

Ellipsis in Dutch¹

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1. Introduction

This chapter examines ellipsis in Dutch. We will discuss the major types of ellipsis as they have been presented in part III of this handbook: gapping and stripping (section 2), predicate ellipsis (VP-ellipsis and pseudogapping) (section 3), conjunction reduction & Right Node Raising (section 4), sluicing (section 5), fragments (section 6), nominal ellipsis (section 7), comparative deletion (section 8) and null complement anaphora (section 9). In addition, section 10 will discuss some peculiarities concerning ellipsis in Dutch dialects. Since we will keep the discussion of the various types of ellipsis as theory neutral as possible, we will provide suggestions for further reading at the end of each of these sections.

2. Gapping and Stripping

The phenomenon of gapping is a part of Dutch grammar. Gapping is an ellipsis operation applying to coordinated clauses, which involves the deletion of a verb in the second conjunct under identity with a verb in the first conjunct. For example, in (1)a, the finite verb *at* 'ate' is deleted, here represented by means of subscription, in the second conjunct under identity with the finite verb *at* in the first conjunct. As shown

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in (1)b, in addition to the verb, other material (*in casu* the direct object *vis*) may be silent as well.

(1) a. JAN at VIS en PIET at BIEFSTUK.

Jan ate fish and Piet ate steak

'Jan ate fish and Piet steak.'

b. JAN at op MAANDAG vis en PIET at op WOENSDAG vis.

Jan ate on Monday fish and Piet ate on Wednesday fish

'Jan ate fish on Monday and Piet on Wednesday.'

As indicated by means of small capitals in (1), the remnant constituents in the clause to which Gapping has applied and its correlates in the antecedent clause are contrasted and bear stress. In the rest of section 2, this contrastive relationship will not be represented orthographically.

Notice also that Gapping does not require strict formal identity between the antecedent verb and the deleted verb. Specifically, if the two verbs differ from each other in number (2)a or tense (2)b, Gapping can still take place.

(2) a. Ik at vis en jullie aten biefstuk.

I ate_{1.sg} fish and you ate_{2.pl} steak

'I ate fish and you steak.'

b. Gisteren at ik vis maar vandaag eet ik biefstuk.

yesterday ate I fish but today eat I steak

'Yesterday I ate fish, but today I eat steak.'

In (1) and (2), there are two remnants in the second conjunct. As shown in (3), it is also possible to have only one remnant (*Piet*) in the second conjunct. In that case, the single remnant is often followed by a (focus) particle like *ook* ('also/too') or a polarity item like *niet*. This phenomenon, in which the verb has been deleted and only one remnant is left in the second conjunct, is called Stripping.²

- (3) Jan at vis maar Piet at niet vis.
Jan ate fish but Piet ate not fish
'Jan ate fish but Piet not.'

The main focus of section 2 will be on Gapping. Section 2.1 addresses the question which verbal material can be deleted by Gapping. Section 2.2 discusses some properties of the remnants in the clause to which Gapping has applied. Section 2.3 examines the distribution of Gapping. That is, in what kinds of clauses is this ellipsis phenomenon attested? In Section 2.4, finally, the phenomenon of Stripping is discussed.

2.1 Gapping: deletion of verbal material

As was shown in (1)-(3), Gapping deletes the finite verb in the second conjunct. If the finite verb is an auxiliary, then Gapping applies to the auxiliary, as in (4)a. The main verb has to be included in the Gapping operation, if it is identical to the main verb in

² We simply use the term Stripping as a descriptive device and will not address the question as to whether the (analysis of the) phenomenon of Stripping can be reduced to that of Gapping.

the first conjunct, as in (4)b. As shown by (4)c, even more complex verbal patterns can be deleted in the second conjunct, if this verbal complex is identical to the one in the first conjunct.

(4) a. Jan heeft de vis gebakken en Piet heeft de
 Jan has the fish cooked and Piet has the
 aardappels geschild.
 potatoes peeled
 'Jan has cooked the fish and Piet has peeled the potatoes.'

b. Jan heeft de vis gebakken en Piet heeft de biefstuk
 Jan has the fish cooked and Piet has the steak
 (*gebakken)/gebakken.
 cooked/cooked
 'Jan has cooked the fish and Piet the steak.'

c. Jan zal de vis moeten bakken en Piet zal de biefstuk moeten
 Jan will the fish must cook and Piet will the steak must
 bakken.
 cook
 'Jan will have to cook the fish and Piet the steak.'

Observe that, as shown by examples (4)b,c, the elements that are deleted by means of Gapping need not be contiguous. For example, the deleted verbal elements *heeft* and *gebakken* in (4)b are separated from each other by the direct object *de biefstuk*.

Gapping is also found in embedded clauses. In (5), Gapping has applied to the second conjunct of a direct object clause. As indicated, Gapping cannot apply to the second conjunct if an overt complementizer (*dat*) is present.

- (5) Ik dacht dat Jan vis at en (*dat) Piet biefstuk at.
 I thought that Jan fish ate and (that) Piet steak ate
 'I thought that Jan ate fish and Piet steak.'

Importantly, Gapping also applies to infinitival verbs in non-finite clauses. Note that also here, the second (infinitival) clause cannot be introduced by an overt complementizer (*om*).

- (6) Jan stelde voor [om *PRO* op maandag vis te eten en
 Jan proposed PRT for *PRO* on Monday fish to eat and
 (*om) *PRO* op woensdag vlees te eten].
 (for) *PRO* on Wednesday meat to eat
 'Jan proposed to eat fish on Monday and meat on Wednesday.'

So far, we have seen that Gapping can delete a finite verb of a main or an embedded clause, or an infinitival verb of a non-finite clause. The fact that Gapping cannot apply in the second conjunct of an embedded clause if that conjunct starts with an overt complementizer, seems to suggest that Gapping is only operative in coordinate structures with TP-conjuncts (that is, [_{CP} *dat/om* [TP & TP]]). However, the wh-interrogative main clause in (7) suggest that Gapping is also operative within a CP-conjunct. In this example, a wh-word has been moved to Spec,CP in both

conjuncts, along with movement of the finite verb to C. In the right conjunct, the wh-word *wat* occupying Spec,CP functions as one of the remnants.

- (7) [[_{CP} Wat heeft Jan op maandag gegeten] en
what has Jan on Monday eaten and
[_{CP} wat heeft Jan op woensdag gegeten]]?
what has Jan on Wednesday eaten
'What did Jan eat on Monday and what on Wednesday?'

So far we have seen that Gapping can apply in finite and infinitival clauses.

Interestingly, Gapping is also found in coordinate structures involving (what looks like) conjoined VPs. Consider the examples in (8):

- (8) A: Wat zal Jan nooit doen?
what will Jan never do
'What will Jan never do?'
B: [[_{VP} Bloemen voor zijn vrouw kopen] en [_{VP} chocola voor
flowers for his wife buy and chocolate for
zijn kinderen kopen]]
his children buy
'Buy flower for his wife and chocolate for his children.'

In (8), person B uses a coordinated VP-structure as an answer to person A's question.

Gapping has applied in the second conjunct of B's answer.

2.2 Gapping and its remnants

As was noted in (1)b, (2)b and (3), in addition to the elided verb(s), other material can be silent as well as a result of Gapping. As shown in (9), Dutch permits Gapping constructions in which more than two remnants are contained within the second conjunct (see also Aelbrecht 2007a,b). In this respect, Dutch differs from English, which only permits two remnants in the second conjunct (Jackendoff 1971).

- (9) Jan gaat dinsdag bij z'n broer dineren en [Piet]_{gaat}
Jan goes Tuesday with his brother dine and Piet _{goes}
[woensdag] [bij z'n zus] _{dineren}.
Wednesday with his sister _{dine}
'Jan will dine with his brother on Tuesday and Piet will dine with his sister
on Wednesday.'

As noted by Hankamer (1971) for English, the remnants left behind after Gapping must be major constituents of the clause (the so-called Major Constituent Condition); see Neijt (1979) for Dutch. According to this condition, only phrases that are immediately dominated by a verbal projection on the extended verbal projection line (Grimshaw 1991) can function as remnants. Thus, arguments of the verb and modifiers contained within the extended verbal projection can be remnants, but subparts of these arguments and modifiers cannot. This condition on the remnants of Gapping is exemplified in (10) for PP-complements (the same can be shown for CP complements, see below).

- (10) Jan snakt naar een glas water ...

Jan longs for a glass water ...

'Jan longs for a glass of water ...'

a. ... en Piet _{snakt} [_{PP} naar een glas bier].

... and Piet _{longs} for a glass beer

'... and Piet Jan longs for a glass of beer.'

b. * ... en Piet _{snakt} naar een glas bier.

... and Piet _{longs} for a glass beer

There seem to be counterexamples to the Major Constituent Condition. There are Gapping constructions in which one of the remnants is a subpart of a major constituent (see Zwarts 1978 for some discussion).

(11) Jan stond [2 meter achter mij] en

Jan stood 2 meter behind me and

Marie _{stond} [_{PP} 3 meter achter mij].

Marie _{stood} 3 meter behind me

'Jan stood 2 meters behind me and Marie 3 meters.'

In (11) a left branch constituent which acts a modifier within a larger phrase (a major constituent: PP) has been left behind as a remnant after Gapping. One could explore an approach in which these remnants are placed (e.g., via some displacement operation) in a clause-internal position outside of the major constituent (PP) before Gapping applies. Independent evidence is then needed for the existence of such a

constituent rearrangement operation. That the left branch modifier in (11) is accessible to displacement is exemplified in (12); see Corver (1990) for discussion.³

- (12) Hoeveel meter_i stond Marie [t_i achter mij]?
how many meter stood Marie behind me
'How many meters did Marie stand behind me?'

A final property of remnants that we would like to point out here is that they can sometimes contain a gap (more specifically, a trace) that results from subextraction. Consider the following example, in which the wh-phrase has been extracted in an across-the-board fashion (Ross 1967):

- (13) Waar_i is Jan [_{AP} geschikt [_{PP} t_i voor]] en
what is Jan suitable for and
Marie [_{AP} ongeschikt [_{PP} t_i voor]]?
Marie unsuitable for
'For what is Jan suitable and Marie unsuitable?'

2.3 Gapping: its distribution

Gapping is a forward ellipsis operation; that is, the gap must be contained in the second conjunct. Gapping cannot apply backwards:

- (14) * Jan at vis en Piet at biefstuk.

³ Pied piping of *achter mij* also yields a well-formed sentence.

Jan ate fish and Piet ate steak

Gapping is permitted in coordinate structures in which the coordinator is *en* (and), *maar* (but), *of* (or), or 'zero' (i.e., asyndetic coordination; here represented as *Conj \emptyset*). For certain speakers, Gapping is blocked when the second conjunct is introduced by the coordinator *want* (because). For other speakers, (15)b is fine or just slightly marked (see also Aelbrecht 2007a,b).

- (15) a. Mijn moeder bakt op zondag een taart *en/maar/of*
my mother bakes on Sunday a pie and/but/or
mijn vader bakt op zondag een cake.
my father bakes on Sunday a cake
'My mother bakes a pie on Sunday and/but/or my father bakes a cake
on Sunday.'
- b. */? Jan kent mij want ik ken hem.
Jan knows me since I know him

Gapping is restricted to coordinate structures (Neijt 1979). In other words, it cannot apply to a verb in an embedded clause that is identical to a verb in the main (matrix) clause. This is exemplified in (16) where Gapping applies within a direct object clause.

