive solution, since, for one, the parenthetical clause that embeds ellipsis is not part of the assertion. Second, if somehow the material that embeds ellipsis is 'ignored', the NLC would be satisfied. Unfortunately, all accounts turned out to have some problems. In case any of the accounts does turn out to be on the right track, it remains to be seen whether the data in (102) and (103) will fit in. I leave the question of how to analyze ellipsis under bridge verbs for future research.

6.2 True exceptions and the role of accommodation and inference

Recall from chapter 1 (section 2.1) that ellipsis and deaccenting can be resolved by an accommodated antecedent. I repeat the relevant definitions here.

(104) **Parallelism:**
Every phonologically reduced (elliptical or deaccented) sentence *E* requires either

a. that the discourse will contain an antecedent sentence *A*, which belongs to the focus value of *E* ($A \in F(E)$), or

b. that the discourse will contain an antecedent sentence *A*, which together with certain shared assumptions entails another sentence, the accommodated sentence *AC*, and $AC \in F(E)$. (adapted from Fox, 1999, p.73)

(105) **Hardt's (2005b) economy condition on accomodation:**
"[F]or a given discourse D, we produce a default LF *L*. If *L* violates no semantically visible constraints, it is the preferred interpretation. If *L* does violate one or more constraints, inferences can be performed to derive an alternative interpretation *L'*. *L'* is a potential interpretation of D if it avoids the constraint violations. If there are several such alternatives, those LF's closest to *L* are preferred."

(106) **Hardt's (2005b) notion of closest:**
"[I]f A entails B and B entails C, then B is closer to A than C."

In this section, I discuss several exceptions to the NLC in (68). I argue that these exceptions are real and that they involve accommodation.

6.2.1 Embedded antecedents

(107a) and (108a) illustrate cases where the antecedent is embedded with respect to the ellipsis site. Although these examples are not perfect, they are significantly better than the examples in (107b) and (108b). The discourse structures of (107a) / (108a) and (107b) / (108b) are shown in (109a) and (109b), respectively.

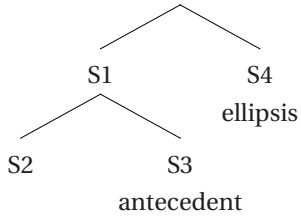
(107) a. ? $[_{S1}\ [_{S2}$ The table legs broke$]$ $[_{S3}$ because John stood on them.$]]$
$[_{S4}$ Peter as well (but they were already broken at that point.$)]$

b. * $[_{S1}\ [_{S2}$ Because John stood on them$]$ $[_{S3}$ the table legs broke.$]]$
$[_{S4}$ Peter as well (but they were already broken at that point.$)]$

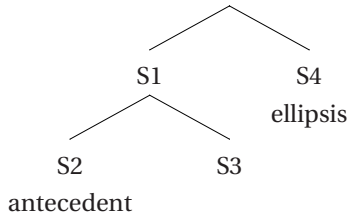
(108) a. ? $[_{S1}\ [_{S2}$ Susan was sad$]$ $[_{S3}$ because her favorite sweater has worn off.$]]$
$[_{S4}$ Her trousers, too (but she wasn't sad about that.$)]$

b. * $[_{S1}\ [_{S2}$ Because her favorite sweater has worn off,$]$ $[_{S3}$ Susan was sad.$]]$
$[_{S4}$ Her trousers, too (but she wasn't sad about that.$)]$

(109) a.



b.

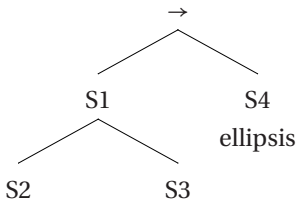


Recall that when there is a choice in antecedent, the only antecedent available is the clause that the ellipsis clause bears a relation to:

(110) A: $[_{S1}\,[_{S2}$ John is going to Greece$]$ because $[_{S3}$ he has family there.$]]$
B: $[_{S4}$ Peter, too.$]$
= Peter is going to Greece, because he has family there.
≠ Peter has family there, too.

