

## Movement and ellipsis: An analysis of gapping

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### OUTLINE

- 1 Introduction: gapping
- 2 Analysis: movement and ellipsis
- 3 Corroborating evidence
- 4 Possible problems and open questions
- 5 Ellipsis is non-Spell-Out
- 6 Conclusion

### 1 INTRODUCTION: GAPPING

Gapping: ❶ occurs in non-initial conjuncts of a coordination  
 ❷ leaves only the phrases which are contrasted with constituents in the first conjunct

→ illustrated for Dutch in this talk:

- (1) Peter stuurde zijn hond naar de cinema en Thomas stuurde Peter his dog to the cinema and Thomas sent zijn kat ~~naar de cinema~~.  
~~his cat to the cinema.~~  
 “Peter sent his dog to the cinema and Thomas his cat.”

**Central claim:** gapping is derived through movement of the contrasted constituents plus clausal ellipsis (cf. (2))

- (2) ...en Thomas zijn kat [<sub>IP</sub> ~~t<sub>Thomas</sub> stuurde t<sub>zijn kat</sub> naar de cinema~~].  
 ...and Thomas his cat sent to the cinema.
- 

### 2 ANALYSIS: MOVEMENT AND ELLIPSIS

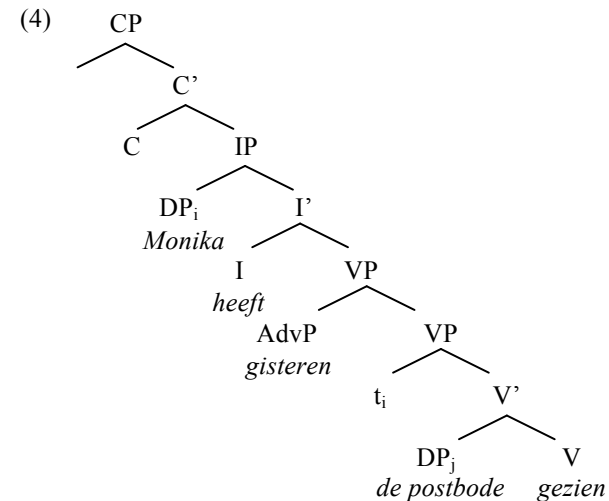
#### Overview:

- 2.1 Movement
- 2.2 Clausal ellipsis

#### 2.1 Movement

**Claim:** (3)a is derived from (3)b:

- (3) a. Marsha heeft gisteren de bakker gezien, en Monika  
 Marsha has yesterday the baker seen and Monika  
de postbode.  
 the mailman  
 b. ... en [<sub>CP</sub> [<sub>IP</sub> Monika heeft gisteren de postbode gezien]].  
 and Monika has yesterday the mailman seen  
 “Marsha saw the baker yesterday and Monika the mailman.”

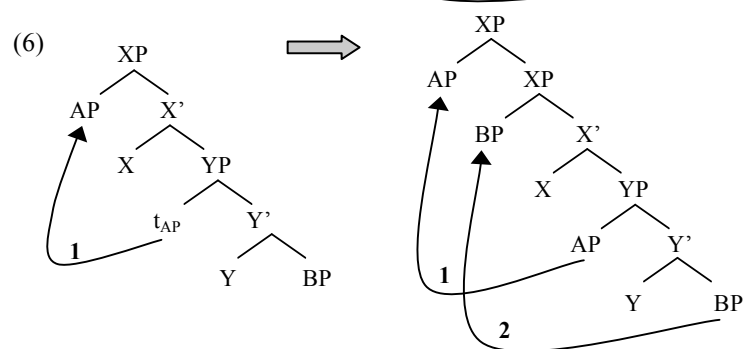
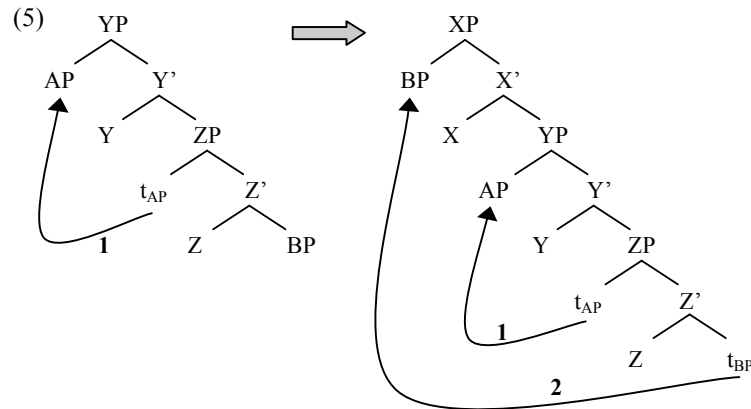