- (16) * Jan had mij verteld [_{CP} dat Piet een leuk verhaal had verteld].
Jan had me told that Piet a nice story had told

When Gapping applies, it is subject to what Boone (2014) calls the Equal Conjunct Requirement: the ellipsis site may not be embedded relative to its antecedent, nor may the antecedent be embedded relative to the ellipsis clause (see also Aelbrecht 2007a,b). This requirement is exemplified in (17) where the Gapping clause is embedded under the matrix clause headed by *geloof*.

(17) * [CP JAN at VIS] en [CP ik geloof [CP dat PIET BIEFSTUK at]]
 Jan ate fish and I believe that Piet steak ate

We already saw that Gapping applies to main clauses embedded clauses. The remnants must be clause mates. Thus, for many but certainly not all speakers of Dutch, Gapping is ill-formed if one remnant is in the matrix clause while the other is in the embedded clause (see **Fout! Verwijzingsbron niet gevonden.**)⁴

(18) */? Ik dacht dat Jan vis at en [jij dacht

⁴ For some speakers, the sentence improves if the embedded subject is coindexed with the matrix subject, as in (i).

(i) % Ik dacht dat ik vis ging eten en jij dacht
 I thought that I fish went eat and you thought
 dat je biefstuk ging eten.
 that you steak went eat

'I thought that I was going to eat fish and you thought that you were going to eat steak.'

I thought that Jan fish ate and you thought

[CP dat Jan biefstuk at]].

that Jan steak ate

As has been noted by Hankamer (1971) for English, and Neijt (1979) for Dutch, the ellipsis site that results from Gapping cannot contain an island (Ross 1967).

(19) * Jan bestelde [vis en rijst] en Marie bestelde

Jan ordered fish and rice and Marie ordered

[vis en aardappelen].

fish and potatoes

In (19), the ellipsis site contains a coordinate structure and the result is ill-formed, which suggests that the Coordinate Structure Constraint is active.

As shown in (20), Gapping can apply across a sentence boundary (see Van Zonneveld 1994). It should be noted, however, that not all speakers of Dutch find this pattern fully acceptable. As exemplified by (21), the ellipsis site that results from Gapping cannot be licensed by a non-linguistic antecedent; see Hankamer and Sag 1976 for English.

(20) A: Ik geef Jan een muts.

I give Jan a cap

'I will give Jan a cap.'

B: Dat komt goed uit. Ik geef Jan namelijk een sjaal.

that suits well PRT. I give Jan namely a scarf

'That is good. I will give Jan a scarf.'

(21) <Context: Mary sees that her eldest son Bill is vacuuming his room. Then her youngest son says to her:>

* Ik _{stofzuig} mijn kamer.

I _{vacuum} my room

2.4 Stripping

Stripping (also known as 'Bare argument ellipsis'), like Gapping, involves the elision of verbal material in the second conjunct under identity with corresponding material in the antecedent clause (the first conjunct). All other (nonverbal) material is deleted as well except for one phrase. In other words, there is only a single remnant. This remnant is often followed immediately by the (focus) particles like *wel/ook* ('also', 'too') or polarity items like *niet* ('not'), as in (22)a. As shown by (22)b, the remnant can also be bare. This requires a special intonation to ensure interpretability: strong emphasis on *hij* and *zij*, and a brief pause after *vis*. The pattern is quite marked compared to (22)a.

(22) a. Hij eet vis maar zij niet/ook.

he eats fish but she not/too

'He eats fish, but she does not/too.'

b. Hij eet vis en zij.

he eats fish and she

'He eats fish and she does too.'

Modulo the number of remnants, Stripping shares many properties with Gapping. For that reason, Stripping is often regarded as a particular manifestation of Gapping. In (23)-(26), some properties are exemplified which were also found above in Gapping constructions.

(23) Wat bestelt Jan erg vaak en wat niet?

what orders Jan very often and what not

'What does Jan order very often and what doesn't he order very often?'

(24) * Piet ook en Jan eet op maandag vis.

Piet too and Jan eats on Monday fish

(25) [De mededeling dat Jan vis bestelde en Piet ook]

the announcement that Jan fish ordered and Piet too
wekte verbazing.

raised surprise

'The announcement that John ordered fish and Piet too, surprised many people.'

(26) A: Jan ontmoette gisteren Els.

Jan met yesterday Els

'Jan met Els yesterday.'

B: Dat is toevallig! Ik ook.

that is coincidental. I too

'That is a coincidence! Me too.'

In (23), a direct object wh-phrase precedes the negation, which suggests that Stripping can apply to entire CPs (this under the assumption that wh-phrases occupy Spec,CP); compare with **Fout! Verwijzingsbron niet gevonden**.b. The ill-formed example (24) shows that Stripping, just like Gapping, is a forward ellipsis operation. Thus, it cannot apply backwards. (25) shows that, like Gapping, Stripping is also found in embedded clauses. Example (26) shows that Stripping can apply across sentence boundaries in a discourse (compare with the Gapping example in (20)). In short, many of the properties attested in Gapping constructions are also found in Stripping constructions.

For more details and in-depth analyses of Gapping and Stripping in Dutch we refer the reader to Bakker (1968), Neijt (1979, 1981a,b), Kerstens (1980, 1981), De Vries (1992), Haeserijn et al. (1997), Van der Heijden and Klein (1995), Van der Heijden (1999), Aelbrecht (2007a,b), Pieters (2011), Boone (2014), Cremers (2014), Zwart (2014).

3. Predicate ellipsis (including VP-ellipsis & pseudogapping)

In English VP-ellipsis the predicate containing the lexical verb, the arguments and low adverbs are elided, i.e. the VP. The remnant of ellipsis consists of the subject and a finite auxiliary, see (27)a. If there is no finite auxiliary, the dummy verb *do* appears, see (27)b:

- (27) a. John has sold his house very quickly, but Pete hasn't sold his house very quickly.
b. John sold his house very quickly, but Pete didn't sell his house very quickly.

VP-ellipsis is not possible in Dutch, as the examples below illustrate:

(28) a. * Jan heeft zijn huis snel verkocht, maar Piet heeft niet.

Jan has his house quickly sold, but Piet has not.

'Intended: Jan has sold his house quickly, but Piet hasn't.'

b. * Jan verkocht zijn huis snel en Piet deed niet.

Jan sold his house quickly, and Piet did not.

'Intended: Jan sold his house very quickly, but Piet didn't.'

A potential reason for the ungrammaticality of VPE in Dutch might be that the lexical verb moves out of the VP domain into a head final TP projection. If this analysis is correct, then this might account for the ungrammaticality of these examples: the lexical verb is not in the VP-domain and hence should not be part of the ellipsis site. This would predict that ellipsis of just the object and low adverbs should be possible (provided they stay in the VP-domain). This also does not result in a grammatical sentence as illustrated in (29).

(29) * Jan heeft zijn huis heel snel verkocht, en

Jan has his house very quickly sold, and

Piet heeft ook zijn huis heel snel verkocht.

Piet has also his house very quickly sold.

'Intended: Jan has sold his house very quickly, and Piet has too.'

VPE with infinitival verbs is also impossible in Dutch (with all types of infinitives, but illustrated here with control infinitives):⁵

- (30) * Ik probeerde te dansen en Jan probeerde ook te dansen
I tried to dance and Jan tried also to dance
'Intended: I tried to dance and Jan also tried to.'

As discussed extensively by Aelbrecht (2010), VPE with the infinitival complement of modals is possible in Dutch. She calls this Modal Complement Ellipsis. An example is given in (31). We refer the reader to the chapter on VPE and Pseudogapping in this handbook for more detailed discussion of this construction.

- (31) Ik wil wel helpen, maar ik kan niet helpen.
I want PRT help, but I can not help
'I want to help, but I cannot.'

As shown by Hoeksema (2006) and Cremers (2014), while VPE might not be possible in general in Dutch, it is (marginally) possible for some speakers in comparative constructions:

⁵ Note that these examples are also ungrammatical if *te* 'to' is part of the ellipsis:

- (i) * Ik probeerde te dansen en Jan probeerde ook te dansen.
I tried to dance and Jan tried also to dance

(32) % Jan verkocht zijn huis veel sneller dan Piet deed.

Jan sold his house much quicker than Piet did.

'Jan sold his house much quicker than Piet did.'

The second type of predicate ellipsis is pseudogapping, i.e. VPE where one constituent has survived ellipsis by moving into a focus position. Just like VPE pseudogapping is generally not possible in Dutch (not even in modal complement ellipsis contexts).

(33) a. * Ik verkocht mijn fiets en Piet deed zijn auto.

I sold my bike and Piet did his car

'Intended: I sold my bike and Piet did his car.'

b. * Ik wil mijn fiets verkopen, en Piet kan zijn auto.

I want my bike sell and Piet can his car

'Intended: I want to sell my bike and Piet can sell his car.'

Just like VPE, pseudogapping is (marginally) possible for some speakers in comparative contexts, however, as was observed by Hoeksema (2006):

(34) % Jan verkocht eerder zijn huis dan Piet zijn auto deed.

Jan sold sooner his house than Piet his car did

'Jan sold his house sooner than Piet did his car.'

For a thorough discussion of the relevance of comparative contexts for VP-ellipsis and pseudogapping we refer the reader to Hoeksema (2006) and Cremers (2014).

4. Conjunction Reduction

Examples (35)a-b illustrate the phenomenon of *Conjunction Reduction* in Dutch.

(35) a. [Jan kocht een fiets] en [Jan huurde een auto].

Jan bought a bike and Jan rented a car

'Jan bought a bike and rented a car.'

b. [Jan kocht een auto] en [Marie huurde een auto].

Jan bought a car and Marie rented a car

'Jan bought and Mary rented a car.'

In the coordinate structure in (35)a, the subject noun phrase *Jan* in the second conjunct is deleted under identity with the subject noun phrase *Jan* in the first conjunct. Since deletion under identity applies in a forward direction, this ellipsis phenomenon can be characterized as *Forward Conjunction Reduction* (FCR). In (35)b we have the reverse situation. The deleted phrase —the direct object *een auto* 'a car'— belongs to the first conjunct and the "antecedent" is part of the second conjunct. Thus, (35)b exemplifies the phenomenon of *Backward Conjunction Reduction* (BCR). We will discuss FCR in section 4.1 and BCR in section 4.2.

4.1 Forward Conjunction Reduction

In (35)a, a subject noun phrase is absent in the second conjunct. As exemplified in (36), the deleted element can also be another type of clausal constituent.

(36) a. [Aan mij verkocht Jan zijn fiets] en [aan mij

to me sold Jan his bike and to me
leende Marie haar auto].

lent Marie her car

'Jan sold me his bike and Marie lent me her car.'

b. [Gisteren kocht Jan een auto] en [gisteren huurde

yesterday bought Jan a car and yesterday rented

hij een fiets].

he a bike

'Yesterday, Jan bought a car and rented a bike.'