The difference between (107a)/(108a) and (110) is that in (107a)/(108a), there is no suitable antecedent that is in a relation with the ellipsis clause. If ellipsis would be resolved by S1, the elliptical sentence would mean 'Peter broke, because John stood on him, as well' in (107a), and 'Susan's trousers were sad, because her favorite sweater has worn off' in (108a). What the examples in (107a) and (108) show is that in a case where there is no suitable antecedent, an antecedent may be used that is not in a direct relation to the ellipsis clause. The fact that the example is less than perfect could be taken as a sign that this strategy involves accommodation. Only when the NLC is not satisfied, the grammar can look for an antecedent 'one step down' in the clause that the ellipsis clause bears a relation to. The contrast between (107a)/(108a) and (107b)/(108b) shows that if the 'one step down' strategy is chosen, the antecedent must be the clause that is attached last. That is, the ellipsis in (107b), for example, must be resolved as 'Peter broke, too', and cannot mean 'Peter stood on them, too', even though the latter is a more suited antecedent given our world knowledge. We can conclude from this example that it is not possible to 'skip' antecedents in Gapping and Fragments. That is, the grammar must always choose the antecedent that was parsed last. In the following discourse tree, the NLC dictates that S1 must be the antecedent. If S1 is not a suitable antecedent, accommodation is possible and S2 may be the antecedent that resolves ellipsis. S2 can never be an antecedent, as it skips S1 and S3, which are both parsed later than S2.

(111)



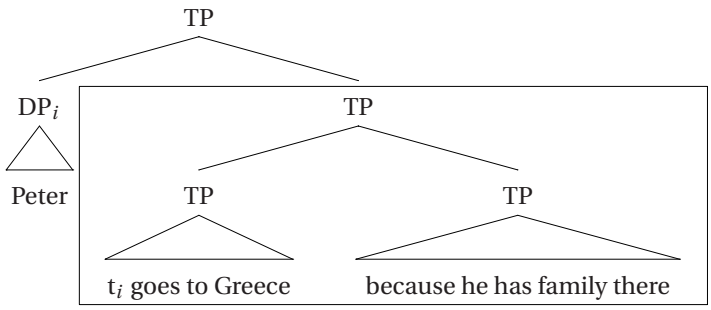
Another argument that accommodation is possible when no suitable antecedent is available comes from a remarkable contrast between antecedents conjoined by *omdat* and *want* (both mean 'because' in Dutch). As shown by the example in (112), if an antecedent contains an *omdat*-clause, the ellipsis clause will be resolved with the *omdat*-clause taken into account.

(112) A. Jan gaat naar Griekenland, omdat hij daar familie heeft.
John goes to Greece because he there family has
'John will go to Greece, because he has family there.'

B. Peter ook.
Peter too
= Peter will go to Greece, because he has family there.
≠ Peter has family there.

Given the NLC, only the large antecedent is available, as this large antecedent is the clause that is in a relation with the ellipsis clause. The syntactic structure of the ellipsis clause in (112) is given in (113). (That the adjunct is adjoined to TP here is not crucial, it could also be adjoined to *v*P.)

(113)



Now consider (114), which only differs from (112) in that the connective changed from *want* to *omdat*.

(114) A: [$_{S1}$ Jan gaat naar Griekenland], want [$_{S2}$ hij heeft daar familie].
B: [$_{S3}$ Peter ook].
= Peter is going to Greece, because he has family there.
= Peter has family there, too.

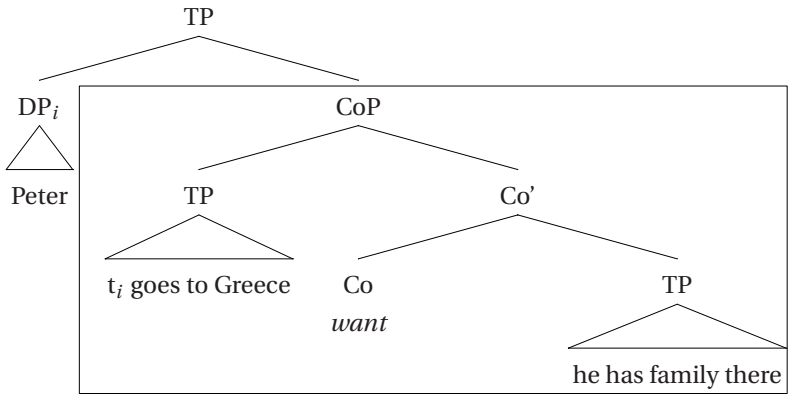
In contrast to the case with *omdat* in (110), the case with *want* in (114) is ambiguous. Ellipsis can be resolved by the antecedent consisting of S1+S2, but also by just S2. The syntactic derivation of this short construal is straightforward, as the antecedent is simply the S2 clause.