**Step 1:** movement of contrasted constituents to the multiple specifiers of CP

trigger for movement = [CONTRAST]-feature on the C-head

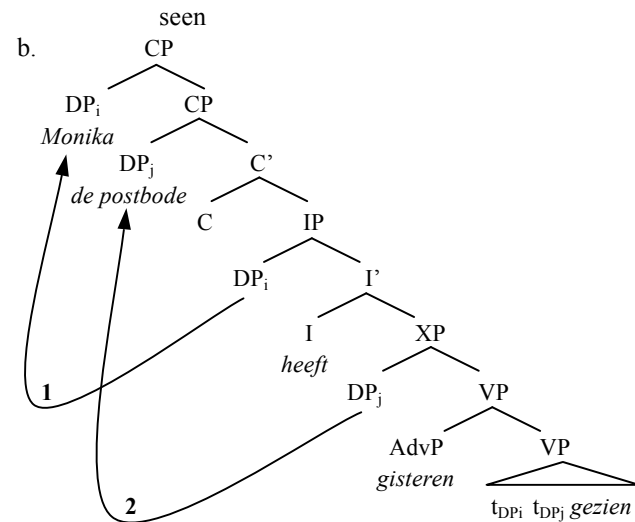
Richards (2001):

- ❶ 2 constituents attracted by **different** probing heads → **nesting** paths (cf.(5))
- ❷ 2 constituents moved to multiple specifier positions of one and the **same** head → **crossing** paths (cf.(6)): the 2<sup>nd</sup> element that is attracted has to tuck in below the 1<sup>st</sup> one; the 3<sup>rd</sup> one below the 2<sup>nd</sup> one and so on.



→ gapping: attraction by one and the same head → crossing paths (cf.(7))

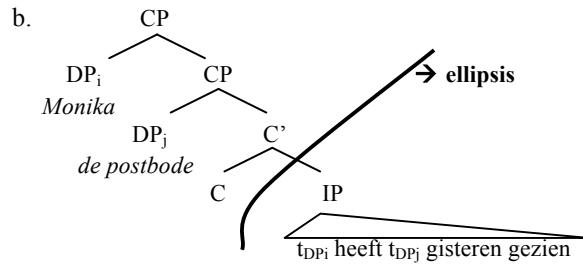
(7) a. ...en [CP Monika [ de postbode [IP t<sub>Monika</sub> heeft gisteren  
 and Monika the mailman has yesterday  
 t<sub>de postbode</sub> gezien]]]



2.2 Clausal ellipsis

**Step 2:** ellipsis of the IP containing only non-contrasted elements

(8) a. ...en [CP Monika [ de postbode [IP t<sub>Monika</sub> heeft t<sub>de postbode</sub> ~~gisteren~~  
 gezien]]]



**Result:** a gapped clause

- (9) Marsha heeft gisteren de bakker gezien, en Monika de postbode.  
 Marsha has yesterday the baker seen and Monika the mailman  
 “Marsha saw the baker yesterday and Monika the mailman.”

### 3 CORROBORATING EVIDENCE

Overview:

- 3.1 *Island-sensitivity*
- 3.2 *P-stranding and P-gapping*
- 3.3 *Number of remnants*
- 3.4 *Ellipsis of the finite verb*
- 3.5 *Contrastiveness*
- 3.6 *Word order*
- 3.7 *Answer to a question*

#### 3.1 *Island-sensitivity*

sensitivity to islands = strong argument for movement (Merchant 2001, 2003, 2004)

**gapping = island-sensitive** (cf.(10))

- (10)a. \*Piet kent iemand die een hond heeft en Lieven een kanarie.  
 Piet knows someone who a dog has and Lieven a canary.  
 b. Piet kent iemand die een hond heeft en Lieven iemand die een kanarie heeft.  
 Piet knows someone who a dog has and Lieven someone who a canary has  
 “Piet knows someone who has a dog and Lieven knows someone who has a canary.”  
 c. ?Piet zegt dat het Nederlands SVO is en Lieven SOV.  
 Piet says that the Dutch SVO is and Lieven SOV  
 “Piet says Dutch is SVO and Lieven says it is SOV.”