In (35), the shared subject noun phrase carries the thematic role of agent. It is possible for the shared subject noun phrase to fulfill a different semantic role in each of the two conjuncts. In (37), for example, the shared subject *Jan* is interpreted as the theme of the passive verb *geslagen* in the first conjunct and as the agent of the active verb *geslagen* in the second conjunct.

(37) Jan werd geslagen maar Jan heeft zelf ook geslagen.

Jan was beaten but Jan has self also beaten.

'Jan was beaten up but has also beaten up himself.'

An important constraint on FCR is that the shared material must occupy a left peripheral position in the two coordinated clauses. The right conjunct cannot be reduced if the shared phrase occupies a clause-internal (38)a or clause-final (38)b position:

(38) a. * [[Jan heeft een auto gehuurd] en [Marie
 Jan has a car rented and Marie
 heeft een auto gekocht]]
 has a car bought
 'Jan rented a car and Marie bought one.'

b. * [[Jan huurde een auto] en [Marie kocht een auto]].
 Jan rented a car and Marie bought a car

It should be noted that this parallelism requirement (i.e., the requirement that the shared material occupy a left peripheral position) is not always fulfilled. In so-called *Tante Betje* (aunt Betty) clauses of the type in (39), the subject noun phrase of the first conjunct and the subject noun phrase of the second conjunct do not share the same (i.e., left peripheral) position (example taken from <https://onzetaal.nl/taaladvies/tante-betje>). Examples like these are normally considered a stylistic error, but they do occur frequently, especially in writing.

(39) ? [Door een defecte bovenleiding rijden de treinen tussen
 because.of a broken overhead-line drive the trains between
 Leiden en Amsterdam via een andere route] en [de treinen
 Leiden and Amsterdam via a differentroute and the trains
 tussen Leiden en Amsterdam stoppen niet in Schiphol].
 between Leiden and Amsterdam stop not at Schiphol
 'Because of a broken overhead-line the trains from Leiden to Amsterdam
 take a different route and they won't stop at Schiphol airport.'

In FCR, the peripheral element need not be a constituent (see also Zwart 2014). The string *Jan heeft* in (40), for example, does not pass any constituency tests; e.g., *Jan heeft* cannot be the input to any displacement operation.

(40) [Jan heeft een fiets gehuurd] en [Jan heeft een auto gekocht].
 Jan has a bike rented and Jan has a car bought

The non-reduced part (i.e., the remnant) of the second conjunct must be a constituent in FCR (see also Zwart 2014). This constituency requirement on the remnant is exemplified in (41):

(41) * [De oude man huurde een fiets] en [de oude
 the old man rented a bike and the old
 vrouw kocht een auto].
 woman bought a car

'The old man rented a bike and the old woman bought a car.'

This example is ill-formed because of a violation of the constituency requirement on the remnant of FCR. In (41), *vrouw kocht een auto* does not form a constituent without the string *de oude*. Notice that a sentence like (40) satisfies the constituency requirement on the remnant: *een auto gekocht* forms a constituent (VP). This is shown, for example, by the possibility of fronting and pronominalizing the string *een auto gekocht*, as in [*Een auto gekocht*] heeft Jan. ('Jan bought a car.') and *Jan heeft [dat] ook* (Jan has that too, 'Jan did so too.') respectively.

As shown in (42), FCR is also attested in embedded clauses:

- (42) Ik herinner me [[_{CP} dat Jan een fiets kocht] en [_{CP} (*dat)
 I remember REFL that Jan a bike bought and that
 Jan een auto huurde]].
 Jan a car rented
 'I remember that Jan bought a bike and rented a car.'

In this example, the second conjunct of the embedded clause has been reduced: the subject noun phrase of this conjunct has been "deleted" under identity with the antecedent *Jan* of the first conjunct. Notice that reduction is blocked if the complementizer *dat* 'that' is present in the second conjunct. In other words, if the subject noun phrase of the second clausal conjunct is absent, the complementizer must be absent as well. This again shows that the deleted peripheral material need not form a constituent: The string *dat Jan* (i.e., complementizer + subject) does not pass any constituency test. Notice that the remnant, viz., the string *een auto huurde*, does form a constituent, viz., VP.

The observation that the remnant must be a constituent in FCR leads to the conclusion that coordination in this type of construction is operative at the remnant constituent level. In other words, a sentence like *Jan heeft een fiets gehuurd en een auto gekocht* does not have the structure in (40) above but rather the structure in (43), where, in this specific case, the two coordinated phrases are two VPs.

- (43) Jan heeft [[een fiets gehuurd] en [een auto gekocht]].
 Jan has a bike rented and a car bought
 'Jan has rented a bike and bought a car.'

Thus, all the (well-formed) FCR-examples discussed so far do not involve a coordination of two clauses, of which the second clause has been reduced (i.e., contains an ellipsis site). Rather, these examples all involve coordination at the remnant constituent level.

4.2 Backward Conjunction Reduction

This section discusses the phenomenon of *Backward Conjunction Reduction* (henceforth BCR), exemplified in (35)b and repeated here as (44):

- (44) [Jan kocht een auto] en [Marie huurde een auto].
Jan bought a car and Marie rented a car
'Jan bought and Marie rented a car.'

This phenomenon is also known as *Right Node Raising*. In early transformational grammar an example like (44) was derived by across-the-board rightward movement of the shared element (*een auto* 'a car') from the left and right conjunct, as in (45). According to this movement analysis, the gap in the left conjunct is not the result of ellipsis. In the rest of section 4.2, we will use the more neutral notion of *Backward Conjunction Reduction*.

- (45) John bought t_i and Mary rented t_i [a car] $_i$.

It is important to note at the very start that BCR is conjunct-final and not sentence-final. That is, the shared element is not at the end of the entire sentence but rather at

the end of the right conjunct. This is exemplified in (46), where the verb *huurt* is the shared element.

- (46) * [[Dat Jan een auto huurt en Marie een fiets huurt]
 that Jan a car rents and Marie a bike rents
 is bekend *huurt*]
 is well-known rents

BCR has the intonation pattern in (47): there is emphasis (represented here with small capitals) on the contrasting words within the conjuncts.

- (47) Jan KOCHT en Marie HUURDE een auto.
 Jan bought and Marie rented a car
 'Jan bought and Marie rented a car.'

In (47), the shared material (*een auto* 'a car') qualifies as a constituent, *in casu* a noun phrase, but e.g. APs, PPs, CPs and TPs can also be the remnant in FCR. For reasons of space, we only provide an example of the latter.

- (48) Jan eet een banaan nadat hij gesport heeft en (TP)
 Jan eats a banana after he sported has and
 Kees eet een appel voordat hij *gesport heeft*.
 Kees eats an apple before he sported has
 'Jan eats a banana after working out, and Kees eats an apple before working out.'

It should be noted that the shared material does not need to qualify as a constituent. Some illustrations of this are given in (49), where the subscripted (i.e., shared) material "crosses" a constituent boundary.

(49) a. Jan heeft [_{NP} een dik boek] gelezen en Piet
 Jan has a thick book read and Piet
 heeft een dun boek gelezen.
 has a thin book read
 'Jan read a thick book and Piet a thin book.'

b. Jan heeft [_{NP} twee jaar] in Parijs gewoond en
 Jan has two years in Paris lived and
 Piet heeft drie jaar in Parijs gewoond.
 Piet has three years in Paris lived

As shown by (50), the BCR-gap can be contained in a (deeply) embedded clause (see also (46) above).

(50) a. Jan zei [_{CP} dat hij een boek had gelezen] en
 Jan said that he a book had read and
 [_{CP} dat Piet de krant had gelezen].
 that Piet the newspaper had read
 'Jan said that he had read a book and that Piet had read the newspaper.'

b. Jan zei [_{CP} dat hij dacht [_{CP} dat Nederland de wedstrijd
 Jan said that he thought that The.Netherlands the game

zou winnen]] en Piet zei[_{CP} dat hij dacht [_{CP} dat
 would win and Piet said that he thought that
 Duitsland *de wedstrijd zou winnen*]].
 Germany the game would win

'Jan said that he thought that the Netherlands would win the game and Piet
 said that he thought that Germany would win the game.'

It should further be noted that the FCR-gap can be embedded in an island
 configuration. This is exemplified in (51) with a complex noun phrase.

(51) Jan kende [_{NP} een man [_{CP} die vaak in Parijs was geweest]]
 Jan knew a man who often in Paris was been
 en Piet kende een man die nooit *in Parijs was geweest*.
 and Piet knew a man who never in Paris was been
 'Jan knew a man that had often been in Paris and Piet knew a man that had
 never been in Paris.'

For certain speakers, it is possible to move material out of the shared element.
 Other speakers judge these examples as marked. In (52), for example, the pronoun
waar has been moved out of the PP complement of the shared AP.

(52) ? Waar_i was Jan al jaren [verslaafd [_{ti} aan]] en raakte
 where was Jan already years addicted to and got
 Marie gisteren pas [*verslaafd [_{ti} aan]*]?
 Marie yesterday only addicted to

'What had Jan already been addicted to for years and did Marie get addicted to only since yesterday?'

All examples of BCR given so far involve structures in which the shared material is in the right periphery of a coordinate structure whose conjuncts are clauses. It should be noted, though, that the BCR-phenomenon is also attested in coordinate structures involving phrasal conjuncts. In (53), for example, BCR applies within a coordinate structure with two nominal conjuncts.

- (53) [[_{NP} Jongens die twee broertjes hebben] en [_{NP} meisjes die
boys who two little-brothers have and girls who
drie broertjes hebben]] krijgen gratis toegang.
three little.brothers have get free access
'Boys with two and girls with three little brothers get free access.'

Although the phenomenon of BCR is typically found in coordinate structures, it should be noted that it is also sometimes found in structural configurations that are not coordinations. This is illustrated in (54), where BCR applies to an argument of the verb, and the shared material is contained within another argument that follows. The question mark indicates that not all speakers of Dutch find these sentences fully acceptable.

- (54) ? Jan stelde [echtparen die twee kinderen hadden]
Jan proposed couples who two children had
[aan echtparen die drie kinderen hadden] voor.

to couples who three children had PRT

'Jan introduced couples with two children to couples with three children.'

Let us finally address the question whether the elided material in the left conjunct and the shared material in the right conjunct must be identical in form. Examples in which there is a mismatch are given in (55). It should be noted that certain speakers find these sentences fully grammatical, while others consider them to be completely impossible.⁶ This inter-speaker variation is represented by means of % (see Kluck 2009 for discussion of speaker variation concerning matching problems in Dutch BCR).

⁶ Quite surprisingly, ((55)a,b) are better than the corresponding examples in which the finite verb/reflexive is overtly realized:

- (i) a. * Ik vind het raar dat jij wel bent uitgenodigd
I find it strange that you PRT are invited
maar wij niet zijn uitgenodigd.
but we not are invited
- b. ?* Jan MOCHT zich scheren maar ik MOEST me scheren.
Jan could himself shave but I had.to myself shave

As pointed out by a reviewer, this could be due to phonological reasons: The contrasted element in the first clausal conjunct must be the rightmost overtly realized element in that conjunct.