(115) [$_{S2}$ Peter ~~has family there~~]

The antecedent S2 is available through the 'one step down' strategy. As noted above, this strategy involves accommodation. Why is accommodation allowed here? From

the interpretation, the S1 + S2 antecedent seems to be available and, moreover, when ellipsis is resolved by this antecedent this is in accordance with the NLC. As noted, *omdat* and *want* have different syntactic properties: *want* is a coordinator (cf. section 4.2) and *omdat* is a subordinator. It is likely, therefore, that the difference between (110) and (114) and the fact that (refch3.ex1060) is ambiguous finds its source in the different syntactic properties of *want* and *omdat*. Consider the syntax of (114) in the case where S1+S2 forms the antecedent.

(116)



The tree structure in (116) reveals that the antecedent S1+S2 requires the remnant *Peter* to move out of the first conjunct of the coordination headed by *want*. Such movement out of the first conjunct of *want*, however, is not allowed, as shown in (117).

(117) * Wat$_i$ heeft Peter t$_i$ gekocht, want Jan wilde het niet houden?
what has Peter bought because John wanted it not keep
(Int.) 'What did Peter buy because John didn't want to keep it.'
(Van der Heijden, 1999)

If movement of *Peter* is not allowed in (116), how come the instance of Fragments in (114) is grammatical? One possibility is that a syntactic repair process takes place that takes (113) and modifies it to make it into (116). According to Arregui et al. (2006), syntactic mismatches between antecedent and ellipsis clause can be repaired. They argue that the bigger this syntactic mismatch is, the more ungrammatical the sentence gets. If a repair mechanism would have to transform (113) into the syntactically dissimilar (116), however, one would expect (114) to be close to ungrammatical, contrary to fact. Clifton and Frazier (2010) discuss cases of ellipsis in conditional sentences, which look similar to (114). In an example like (118a), the ellipsis clause cannot be derived syntactically, as shown in (118b). The embedded antecedent (*he bought twinkies*) requires accommodation in the form of the 'one step down' strategy. Although this is an available strategy, this antecedent would give rise to an incoherent discourse, as the particle *too* in the ellipsis clause presupposes that someone else bought twinkies, too. The conditional does not entail that someone bought twinkies, though. Clifton and Frazier (2010) tested sentences

like (118) experimentally. They found that in such cases the small antecedent is accepted only 26% of the time, whereas the large antecedent is accepted 74% of the time. Clifton and Frazier (2010) argue that what underlies ellipsis in the large antecedent is just the consequent clause (i.e. *x bought twinkies*). The antecedent clause of the conditional is inferred from the prior discourse, but not syntactically present.

(118) a. If John went to the store, he bought Twinkies. George, too.
= If George went to the store, he bought Twinkies, too. 74%
= George bought twinkies, too. 26%
(Clifton and Frazier, 2010, p.285)

b. * [George]$_i$ ~~[[if t$_i$ went to the store] he bought Twinkies]~~

I now return to (114). If Clifton and Frazier's (2010) proposal is on the right track, we could maintain the following idea. The large antecedent S1+S2 arises when the ellipsis clause contains *Peter is going to Greece* and the *because*-clause is inferred from the antecedent (and thus not syntactically present in the ellipsis clause). Contrary to (118), in (114) the small antecedent is available next to the large antecedent. This is because in (114), contrary to (118), the small antecedent does not give rise to an incoherent discourse.

To sum up this section, exceptions to the NLC are allowed when the clause bearing a non-hierarchical relation to the ellipsis clause does not provide an antecedent for the ellipsis. Only in such cases, an antecedent may be used that is 'one step down' in the antecedent clause (i.e. the clause the the ellipsis clause is in a relation with). This is a form of accommodation, which is only allowed when no antecedent is available that does not require accommodation (cf. (105)).

6.3 Islands

A problem closely related to the examples of embedded antecedents in the last section concern contexts where there is an indefinite inside an island.