→analysis of (10)a: *a canary* is moved out of a relative clause (= Complex NP island):

(11) \*...en [Lieven]<sub>i</sub> [een kanarie]<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> kent [<sub>DP</sub> iemand die t<sub>j</sub> heeft]].  
 and Lieven a canary knows someone who has

→ (10)b,c: no such Subjacency violation takes place (cf.(12) a,b)

(12) a. ...en [Lieven]<sub>i</sub> [<sub>DP</sub> iemand die een kanarie heeft]<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> kent t<sub>j</sub>].  
 and Lieven someone who a canary has knows

b. ?... en [Lieven]<sub>i</sub> [<sub>SOV</sub> ]<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> zegt dat het Nederlands t<sub>j</sub> is].  
 and Lieven SOV says that the Dutch is

⇒ **movement and ellipsis analysis of gapping accounts for island-effects**

3.2 P-stranding and P-gapping

- English: preposition can be stranded under wh-movement

(13) a. [What] did Steven talk [about t<sub>what</sub>?]  
 b. [About [what]] did Steven talk t<sub>about what</sub>?

Dutch/German: no preposition-stranding possible

(14) a. \*[Wat] heeft Steven gepraat [over t<sub>wat</sub>?] [Dutch]  
 what has Steven talked about

b. [Over [wat]] heeft Steven gepraat t<sub>over wat</sub>?  
 about what has Steven talked

(15) a. \*[Was] hat Steven gesproken [über t<sub>was</sub>?] [German]  
 what has Steven talked about

b. [Über [was]] hat Steven gesprochen t<sub>über was</sub>?  
 about what has Steven talked

- correlation between a language's ability to strand a preposition under wh-movement and its ability to gap a preposition (Vanden Wyngaerd 1999):

English: both P-stranding and P-gapping

(16) a. Jeffrey talked about linguistics and Karen **[about [politics]]** [<sub>IP</sub> t<sub>Karen</sub> talked t<sub>about politics</sub>].  
 b. Jeffrey talked about linguistics and Karen **[politics]** [<sub>IP</sub> t<sub>Karen</sub> talked [about t<sub>politics</sub>]].

Dutch/German: no P-stranding, no P-gapping

(17) a. Joris praatte over taalkunde en Karen **over politiek**. [Dutch]  
 Joris talked about linguistics and Karen about politics  
 b. \*Joris praatte over taalkunde en Karen **politiek**.  
 Joris talked about linguistics and Karen politics

(18) a. Joris sprach über Linguistik und Karen **über Politik**. [German]  
 Joris talked about linguistics and Karen about politics  
 b. \*Joris sprach über Linguistik und Karen **Politik**.  
 Joris talked about linguistics and Karen politics.

⇒ **argument for the movement approach in gapping:**  
 P-stranding languages can strand the preposition inside ellipsis site when the contrasted constituent moves to left periphery  
 ⇕  
 in non-P-stranding languages stranding of the preposition is not possible, and therefore P-gapping does not occur.

3.3 Number of remnants

- no structural restriction on the possible number of remnants: any phrase that contrasts with one in the first conjunct can survive the ellipsis

- (19) Sofie heeft Wim een boek gegeven,  
 Sofie has Wim a book given  
 a. ...en Jessica Reiner.  
 and Jessica Reiner  
 “Sofie gave Wim a book, and Jessica Reiner.”  
 b. ... en Jessica Reiner een cd  
 and Jessica Reiner a cd  
 “Sofie gave Wim a book, and Jessica Reiner a cd.”  
 c. Sofie heeft Wim gisteren een boek gegeven, en Jessica  
 Sofie has Wim yesterday a book given and Jessica  
Reiner eergisteren een cd.  
 Reiner the.day.before.yesterday a cd  
 “Sofie gave Wim a book yesterday, and Jessica Reiner a cd the day before.”  
 d. Sofie heeft Wim gisteren een boek gegeven, en Jessica  
 Sofie has Wim yesterday a book given and Jessica  
Reiner eergisteren een cd gekocht.  
 Reiner the.day.before.yesterday a cd bought  
 “Sofie gave Wim a book yesterday, and Jessica bought Reiner a cd the day before.”