- (55) a. % Ik vind het raar dat jij wel bent uitgenodigd
 I find it strange that you PRT are invited
 maar wij niet zijn uitgenodigd.
 but we not are invited
 'I find it strange that you are invited but that we are not invited.'
- b. % Jan mocht zich scheren maar ik moest me scheren.
 Jan could himself shave but I had.to myself shave
 'Jan was allowed to shave himself, but I had to shave myself.'

In (55)a, the perfective auxiliaries display a mismatch in person and number: *bent* (2nd person singular) versus *zijn* (1st person plural). In (55)b, there is a mismatch in the form of the reflexive pronoun: *zich* (3rd person) versus *me* (1st person singular).

Even though we can conclude from (55) that mismatches are possible in Dutch BCR-patterns (at least for certain speakers), we should add that examples can be found in which matching is required:

- (56) * Jan is gisteren gekomen en Piet zal morgen komen.
 Jan is yesterday come and Piet will tomorrow come
 'Intended: Jan came yesterday and Piet will come tomorrow.'

In these examples, there is a mismatch in the form of the main verb: the participial form (*gekomen*) versus the infinitival form (*komen*). Even if the participial form and the infinitival form are phonologically identical, it is impossible for many people to have them as shared material in BCR-patterns:

(57) * Jan is vandaag zijn bril vergeten en Marie
 Jan is today his glasses forgotten and Marie
 zal morgen haar tas vergeten.
 will tomorrow her bag forget
 'Intended: Jan forgot his glasses today and Marie will forget her bag
 tomorrow.'

As is clear from the above discussion, BCR and FCR display different grammatical behavior in many respects. Even though they both fall under the descriptive label of conjunction reduction, it seems plausible to treat them as very different phenomena.

For more information and in-depth analyses of Conjunction Reduction in Dutch we refer the reader to Bakker (1968), Blom (1975), Neijt (1979), De Vries (1992), Haeseryn et al. (1997), De Vries (2005), Pieters (2011), Cremers (2014), Zwart (2014).

5. Sluicing and its subtypes

Dutch allows sluicing, i.e. ellipsis in *wh*-clauses where the only remnant is the *wh*-element. Consider the example in (58).

(58) Ik heb iemand gezien, maar ik weet niet **wie** ik gezien heb.
 I have someone seen but I know not who I seen have
 'I saw someone, but I don't know who.'

The example in (58) is a standard example of sluicing. The IP-part of the embedded question *ik gezien heb* 'I have seen' has been elided. The remnant consists of a wh-word, in this case *wie* 'who'. Sluicing is possible with subjects, as shown in (58), but also with other arguments, like indirect objects (59)a, and with adverbs (59)b.

- (59) a. Ik gaf iemand een boek, maar ik weet niet *wie*.
 I gave someone a book but I know not who
 'I gave a book to someone, but I don't know who to.'
- b. Jan heeft mij ooit gekust, maar ik weet niet meer *wanneer*.
 Jan has me once kissed but I know not anymore when
 'Jan has kissed me once, but I don't remember when anymore.'

Sluicing is also possible with all types of wh-items (e.g. *waarom* 'why', *wanneer* 'when', *hoeveel* 'how many'), but the examples with the wh-element *wat voor* 'what for, i.e. what kind of', are most interesting since this element can be split. Consider the sentences in (60), which illustrate the *wat voor*-pattern without ellipsis.

- (60) a. Ik weet niet *wat voor boek(en)* Jan kocht.
 I know not what for book(s) Jan bought
 'I don't know what kind of book(s) Jan bought.'
- b. Ik weet niet *wat* Jan *voor boek(en)* kocht.
 I know not what Jan for book(s) bought
 'I don't know what kind of book(s) Jan bought.'

Sluicing is only possible with the non-split *wat voor* 'what for' variant, (61)a, not with the split one, (61)b:

(61) Jan heeft bepaalde boeken gekocht, maar...

Jan has certain books bought but

'Jan has bought certain books, but...'

a. ik weet niet precies *wat voor boek(en)* Jan heeft gekocht.

I know not exactly what for book(s) Jan has bought

'I don't know exactly what kind of book(s).'

b. * Ik weet niet precies *wat Jan voor boek(en)* heeft gekocht.

I know not exactly what Jan for book(s) has bought

'I don't know exactly what kind of book(s) Jan bought.'

It is not entirely clear what causes the ungrammaticality of (61)b. It might simply be that the parallelism between the antecedent clause and the sluice prohibits sluicing in split *wat voor* 'what for'-constructions. The antecedent clause does not contain an element that is similar to the *wat voor* 'what for' wh-element, since there is no indefinite counterpart of it.

Something similar is found with wh-pronouns that undergo preposition stranding. The R-pronoun *waar* 'where' and the preposition *op* 'on' can be split in the non-sluced version of this sentence, but not in the sluiced version. Consider this contrast in (62) (see also Merchant 2001; Chung 2005 and also Kluck 2014 who provides an analysis for this observation).

(62) Jan geloofde ergens in, ...

Jan believed somewhere in

'Jan believed in something, ...'

a. maar ik weet niet *waar* Jan *in* geloofde.

but I know not where Jan in believed

'but I don't know what Jan believed in.'

b. * maar ik weet niet *waar*.

but I know not where

The by now standard analysis of sluicing involves deletion of IP (see Merchant 2001).

The idea is that the remnant of sluicing, i.e. the wh-phrase, has moved out of the IP before ellipsis has taken place. As such this wh-element shows the characteristics of movement (like reconstruction) as well as the morphological properties related to the position it has moved from (i.e. the morphological case belonging to the base position of the wh-phrase). Unfortunately, Dutch wh-items do not show case distinctions and hence they do not provide any information about the base position of the wh-phrase in sluicing. However, Dutch sluicing shows the same reconstruction effects for binding as English sluicing. Consider the data in (63).

(63) [Marie en Piet]_i lachen om sommige

Marie and Piet laugh about some

grapjes van elkaar_i, maar ik weet niet ...

jokes of each.other but I know not

'Marie and Piet laugh about some jokes of each other's, but I don't know...'

a. om welke grapjes van elkaar_i [Marie en Piet]_i lachen.

about which jokes of each.other Marie and Piet laugh

'about which jokes of each other's Marie and Piet laugh.'

b. om welke grapjes van elkaar_i.
about which jokes of each.other

'about which jokes of each other's.'

Since the reciprocal *elkaar* 'each other' is bound by the subject *Marie en Piet* in the b-example, the sluiced part of the sentence should contain this antecedent, indicating that the IP has been deleted.

Another frequently used diagnostic for movement, i.e. island sensitivity, works slightly different in sluicing. Dutch sluices, like English ones, are sensitive to weak islands (see also Sauerland 1996) (see (64) with a negative island) but not to strong islands (see (65), with a complex NP-island)⁷.

(64) Marie heeft niet gezegd dat Jan de auto

Marie has not said that Jan de car

op een bepaalde manier repareerde...

in a certain way repaired,

'Marie didn't say that Jan repaired the car in a certain way...'

a. * en ik weet hoe Marie niet heeft gezegd

and I know how Marie not has said

dat Jan de auto repareerde.

that Jan the car repaired

⁷ Note that island sensitivity does hold for so-called contrast sluices or *else* sluices (see Merchant 2008). This is true for Dutch as well.

b. * en ik weet hoe.
and I know how

(65) Ze hebben iemand aangenomen die een Slavische taal
they have someone hired that a Slavic language
spreekt, ...

speaks

'They hired someone that speaks a Slavic language, ...'

a. * maar ik weet niet [_{CP} [welke Slavische taal]_i
but I know not which Slavic language
[_{C'}[_{TP} ze [_T[iemand [die spreekt t_i]] hebben aangenomen]]]].
they someone who speaks have hired

b. maar ik weet niet welke Slavische taal.
but I know not which Slavic language
'but I don't know which Slavic language.'

A potential problem for the IP-deletion analysis is multiple wh-sludging which is grammatical in Dutch. Consider (66)a, (see also Merchant 2001:111). If sludging is the result of wh-movement followed by ellipsis, we can conclude that multiple wh-sludging in (66)a is the result of movement of the wh-items *wie* 'who' and *wat* 'what' into the CP domain where they survive the ellipsis of IP. However, multiple wh-fronting is ungrammatical in non-ellipsis contexts in Dutch, see (66)b.

(66) a. Jan gaf iemand iets, maar ik weet niet wie wat.
Jan gave someone something, but I know not who what

'Jan gave something to someone, but I don't know who Jan gave what.

- b. * Jan gaf iemand iets, maar ik weet niet wie wat Jan
Jan gave someone something but I know not who what Jan
gaf.
gave

To account for this problem Lasnik (2013) argues that multiple wh-slucing in English is the result of moving one of the wh-items into the CP domain via regular wh-movement, whereas the other one undergoes heavy NP-shift.⁸ This explanation does not hold for Dutch, however, since it allows multiple wh-slucing of elements that do not allow heavy NP-shift (see also Boone 2014):

- (67) * Iemand heeft iets gegeten, maar ik weet niet
someone has something eaten but I know not
wie heeft gegeten wat.
who has eaten what

Now let us consider how Dutch fares with subtypes of sluicing: sprouting and swiping.⁹ Sprouting, i.e. sluicing based on an implicit argument or modifier of the antecedent predicate, is possible in Dutch:

⁸ But see Richards (1997, 2001) for an alternative account of these data.

⁹ Another subtype of sluicing is spading (see Van Craenenbroeck 2010). As this is only possible in dialectal Dutch we discuss it in section 10 below.

- (68) Jan wil een band vervangen, maar hij weet niet hoe.
 John wants a tire replace but he knows not how
 'John wants to replace a tire, but he does not know how.'

In this example *hoe* 'how' is the implicit modifier of the predicate *wil een band vervangen* 'wants to replace a tire'.

One subtype of sluicing that is not found in Dutch is so-called swiping (see (69)). Swiping, which is an acronym for Sluiced Wh-word Inversion with Prepositions in Northern Germanic, reverses the order of wh-element and preposition in sluicing contexts.

- (69) Ik heb op iemand gewacht, maar ik weet niet op wie/*wie op.
 I have on someone waited but I know not on who/who on
 'I waited for someone, but I don't know who for.'

Swiping is typically found in languages that allow preposition stranding. Dutch only allows preposition stranding with R-pronouns, not with regular pronouns, as is shown in the contrast between (70)a-b:

- (70) a. Ik heb ergens op gewacht,
 I have something on waited,
 maar ik weet niet **waar** ik **op** heb gewacht.
 but I know not where I on have waited
 'I have waited for something, but I don't know what I waited for.'
- b. * Ik heb op iemand gewacht,

I have on someone waited,
maar ik weet niet **wie** ik **op** heb gewacht.
but I know not who I on have waited

'Intended: I have waited for someone, but I don't know who I waited for.'

c. Ik heb ergens op gewacht,

I have something on waited,

maar ik weet niet **waarop**.

but I know not where.on

'I have waited for something, but I don't know what for.'

The example in (70)c shows that the order wh-pronoun-preposition is possible with R-pronouns. However, this order is not limited to ellipsis contexts, but it is the normal order of preposition and R-pronoun, so it is a bit unclear whether we can speak of swiping in these cases.¹⁰

For more details and in-depth analyses about sluicing, swiping and sprouting in Dutch we refer the reader to Van Craenenbroeck (2004, 2010), Boone (2014), Broekhuis and Corver (2015).