(119) A: They hired someone who speaks a Balkan language.
B: Yeah, Bulgarian.

The fragment in (119) seems to violate a (complex NP) island, as shown in (120).

(120) * [Bulgarian]$_i$ they hired someone [who speaks t$_i$].

There are two lines of research on islands. One starts with Ross (1967) and holds that there is indeed an island violation in (119), but that the island violation is 'repaired' by ellipsis. The other line of research assumes that islands can never be violated; ellipsis plays no role in this. What ellipsis does is cover up the true source of the elliptical utterance. Barros et al. (to appear), for example, argues that what underlies (119) is (121), a 'short source'.

(121) [Bulgarian]$_i$ s/he speaks t$_i$.

For reasons to be made clear in chapter 4, I will adhere to the 'small antecedents view' on islands. If (119) indeed involves a short construal, it constitutes another case of ellipsis in which the antecedent is embedded. If (121) is the antecedent for ellipsis in (119), this involves accommodation in that a small antecedent is chosen over the large island-containing one (see also Craenenbroeck, 2012). The rest of the antecedent (*they hired someone*) can be inferred from prior discourse as I argued was the case for (114)/(118). The assumption that inference is possible seems especially necessary when we consider contexts in which the island is headed by an intensional verb.

(122) A: They want to hire someone who speaks a Balkan language.
B: Yeah, Bulgarian.
B': #Yeah, s/he speaks Bulgarian.
B": Yeah, s/he should speak Bulgarian.

If a short source underlies the fragment utterance of B', it must be the case that a modal is inferred from the context, as seen in the contrast between B' and B". This modal in B" is not present in the ellipsis clause. This inference of a modal does not pose a problem for the small antecedent approach to islands, as such cases of inference also occur elsewhere. Johnson (2012) notes that infinitival sluice clauses headed by *how* also require such inference. This is illustrated in (123) for Dutch, which especially makes clear that inference of a modal should be possible under ellipsis. The sluice in (123) can only be continued by the striked out material, crucially containing the modal *moet* 'must'.

(123) Decoreren is makkelijk, als je maar weet hoe ~~je moet decoreren~~
decorating is easy, if you only know how you must decorate
'Decorating is easy, as long as you know how to decorate.'

Summing up, under a small antecedent approach to islands, cases in which an antecedent contains an island violate the NLC. This is so, since the antecedent clause containing the island cannot resolve the ellipsis site, as in that case the remnant of ellipsis would have to have illicitly moved out of the island, wrongly predicting that ungrammaticality ensues. Island containing antecedents thus require accommodation in that a smaller antecedent is chosen. This could be seen as an instance of the 'one step down' strategy. This is only possible when the full antecedent is unavailable to resolve ellipsis. In that sense, the cases involving island containing antecedents pattern with the rest of the cases considered in this section.

7 Conclusion and open questions

In this chapter, I have been concerned with the distribution of Gapping and Fragments and how it follows from the licensing condition on ellipsis. Regarding their distribution, we have seen that Gapping and Fragments are severely restricted in their occurrence. Specifically, Gapping and Fragments clauses cannot be embedded nor bear a hierarchical relation with respect to their antecedent. I reviewed the

literature on licensing and showed that none of the theories on licensing can extend to Gapping and Fragments. All of the syntactic theories overgenerate. As for the discourse accounts, I showed that the QUD approach likewise does not cover the full range of Gapping/Fragments cases. Although López' D-linking account also doesn't cover Gapping and Fragments, it showed promise in that it hypothesizes that a discourse relation must hold between the Gapping/Fragments clause and an antecedent. Based on this approach, I argued that Gapping and Fragments are licensed when the discourse configuration holds in which the ellipsis clause and the antecedent are in a non-hierarchical relation. This theory accounts for the restricted distribution of Gapping and Fragments. At the same time it is capable of explaining the variable size of the ellipsis site in these ellipsis types.

I have shown in chapter 2 that, syntactically, the derivations of Gapping and Fragments are identical. In this chapter, I have shown that the distribution of Gapping and Fragments is identical, as well. If the ideas in this chapter are on the right track, the similar distribution follows from the fact that Gapping and Fragments are both licensed by the same licensing condition. For all intends and purposes then, we no longer have any reason to formally distinguish Gapping and Fragments.