6. Fragments

Fragments, i.e. non-clausal answers to questions, are also found in Dutch. Consider an example from Dutch in (71).

¹⁰ Note that Van Craenenbroeck (2004, 2010) provides an argument in favor of the idea that there is swiping in similar examples in Frisian. We will not go into this analysis here, but refer the reader to the original work.

Fragments, just like sluicing, are argued to be the result of movement of an element into the CP and concomitant ellipsis of IP (see Merchant 2004). This means that the sentence in (71) has the underlying structure in (73).

(73) A:	Wie heeft hij gekust?	B:	Piet/Hem heeft hij Piet/hem gekust.
	who has he kissed		Piet/him has he Piet/him kissed
	'A: Who did he kiss?		B: Piet/Him.'

We refer the reader to the chapter about Fragments in this volume for a more extensive discussion.

Just as with sluicing, we discuss several connectivity properties of Fragments in Dutch. Fragments, just like sluicing, show some (but not all) connectivity effects. Let us first consider binding. The example in (74) shows that principle A, B and C of the binding theory are at work in Fragments:

(74) A:	Wie heeft hij _i geprobeerd te scheren?	B:	* Jan _i /*Hem _i /Zichzelf _i .
	who has he tried to shave		Jan/him/himself
	'A: Who has he tried to shave?		B: himself.'

Let us now consider two other connectivity effects: sensitivity to islands and preposition stranding. Let us start with preposition stranding. If fragments involve movement into the left periphery with concomitant ellipsis, we expect languages that allow preposition stranding to also allow bare DPs as fragments. This is most clearly illustrated by English:

(75) A: To whom did John speak? B: Mary John spoke to-

English allows preposition stranding and hence the fragment answering the question in (75) can be just the complement of the preposition *to*, i.e. Mary. Other languages, like Dutch, display more complex behavior with respect to preposition stranding.

Consider the examples in (76).¹¹

- (76) a. Op Anna/Op haar/ Daarop wacht Piet het liefst.
On Anna/on her/there.on waits Piet the best
'For Anna/For her/For that Piet enjoys waiting the most.'
- b. * Anna/*Haar/ Daar wacht Piet het liefst op.
Anna/her/there waits Piet the best on
'Anna/Her/That Piet enjoys waiting for the most.'
- c. Waar wacht Piet het liefst op?

¹¹ For some speakers of Dutch preposition stranding with DPs is possible. Some speakers also allow DP fragments in these preposition stranding contexts. Merchant would predict that the group of speakers allowing preposition stranding with DPs be identical with the group of speakers allowing bare DP-fragments in sentences like (76)c. This is not necessarily the case, as the judgements of one of the reviewers reveals (s/he does not allow preposition stranding with bare DPs but does allow bare DP-fragments like the ones in (76)c). More research is needed into the correlation between preposition stranding and fragments in Dutch.

where waits Piet the best on
 * (Op) Anna/*(Op) haar/Daar*(op).
 on Anna/on her/there on
 'What does Piet enjoy waiting for the most? Anna/her/it.'

The examples show that Dutch speakers allow preposition stranding with R-pronouns (see Riemsdijk 1978). However, a fragment answer involving just the R-pronoun seems to be ungrammatical. We refer the reader to Kluck (2014) for an analysis of this observation.

Just as in English, Fragments are insensitive to certain islands:

- (77) A: Willen ze iemand aannemen die syntaxis geeft?
 want they someone hire that syntax teaches
 'A: Do they want to hire someone who teaches syntax?'
- B: Nee, ze willen iemand aannemen die fonologie geeft.
 no they want someone hire that phonology teaches
 'B: No, they want to hire someone who teaches phonology.'
- B': * Nee, fonologie willen ze iemand aannemen die geeft.
 no phonology want they someone hire that teaches
- B'': Nee, fonologie.
 no phonology
 'No, phonology.'

Movement out of a complex NP is impossible in Dutch, see (77)B'. The fragment that derives from this underlying structure is grammatical, though, see (77)B''.

Dutch poses some problems for Merchant's analysis of fragments: negation *niet* 'not' cannot be fronted to the beginning of the sentence, see (78)B'. This predicts that it cannot be a fragment. This prediction is not borne out, however, as the grammaticality of (78)B shows.

(78) A: Komt Jan nu wel of niet naar het feestje?

comes Jan now AFF or not to the party

'A: Is Jan coming to the party or not?'

B: Niet/Wel.

Not/AFF

'B: Yes/No.'

B':* Niet/Wel komt Jan naar het feestje.

not/AFF comes Jan to the party

Note, by the way, that an analysis of (78) as not involving ellipsis at all cannot be correct, since these fragments are sensitive to certain islands, as illustrated with an adjunct island in (79).

(79) A: Is Jan boos omdat Piet wel of niet naar het feestje komt?

is Jan angry because Piet AFF or not to the party comes

'A: Is Jan angry because Piet is or is not coming to the party?'

B: * Niet/Wel.

Not/AFF

Multiple fragments are also possible in Dutch, see (80)B, whereas multiple movement into CP is not, see (80)B':

- (80) A: Heeft Jan Henk gekust?
has Jan Henk kissed
'A: Has Jan kissed Henk?'
B: Nee, Piet Marie.
no Piet Marie
'B: No, Piet Marie.'
B': * Nee, Piet Marie heeft gekust.
no Piet Marie has kissed

Merchant (2004) also observes this for German and argues that ellipsis in some way repairs the problems posed by multiple fronting.

Finally, Dutch allows for embedded fragments (Temmerman 2013). Consider the examples in (81) (from Temmerman 2013, her example (10)).

- (81) A: Wie dacht Carl dat de wedstrijd zou winnen?
who thought Carl that the contest would win
'A: Who did Carl think would win the contest?'
B: Hij had gedacht Kim.
he had thought Kim
B': % Hij had Kim gedacht.
he had Kim thought

B": Hij dacht Kim.

he thought Kim

'B: 'He (had) thought that Kim would win the contest.'

As the answers in B, B' and B" show the fragment *Kim* can be embedded within another clause, either following the verb as in B and B" or preceding it, as in B'.

Temmerman provides several tests to show that embedded fragments are the result of ellipsis rather than, for instance, parenthesis. We will not repeat these tests here, but refer the reader to the original work.

For more details and elaborate analysis of fragments in Dutch we refer the reader to Aelbrecht (2010), Temmerman (2013), Boone (2014) and Broekhuis and Corver (2015).

7. Nominal ellipsis

Nominal ellipsis occurs when the noun, possibly in combination with material accompanying the noun, is missing from the noun phrase (see Lobeck 2006). In (82), some illustrations of nominal ellipsis in Dutch are given. These examples clearly illustrate that the nominal head or a larger part of the noun phrase can be missing.

(82) Jan kocht die dure Chinese vaas van porselein en ...

Jan bought that expensive Chinese vase of porcelain and ...

a. Marie kocht die goedkope Japanse vaas van plastic.

Marie bought that cheap Japanese vase of plastic

'Marie bought that cheap Japanese one of plastic.'

b. Marie kocht die goedkope Japanse vaas van plastic.

Marie bought that cheap Japanese vase of plastic

'Marie bought that cheap Japanese one of plastic.'

After elision of the noun or a larger nominal projection, one or more remnants are left behind in the elliptical noun phrase. As shown by the examples in (83) and (84), nominal ellipsis in Dutch is only possible with certain types of remnants. For example, the prenominal “satellites” *Jans* 'Jan's' (possessor) and *veel* 'many' (indefinite quantifier) do not license a nominal gap, whereas *groene* 'green' (attributive adjective), and *die* 'that' (demonstrative) do.¹²

- (83) a. ?* Els heeft [Piets auto] verkocht en Marie heeft
Els has Piet's car sold and Marie has
[Jans auto] verkocht.
Jan's car sold
- b. * Els heeft [weinig auto's] verkocht maar
Els has few cars sold but

¹² Interestingly, the examples in (83) are possible if nominal ellipsis is combined with gapping, as in (i). We leave the analysis of these structures for future research.

- (i) Els verkocht [Piets auto] en Marie verkocht [Jans auto].
Els sold Piet's car and Marie sold Jan's car

Marie heeft [veel auto's] verkocht.¹³

Marie has many cars sold

(84) a. Els heeft [een witte auto] verkocht en

Els has a white car sold and

Marie heeft [een groene auto] verkocht.

Marie has a green car sold

'Els sold a white car and Marie sold a green one.'

b. Els heeft [deze auto] verkocht en

Els has this car sold and

Marie heeft [die auto] verkocht.

¹³ Note that the quantifier *veel* or the cardinal *drie* can be followed by a nominal gap (\emptyset) in clausal constructions featuring the quantitative pronoun *er* (literally: there; paraphrasable as 'of them'):

(i) Marie heeft er gisteren [veel / drie \emptyset] verkocht.

Marie has there yesterday many / three sold

'Mary sold many/three yesterday.' (e.g., many/three cars)

In Bennis (1986), the noun phrase internal gap (\emptyset) is analyzed as a silent pro-form bound (and licensed) by *er*, which is base-generated in a special clause-internal position. In Coppen (1991), on the other hand, the gap is taken to be a trace that results from displacement of *er* out of the noun phrase.

Marie has that car sold

'Els sold this car and Marie sold that one.'

Notice also that postnominal satellites (e.g., PPs and clauses) do not license NPE; see (85). Note in passing that the same example shows that an (in)definite article is not able to license NPE either.¹⁴

- (85) * Els heeft [een/de auto met trekhaak] gekocht en
Els has a/the car with towbar bought and
Marie heeft [een/de auto zonder trekhaak] gekocht.
Marie has a/the car without towbar bought

In the literature on Dutch NPE (see, for instance, Muysken & Van Riemsdijk 1986, Kester 1996), it has been argued that licensing of the ellipsis site in (84)a relates to the presence of the inflectional *e*-ending on the attributive adjective. In a way, this inflectional ending makes it possible to recover the properties of the elided noun. Evidence in support of this licensing role of *-e* comes from the fact that certain

¹⁴ Sentence (i) is fine in Dutch, with *één* 'one' as a numeral and quantitative *er* as a pro-form that is related to the noun phrase internal gap (\emptyset).

- (i) Els heeft een auto met trekhaak gekocht en
Els has a car with towbar bought and
Marie heeft er_i [één \emptyset_i zonder trekhaak] gekocht.
Marie has there one without towbar bought
'Els has bought a car with a towbar and Marie has bought one without a towbar.'

speakers of Dutch reject NPE when the attributive adjective does not carry this inflection. As shown in (86)a, this happens when the attributive adjective modifies a singular, indefinite neuter noun. Adding *-e* after the attributive adjective (as a last resort), as in (86)b, rescues the NPE-structure for those speakers. It should be noted that the pattern in (86) does not apply to all speakers of Dutch. Some (mostly speakers of Southern Dutch) do allow a morphologically bare adjective like *zwart* in nominal ellipsis patterns.¹⁵ These speakers also find the variant with an *e*-ending, as in (86)b, degraded or even completely impossible. The inter-speaker variation attested for these examples is represented by means of %.

(86) a. % Els heeft [een wit paard_{Neut.Sg.}] verkocht en
 Els has a white horse sold and
 Marie heeft [een zwart paard] verkocht.
 Marie has a black horse sold
 'Els sold a white horse and Marie sold a black one.'

b. % Els heeft [een wit paard_{Neut.Sg.}] verkocht en Marie

¹⁵ The question arises why (especially) speakers from Southern Dutch permit a morphologically bare adjectival remnant. Corver & Van Koppen (2011) suggest that dialectal variation might play a role here. Specifically, many southern varieties of Dutch morphologically distinguish three genders (masculine, feminine, neuter), while northern varieties have a two-gender system (neuter versus non-neuter). This contrast in the morphological gender system possibly plays a role in the different behavior of attributive adjectives in NPE-contexts.

Els has a white horse sold and Marie

heeft [een zwarte paard] verkocht

has a black-e horse sold

'Els sold a white horse and Marie sold a black one.'

According to the analysis just sketched, *-e* is an adjectival inflection which licenses the elided noun. Schematically, with \emptyset representing the missing noun: [DP een [NP groen-*e* [NP \emptyset]]]. In Corver and Van Koppen (2009), it is proposed that *-e* is not an agreement marker but rather a focus marker, whose Spec-position is the landing site of a displaced focalized AP: [DP een [_{FocP} groen_i [_{Foc'} -*e* [NP t_i [NP \emptyset]]]]]. In Corver and Van Koppen (2011), on the other hand, *-e* is analyzed as a pro-form that spells out N(P). This pronominalization strategy (compare English *one* in *a green one*) yields the following structure: [DP een [NP groen [NP -*e*]]]. According to this last analysis, *een groene* does not involve nominal ellipsis, which means that the issue about the licensing of the missing noun becomes irrelevant. We refer the reader to these articles for discussion of the pros and cons of these proposals.

N-ellipsis can be triggered by a non-linguistic context or a linguistic context. For example, while looking at two bikes on display in a shop one can say (87)a. The contents of the elided noun can also be recovered from an antecedent noun in the linguistic context, whereas N-ellipsis normally requires that the overtly realized noun precedes the empty one. See also Broekhuis (2013: 298-306) for discussion.

(87) Ik ga de groene kopen.

I go the green buy

'I will buy the green one.'

In (88) an example is given of a sentence in which the NP to which N-ellipsis has applied precedes the "antecedent" noun phrase. Most speakers of Dutch reject sentences like (88), instead preferring the order in which the overt noun precedes the empty one, as in (87) (see Broekhuis (2013:303) for discussion).

- (88) % Ik ga een witte kopen nadat ik de groene
I go a white buy after I the green
fiets heb verkocht.
Bike have sold
'I will buy a white bike after having sold the green bike.'

In this section, we have discussed NPE, especially NPE with adjectival remnants. We will come back to NPE with other remnants like possessors, wh-pronouns and demonstratives in section 10.2 below. For more information and in-depth analyses of nominal ellipsis in Dutch we refer the reader to Kester (1996), Corver & Van Koppen (2009, 2011), Kranendonk (2011), Broekhuis (2013) and Zwart (2014).

8. Comparative Deletion

As shown by (89) material can be missing in Dutch comparative constructions:

- (89) Jan heeft meer vrouwen uitgenodigd dan ik __ had uitgenodigd.
Jan has more women invited than I had invited
'Jan invited more women than I had invited.'

(89) exemplifies the phenomenon of *Comparative Deletion*. The compared element *vrouwen* 'women' in the *dan* 'than'-clause has been deleted under identity with the element *vrouwen* 'women', which is introduced by the comparative operator *meer* 'more' in the antecedent clause. It is generally assumed that the elided element in (89) is not simply a bare nominal element (*vrouwen* 'women') but rather a quantified nominal expression (*x-MANY vrouwen*).

Interesting evidence in support of the presence of an underlying quantifier (*x-MANY*) in the compared constituent comes from an example like (90)a, which minimally differs from (89) in having so-called quantitative *er* (there, 'of them') in the comparative clause (Bennis 1977, 1978). This clitic-like element typically occurs in clausal environments featuring a(n indefinite) direct object noun phrase whose nominal head is empty, possibly as a result of movement, and which is introduced by a cardinal or indefinite quantifier (see (90)b). Analogously to the structure in (90)b, the comparative clause in (90)a can be assigned the structure in (90)c, where Q_{\emptyset} represents the silent (i.e., phonetically empty) quantifier *x-MANY*.

- (90) a. Jan heeft meer vrouwen gevraagd dan ik er had gevraagd.
 Jan has more women invited than I there had invited
 'Jan has invited more women than I had invited.'
- b. Jan dacht dat ik er_i toen [drie/veel t_i] had gevraagd.
 Jan thought that I there then three/many had invited
 'Jan thought that I had invited three/many of them then.'
- c. ... dan ik er_i [Q_{\emptyset} t_i] had gevraagd.
 than I there had invited
 '...than I had invited.'

Besides the phenomenon of Comparative Deletion, Dutch also exhibits the phenomenon of *Comparative Subdeletion* (91)a and the pattern in (91)b, a so-called *Phrasal Comparative*:

- (91) a. Jan heeft meer vrouwen uitgenodigd dan
Jan has more women invited than
Marie ___ mannen had uitgenodigd.
Marie men had invited
'Jan invited more women than Marie had invited men.'
- b. Jan heeft meer vrouwen uitgenodigd dan ik.
Jan has more women invited than I
'Jan invited more women than me.'

In (91)a, the element that is missing in the comparative clause corresponds to a quantifying element (*x-MANY*). In (91)b, there is no (comparative) clause that follows *dan* 'than', at least not at the surface. Instead of a full clause, we find a phrasal constituent (*in casu* the pronoun *ik* 'I') right after *dan*. The question, obviously, arises as to whether this phrasal constituent is base-generated as a complement of *dan* 'than' or should be treated as a remnant in an elided comparative clause.

In what follows, we will discuss these three phenomena in more detail. Section 3.1 discusses Comparative Deletion, section 3.2 Comparative Subdeletion, and section 3.4 Phrasal Comparatives. Section 3.3 addresses the question to what extent Comparative Deletion and Comparative Subdeletion display coordination-like properties.

3.1 Comparative Deletion

An important property of Comparative Deletion (henceforth CD) is the obligatoriness of elision: the compared quantified expression (*x-MANY vrouwen*) in (92) must be deleted. Compare (92) with (89).

- (92) * Jan heeft meer vrouwen uitgenodigd dan
Jan has more women invited than
ik [veel vrouwen] had uitgenodigd.
I many women had invited
'Jan invited more women than I had.'

As shown by (93), CD not only applies to direct object noun phrases but also to noun phrases with other grammatical functions (see (93)a) and adjective phrases (including those with an adverbial function). Notice by the way that the two occurrences of *er* in (93)a are expletive subjects and not instances of quantitative *er*.

- (93) a. Er houden meer mannen van voetbal dan er __SUBJ van tennis
there love more men of soccer than there of tennis
houden.
love
'There are more men who are fond of soccer than there are men who are fond
of tennis.'
- b. Deze weg is tegenwoordig breder dan hij vroeger __ was.

this road is nowadays broader than he formerly was

'This road is broader nowadays than it used to be in the past.'

The elided compared phrase can be part of an embedded clause which is selected by a so-called bridge verb, as in (94)a. The elided phrase, however, cannot be contained within an island configuration (e.g., a wh-island); see (94)b. This grammatical behavior of Dutch CD-constructions suggests that a movement operation is involved in the derivation of the comparative clause (Chomsky 1977; Bennis 1978). In other words, there are good reasons to assume that the gap in the comparative clause is a trace that results from the application of a movement operation.

(94) Jan heeft meer romans besproken ...

Jan has more novels discussed

'Jan has discussed more novels...'

a. dan ik denk [dat ik ooit __ zal lezen].

than I think that I ever will read

'than I think I will ever read.'

b. * dan ik me afvraag [wanneer ik __ zal lezen].

than I me wonder when I will read

In the CD-constructions discussed so far, the comparative clause introduced by *dan* 'than' follows the matrix clause containing the antecedent compared phrase. For example, in (93)a, the comparative clause *dan ik er had uitgenodigd* 'than I had invited' follows the matrix clause *Jan heeft meer vrouwen uitgenodigd* 'Jan has invited more women'. This means that the comparative clause is separated from the compared

nominal expression (*meer vrouwen* 'more women') with which it stands in a dependency relation via the quantifier *meer*. Importantly, as shown in (95), the comparative clause can also stand in a subordinate relation to the antecedent noun phrase:

- (95) [Meer complimenten [dan ik je nu __gegeven heb]]
 more compliments than I you now given have
 zul je nooit meer krijgen.
 will you never again get
 'You won't ever get more compliments than the number of compliments I just gave you.'

Notice that the antecedent compared phrase and the comparative clause together occupy the clause initial position, i.e., the position preceding the finite verb that occupies the second position in Dutch main clauses.

3.2 Comparative Subdeletion

In Comparative Subdeletion (henceforth CsubD) a quantifying element (*x-MANY*) is missing in the comparative clause. As shown in (96), elision of this quantifier is obligatory. Compare (96) with (92)a.

- (96) * Jan heeft meer vrouwen uitgenodigd dan Marie [veel mannen]
 Jan has more women invited than Marie many men ≈
 had uitgenodigd.
 had invited

CsubD can apply to nominal expressions with different grammatical functions (97)a and to adjectival expressions that function as predicate complements (97)b or modifiers:

(97) a. Er houden meer mannen van voetbal dan er [SU ___ vrouwen] van
there love more men of soccer than there women of
tennis houden.

tennis love

'There are more men fond of soccer than there are women fond of tennis.'

b. Deze weg is breder dan hij [___ lang] is.

this road is broader than he long is

'This road is broader than it is long.'

Compared to the CD-constructions in (94), CsubD-constructions in which the deleted quantifier is part of an embedded clause selected by a bridge verb seem to be degraded (see (98)a). It is not entirely clear whether the ill-formedness of the patterns in (98)b,c is due to a violation of an island constraint —implying that the gap corresponding to the "subdeleted" quantifier results from movement— or a kind of complex phrase constraint on deletion operations, which states that the antecedent of deletion should not be arbitrarily far from the deletion site (see Bresnan 1975, Chomsky 1977). Importantly, under the latter interpretation, CD and CsubD involve different mechanisms for creating a gap in the comparative clause (viz., movement versus deletion).

(98) Jan heeft meer romans besproken ...

Jan has more novels discussed

'Jan discussed more novels...'

a. ?? dan ik denk [dat ik ooit [___ gedichten] zal lezen].

than I think that I ever poems will read

'than I think I will ever read poems.'

b. * dan ik me afvraag [wanneer ik [___ gedichten] zal lezen].

than I me wonder when I poems will read

c. * dan ik [iemand die [___ gedichten] gelezen heeft] ken.

than I someone that poems read has know

For certain speakers of Dutch, CsubD cannot apply when the comparative clause is embedded within a noun phrase headed by the antecedent compared constituent (see (99)). There are also speakers who judge these sentences as quite acceptable. For the first group of speakers, there is a strong contrast between CsubD (99) and CD (95).

(99) */? [Meer complimenten [dan ik je nu ___

more compliments than I you now

adviezen gegeven heb]] zul je nooit meer krijgen.

advices given have will you never anymore get

3.3 CsubD, CD and Coordination

In the previous section, we discussed a number of phenomena for which CsubD seems to display different behavior from CD, specifically long distance behavior

((94)a,b versus (98)a,b) and embedding behavior ((95) versus (99)). If these contrasts are real, then different syntactic mechanisms are possibly at the basis of the derivation of these two types of comparative construction.

Another contrast between CD and CsubD regards the phenomenon of double comparison (cf. Von Stechow 1984, Corver 1990, 1993, Rijkhoek 1998). According to Von Stechow, a sentence like (100) must be interpreted as involving two pairs of compared elements. The first comparison is between the number of girls and the number of boys (i.e., the indirect objects in (100)), and the second comparison is between the number of flowers and the number of postcards (i.e., the direct objects).

(100) Jan heeft meer meisjes meer bloemen gestuurd dan hij
Jan has more girls more flowers sent than he
[___ jongens] [___ kaarten] heeft gestuurd.
boys postcards has sent
'Jan sent more flowers to more girls than he sent postcards to boys.'

Double comparison is impossible with CD-constructions:

(101)* Meer mannen hebben meer gedichten gelezen dan ___ ___ hebben
more men have more poems read than have
geschreven.
written

The question, obviously, arises how this contrast between CD and CsubD can be accounted for. A line of analysis that has been explored in the literature regards the

nature of the element *dan* 'than', which introduces the comparative clause. It has been proposed that *dan* 'than' in CD-constructions behaves like a subordinator whereas *dan* 'than' in CsubD-constructions behaves more like a coordinator (Corver 1990, 1993, Hendriks 1991, 1995). Note that, under this approach, the ill-formedness of (99) simply follows from the fact that the coordinator *dan* 'than' does not conjoin two phrases of the same categorial and semantic type. That is, *meer complimenten* 'more compliments' in (99)a and *ik je nu adviezen gegeven heb* 'I gave you advices now' are not "like"-categories.

If a CsubD-construction involves a coordination of the antecedent clause and the comparative clause (with *dan* 'than' as the conjoining element), we would expect other traits that hint at a resemblance between CsubD-constructions and coordinate constructions. One piece of evidence in support of this coordinative relation comes from Gapping (see section 2), which is typically found in coordinate structures (see (102)a. As shown in (102)b, it is possible to delete the (clause-final) finite verb of the *dan* 'than'-clause under identity with the finite verb (in Verb-Second position) of the preceding clause.

- (102) a. Jan spreekt Romaanse talen en
 Jan speaks Romance languages and
 Marie spreekt Germaanse talen.
 Marie speaks Germanic languages
 'Jan speaks Romance languages and Marie Germanic languages.'
- b. Jan spreekt meer Romaanse talen
 Jan speaks more Romance languages
 dan Marie Germaanse talen spreekt-

than Marie Germanic languages speaks

'Jan speaks more Romance languages than Marie Germanic languages.'

Secondly, we saw in section 4.2 that Backward Conjunction Reduction is also typically found in coordinate structures. Notice now the CsubD-constructions in (103) where *bewonderen* 'admire' has undergone BCR.

- (103) Ik denk dat meer vrouwen de schilderijen van Picasso *bewonderen*
I think that more women the paintings of Picasso *admire*
dan mannen de tekeningen van Rembrandt *bewonderen*.
than men the drawings of Rembrandt *admire*
'I think that more women admire the paintings of Picasso than men the
drawings of Rembrandt.'

Although the examples in (102) and (103) seem to support the proposal that CsubD-constructions involve a coordination of the antecedent clause and the comparative clause, they also raise a new question. It turns out that both Gapping and Backward Conjunction Reduction are also found in CD-constructions, as is exemplified in (104)a and (104)b, respectively.

- (104) a. [Jan heeft aan Marie meer boeken gegeven]
Jan has to Marie more books given
dan [Piet aan Els heeft gegeven].
than Piet to Els has given.
'Jan has given more books to Marie than Piet to Else.'

- b. Ik denk [dat meer jongens Duits zullen kiezen]
 I think that more boys German will take
 dan [_{x-jongens} Frans *zullen kiezen*].
 than x-boys French will take
 'I think that more boys will take German than French.'

The possibility of having Gapping and BCR in CD-constructions suggests that this type of comparative construction also has coordination-like characteristics. In other words, the earlier statement that *dan* 'than' in CD-constructions behaves like a subordinator needs further investigation. We leave that for future research.

3.4 Phrasal Comparatives

Phrasal comparatives have the characteristic property that a single phrase follows the comparative conjunction *dan*.

- (105) Jan heeft op woensdag meer mannen uitgenodigd ...
 Jan has on Wednesday more men invited...
 'Jan invited more men on Wednesday...'
 dan Piet/vrouwen/op zaterdag.
 than Piet/women/on Saturday
 'than Piet/women/on Saturday.'

These structures trigger the following question: Are these phrasal comparatives derived from a clausal source through deletion of identical material, or is the phrase following *dan* 'than' a direct (i.e., base-generated) complement of *dan* 'than'? An

argument in support of a clause-reduction analysis comes from phrasal comparatives like, in which the phrase following *dan* 'than' is a pronominal subject carrying nominative case. Under a clause-reduction analysis, the nominative case would simply be assigned by the finite verb (i.e., T) before it gets deleted at PF. This argument is weakened, though, by the fact that the default case in Dutch is nominative (unlike in English), as is clear from an example like *Ik_{NOM} dit probleem oplossen? Geloof je het zelf?* 'Me solve this problem? Do you really believe it?'. Possibly, *ik* in (106) is a default case.

- (106) Jan heeft op woensdag meer mannen uitgenodigd dan ik_{NOM}.
 Jan has on Wednesday more men invited than I
 'Jan invited more men on Wednesday than I.'

It should also be noted that in colloquial Dutch one often hears *dan mij* 'than me' instead of *dan ik* 'than I' in a sentence like (106). The object form *mij* 'me' suggests that it behaves like a complement of *dan* 'than' and not as the subject of a reduced finite comparative clause.

There are arguments that go against a clause reduction analysis of phrasal comparatives (see Hoeksema 1983, Hendriks 1995). For example, there are phrasal comparatives for which no clausal source can be found. In (107), *wereldrecord* 'world record' cannot possibly be interpreted as an argument of *sprong* 'jumped'.

- (107) Jan sprong hoger dan het wereldrecord (*sprong).
 Jan jumped higher than the world.record (jumped)
 'Jan jumped higher than the world record.'

For more information and in-depth analyses about comparative deletion in Dutch we refer the reader to Bennis (1978), Den Besten (1978), Corver (1990, 1993, 2006), Hendriks (1991, 1995), Lechner and Corver (to appear).

9. Null complement anaphora

The phenomenon of Null Complement Anaphora (NCA) involves the elision of a complete complement after certain verbal predicates (Depiante 2000). As shown by the following examples, it is generally impossible to elide the complement of a verb in Dutch, even if the contents of the elided material are recoverable on the basis of the linguistic (108) or discourse context (109).

(108) * Op het moment dat Piet het begon te vermoeden,
at the moment that Piet it began to suspect,
vermoedde ik _{het} ook.
suspected I it too

(109) A: Realiseer je je wat dat betekent?
realize you you what that means
'Do you realize what that means?'

B: * Ja, ik realiseer me heel goed _{wat dat} betekent.
yes I realize me very well _{what that} means

Note in passing that the ill-formed sentences in (108)-(109) are fine if a pronominal element fulfills the role of complement. This is illustrated in (110) for (108) and

(109):

(110) a. Op het moment dat Piet het begon te vermoeden,
at the moment that Piet it began to suspect,
vermoedde ik het ook.

suspected I it too

'At the moment that Piet began to suspect it, I suspected it too.'

b. Ja, ik realiseer me dat heel goed.

yes I realize me that very well

'Yes, I realize that very well.'

It is important to distinguish the phenomenon of Null Complement Anaphora from the phenomenon of Topic drop (see Weerman 1989). The latter phenomenon is exemplified in (111), where ' \emptyset ' represents the dropped constituent:

(111) A: Jan is ziek. B: Dat/ \emptyset vermoedde ik al.

Jan is ill that suspected I already

'Jan is ill.' 'That's what I suspected.'

Topic drop can only apply to a constituent that occupies the left periphery of the main clause (i.e., Spec,CP). It is generally assumed that the topic ends up in Spec,CP as a result of movement. It has been shown that constructions involving Topic drop are island sensitive. NCA does not seem to be island-sensitive in view of the well-formedness of an English example like: *The teacher told the children that it was time to leave even though they already knew \emptyset* . In this example, the gap (\emptyset) is contained

within an adjunct island introduced by *even though*. This suggests that NCA involves a base-generated (pronominal) gap (see Depiante 2000).

Although the default rule seems to be that NCA is not attested in Dutch, examples like the following can be found:

- (112) a. Ik had mijn vriend gevraagd een ring
I had my friend asked a ring
voor me te kopen maar hij weigerde.
for me to buy but he refused
'I had asked my friend to buy a ring for me, but he refused.'
- b. Ik vroeg Jan om mij 30 euro te lenen
I asked Jan for me 30 euro to lend
en na enig aandringen stemde hij in.
and after some insisting agreed he PRT
'I asked Jan to lend me 30 euro's and after some insisting he agreed.'

Notice, however, that verbs like *weigeren* 'to refuse' and *instemmen* 'to agree' are simply optionally transitive, just like the verb *koken* 'to cook', as in *Jan kookte (de aardappelen)* 'Jan cooked (the potatoes)'. In other words, the examples in (112) are not true instances of NCA.

Consider also the comparative constructions in (113); see also Cremers (2014):

- (113) Messi had meer doelpunten gemaakt ...
Messi had more goals made...
'Messi made more goals...'

- a. dan hij ___ dacht/besefte/vermoedde/hoopte.
 than he thought/realized/suspected/hoped
- b. dan hij ___ had voorspeld/verwacht/beoogd.
 than he had predicted/expected/intended

In these examples, the *dan* 'than' -clause of a comparative construction contains a verbal predicate whose complement has been elided. The contents of the elided complement are recoverable on the basis of the matrix clause containing the compared constituent. For example, the null complement of *dacht* 'thought' in (113)a can be interpreted as: “that he would score x-many goals”. The question obviously arises what the nature of the gap is in these examples. Since base-generated null-complements are generally impossible in Dutch (see (108)-(109)), one might hypothesize that the gap results from a movement operation. One approach would be to say that the clause following *dan* 'than' is a free relative clause whose operator (in Spec,CP) is null. This free relative hypothesis is represented schematically in (114):

- (114) [dan [_{NP} Ø [_{CP} OP_i hij t_i dacht]]]
 than he thought
 '...than he thought.'

According to his analysis, *dan ik dacht* 'than I thought' is a phrasal comparative with *dan* 'than' as a prepositional element that combines with a nominal complement whose head is empty and which contains a relative clause (see Den Besten 1978 for the existence of free relatives as complements of *dan* 'than'). For certain speakers, it is possible to have an overt realization of the relative pronoun of the free relative clause,

as in (115). Other speakers reject such examples. This inter-speaker variation is represented here by means of %.

- (115) De rekening is iets hoger dan (%wat_i) ik had t_i verwacht.
the bill is a bit higher than what I had expected
'The bill is a bit higher than I expected.'

Possibly, this free relative analysis extends to constructions like (116), which also do not have an overt complement after the transitive verb.

- (116) Naar (%wat) ik verwacht, kost het ongeveer 50 euro.
after what I expect cost it approximately 50 euro
'According to my expectations, it will cost approximately 50 euro's.'

- (117) [naar [NP Ø [CP OP_i ik t_i verwacht]]]
after I expect
'According to what I expect...'

So far, the phenomenon of Null-Complement Anaphora has not been a topic of extensive investigation in research on Dutch ellipsis. For some information, see Cremers 2014.

10. Ellipsis in Dutch dialects

So far, this chapter has focused on standard Dutch. There is, however, an extensive literature on ellipsis phenomena in dialects of Dutch. We want to use this final section

to discuss some of these constructions. We will go into clausal ellipsis in subsection 10.1 and nominal ellipsis in subsection 10.2.

10.1 Clausal ellipsis in Dutch dialects

The Dutch dialects show several interesting cases of clausal ellipsis, which are most recently discussed in Van Craenenbroeck (2004, 2010). In particular, he discusses so-called Spading (i.e. Sluicing Plus a Demonstrative in Non-insular Germanic), Short Do Replies and conjugated *yes* and *no*. We will, very briefly, discuss these ellipsis cases below.

First consider the example of *spading* in (118) from the Dutch dialect of Wambeek (spoken in the Belgian province of Brabant) (from Van Craenenbroeck 2010:13).

(118) a. Jef ei gisteren iemand gezien. Wou da?

Jef has yesterday someone seen who that

'Jef saw someone yesterday. Who?'

b. Jef eid iemand gezien, mo ik weet nie wou da.

Jef has someone seen but I know not who that

'Jef saw someone, but I don't know who.'

Spading is impossible in standard Dutch:

(119) a. Jef heeft gisteren iemand gezien. Wie (*dat)?

Jef has yesterday someone seen who that

'Jef saw someone yesterday. Who?'

b. Jef heeft iemand gezien, maar ik weet niet wie (*dat).

Jef has someone seen but I know not who that
'Jef saw someone, but I don't know who.'

Spading is a subtype of sluicing in which the remnant contains both a wh-element, *wou* 'who' in this case, and a demonstrative pronoun, *da* 'that'. As Van Craenenbroeck shows, spading is not possible in non-sluiced contexts (see (120)a) and only involves simplex wh-elements ((120)b) (from Van Craenenbroeck 2010:16-17):¹⁶

- (120) a. Ik vruig ma af me wou (*da) da Lewie geklapt eit.
I ask me PRT with who that that Lewie talked has
'I wondered to whom Lewie has talked.'
- b. * Welken boek dat?
which book that

The structure underlying spading is not simply ellipsis of the IP complement of C (just like regular sluicing), but rather IP-ellipsis of an underlying cleft. The underlying structure in spading can be represented as follows:

¹⁶ Van Craenenbroeck (2004,2010) provides several arguments to show that the *da* 'that' in spading is a demonstrative pronoun rather than a complementizer. We will not repeat these arguments here, but we refer the reader to the original work. Furthermore, one might wonder whether the ungrammaticality in (120)a is simply a case of haplology. Again we refer the reader to Van Craenenbroeck (2004, 2010) for arguments against this hypothesis.

(121) Jef ei gisteren iemand gezien. Wou;
 Jef has yesterday someone seen who
 da is ti da Jef gezien ei?
 that is that Jef seen have
 'Jef saw someone yesterday. Who?'

Van Craenenbroeck shows that the Southern Dutch dialects have three further ellipsis patterns that are unattested in standard Dutch: Short *Do* Replies (SDR), *da's nie/da's wel* and conjugated *yes* and *no*. We provide examples from Wambeek Dutch (Van Craenenbroeck 2010:245-246) in (122)a, b and c respectively.

(122) a. **Short *Do* Reply**

A: Marie zie Pierre geirn.	B: Z'en duut.
Marie sees Pierre gladly	she.NEG does
'A: Marie loves Pierre.	B: She doesn't.'

b. ***Da's wel/nie***

A: Marie gaat naar de film.	B: Da's nie.
Marie goes to the movies	that.is not
'A: Marie goes to the movies.	B No, she doesn't.'

c. **Conjugated *yes/no***

A: Kom Marie mergen?	B: Nije-s.
comes Marie tomorrow	no.she
'A: Is Marie coming tomorrow?	B: No'

SDRs contradict the previous declarative statement. The remnant in SDRs consists of the verb *to do*, a subject clitic and, if the context requires it, a negative clitic (i.e. if a positive statement is being contradicted). The second set of data, dubbed *da's wel/niet* 'that is so, that is not so' are argued to be derived from the same structure as SDRs, as are conjugated *yes/no* in which the polarity marker *yes/no* can be inflected and/or bear a subject clitic.

Again these constructions are ungrammatical in standard Dutch:

(123) a. **Short Do Reply**

A:	Marie	houdt	niet	van	Pierre.	B:	* Ze	doet.
	Marie	loves	not	of	Pierre		she	does
'A:	Marie loves Pierre.					B:	She does.'	

b. ***Da's wel/nie***

A:	Marie	gaat	naar	de	film.	B:	* Da's	nie.
	Marie	goes	to	the	movies		that.is	not
'A:	Marie goes to the movies.					B:	No, she doesn't.'	

c. **Conjugated *yes/no***

A:	Kom	Marie	morgen?	B:	* Nee-ze.
	comes	Marie	tomorrow		no.she
'A:	Is Marie coming tomorrow?			B:	No.'

We refer the reader to Van Craenenbroeck (2004, 2010) for extensive discussion and analysis of these data.

(128) a. (* de) zijn groene

the his green

'his green ones'

b. (* de) zijn vier

the his four

'his four'

Corver & Van Koppen argue that the definite article is present in these constructions to recover the gender agreement of the elided possessee, since the possessive pronoun is not capable of doing that. The first person singular possessive pronoun, for instance, always appears in the form *mijn* 'my' independent of the gender and number of the possessee. As a result, the remnant of ellipsis, the possessive pronoun, cannot recover the gender information of the elided possessee. The definite article is marked for gender, and hence this element has to appear in these ellipsis constructions. There are Dutch dialects, however, that do show agreement between the possessor and the possessee, like for instance the dialect of Winterswijk.

(129) a. masculine singular: mien-en hood 'my hat'

b. feminine singular: mien-e muts 'my bonnet'

c. plural: mien-e mutse 'my bonnets'

Corver & Van Koppen's analysis correctly predicts that the definite article does not have to appear in these types of dialects:

- (130) a. masculine singular: (d'n) mienen 'mine'
 b. feminine singular: (de) miene 'mine'
 c. plural: (de) miene 'mine'

There are also dialects that have a pronominalization strategy comparable to standard Dutch, but with a different pronoun. Hindeloopen Dutch, for instance, where ellipsis of the possessee leads to an *en*-affix or *s*-affix on the remnant. The *en*-affix appears with the singular possessive pronouns and the *s*-affix with the plural possessive pronouns. This is illustrated in (131).

- (131) a. masculine singular: mien-en 'mine' uze-s 'ours'
 b. feminine singular: mien-en 'mine' uze-s 'ours'
 c. neuter singular: mien-en 'mine' uze-s 'ours'
 d. plural: mien-en 'mine' uze-s 'ours'

Corver & Van Koppen argue that these *en*- and *s*-endings are also a pronominal element spelling out part of the possessed DP.

Let us now turn to the possessor doubling construction in (124)b and (125)b. As these examples show standard Dutch does not allow ellipsis in this construction. There are, however, dialects that do allow ellipsis in the possessor doubling construction, see (132). These dialects differ among each other as well. In Asten Dutch, (132)a, the definite article is obligatorily present. In Winterswijk Dutch it is optional, just like in example (130), and in Hindeloopen Dutch the definite article is absent (as expected on the basis of example (131)), but the invariant form of the possessive pronoun appears:

(132) (Over auto's gesproken / Talking about cars)

a. Ik vein Teun *(de) zinnen echt geweldig

I find Teun the his really great

'I find Teun's really great.' (Asten Dutch)

b. Vonnebos (de) zien-e ____

Vonnebos (the) his_{-fem.sg} (Winterswijk Dutch)

'Vonnebos's'

c. Jan (*de) sienen

Jan (the) his (Hindeloopen Dutch)

'Jan's'

We refer the reader to Corver & Van Koppen (2009) for extensive discussion and an analysis of this pattern.

Finally, let us look at the pattern in (124)c and (125)c. Again, standard Dutch does not allow ellipsis with the Saxon genitive, but some dialects do. The example in (133) from the dialect of Katwijk is one example of this.

(133) Ik vind Teuns (auto) geweldig.

I find Teun's (car) great

'I love Teun's.' (Katwijk Dutch)

The pronominalization strategy we have discussed above in (127) is found in several other NPE contexts as well. For instance, with adjectives (134), demonstratives (135) and wh-pronouns (136) (see also Corver & Van Koppen (2011, 2015):

(134) Piet ei een vervelend-e/*-en opa en
 Piet has an annoying-e/-en grandfather and
 Jan ei een leuk-en.
 Jan has a nice-en
 'Piet has an annoying grandfather and Jan has a nice one.' (Zierikzee Dutch)

(135) (*Den) deze opa is al oud, maar den dieje nie.
 the this grandfather is already old but *the* that not
 'This grandfather is already old, but that one isn't.' (Zierikzee Dutch)

(136) a. de waffer-en
 the_{-masc/fem} what.for-masc
 b. de waffer
 the_{-masc/fem} what.for
 c. et waffer
 the_{-neut} what.for
 'what kind of (Oerle Dutch, De Bont 1962)

The example in (134) shows the pronoun *-en* that we already saw with possessive pronouns in example (131), appearing with adjectives. The *en*-affix is not simply adjectival inflection, since that is an *e*-affix as the first part of the example shows. Another argument for the pronominal status of this *en*-affix, as Corver & Van Koppen (2011) show, is that in a sequence of adjectives it only appears on the final one. The

other ones show regular adjectival inflection. We also find this *en*-pronoun with demonstrative pronouns and *wh*-pronouns in several dialects.

Example (135) provides an example of the pronoun *de*, which we already saw in the possessive constructions discussed above, but now with demonstrative remnants rather than possessive remnants. The dialects that show this *de* in elliptical demonstrative constructions are a subset of the dialects with *de* in elliptical possessive constructions. The same holds for the appearance of *de/t* (136) with elliptical *wh*-pronouns. The dialects that show the construction in (136) are again a subset of the dialects that have the construction in (135). We refer the reader to Corver & Van Koppen (2009, 2010, 2011, 2015) for extensive discussion and an analysis of these patterns.

11. Summary

To summarize, this paper has discussed the major ellipsis constructions in Dutch. We have discussed the properties of gapping and stripping (section 2), predicate ellipsis (VP-ellipsis and pseudogapping) (section 3), conjunction reduction & Right Node Raising (section 4), sluicing (section 5), fragments (section 6), nominal ellipsis (section 7), comparative deletion (section 8) and null complement anaphora (section 9). Finally, in section 10 we have discussed some special instances of ellipsis in Dutch dialects.

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