- No restriction on syntactic function, either:

- (20) Sofie heeft Wim een boek gegeven,  
 Sofie has Wim a book given  
 a. ...en Jessica Reiner. → SU + IO  
 and Jessica Reiner  
 “Sofie gave Wim a book, and Jessica Reiner.”  
 b. ... en Jessica een cd. → SU + DO  
 and Jessica a cd  
 “Sofie gave Wim a book, and Jessica gave him a cd.”  
 c. ... en Reiner eergisteren een cd.  
 and Reiner the.day.before.yesterday a cd  
 “Sofie gave Wim a book yesterday, and Reiner a cd the day before.” → IO + Adv + DO

⇒ [CONTRAST]-feature attracts any XP that bears contrastive focus and allows as many XPs in the specifier of CP as bear this contrast.

### 3.4 Ellipsis of the finite verb

- Puzzle: contrast between finite and nonfinite verb:

#### ❶ Finite verb cannot survive gapping:

- (21) a. \*Sofie wil Wim een boek geven en Jessica zal Reiner een  
 Sofie wants Wim a book give and Jessica will Reiner a  
 cd ~~geven~~.  
 cd give  
 b. Sofie wil Wim een boek geven en Jessica ~~wil~~ Reiner een  
 Sofie wants Wim a book give and Jessica Reiner a  
 cd ~~geven~~.  
 cd give  
 “Sofie wants to give Wim a book and Jessica wants to give Reiner a cd.”

#### ❷ Nonfinite verb can:

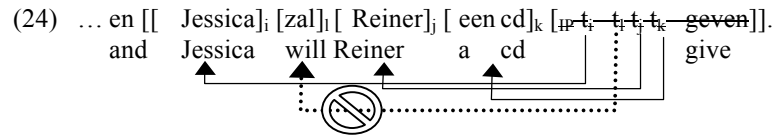
- (22) Sofie wil Wimeen boek geven en Jessica ~~wil~~ Reiner een  
 Sofie wants Wima book give and Jessica Reiner a  
 cd verkopen.  
 cd sell  
 “Sofie wants to give Wim a book and Jessica wants to sell Reiner a cd.”

- Explanation of ❶:

→ movement and ellipsis analysis of (21)b:

- (23) ... en [[ Jessica]<sub>i</sub> [Reiner]<sub>j</sub> [ een cd]<sub>k</sub> [<sub>IP</sub> t<sub>i</sub> wil t<sub>j</sub> t<sub>k</sub> geven ]].  
 and Jessica Reiner a cd wants give
-

→ movement and ellipsis analysis of (21)a:



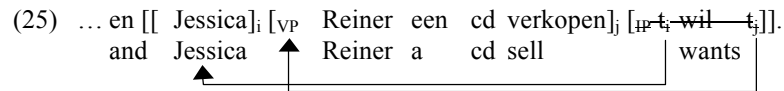
finite verb is a head, not a phrase → not attractable to [Spec,CP]

⇒ **V<sub>fin</sub> has to remain in IP in ellipsis → when the finite verb is spelt out (as is (21)a), the entire IP must be spelt out as well**

Explanation of ❷:

! nonfinite V-head is not attractable to [Spec,CP] either  
 → nonfinite verb can survive ellipsis because VP as a whole is moved.

Analysis of (22):



### 3.5 Contrastiveness

Only elements which are contrasted with a correlate in the first conjunct can remain:

(26) \* Sofie wil Wim een boek geven en Jessica Reiner  
 Sofie wants Wim a book give and Jessica Reiner  
een cd geven.  
 a cd give

⇒ **[CONTRAST]-feature attracts all and only constituents bearing contrastive focus. No other elements can move out of the ellipsis site and survive deletion.**

### 3.6 Word order

The order in which gapping remnants occur is parallel to the word order in full sentences

→ explained by the analysis: tucking in (Richards 2002)

#### 3.6.1 Indirect object DP precedes direct object DP

• Full sentence:

- (27) a. Ik heb Stijn het boek gegeven. → **IO DO**  
 I have Stijn the book given  
 “I gave Stijn the book.”  
 b. \*Ik heb het boek Stijn gegeven. → **\*DO IO**  
 I have the book Stijn given

• Gapped clause:

- (28) Ik heb Stijn het boek gegeven  
 I have Stijn the book given  
 a. en Jurgen de foto. → **IO DO**  
 and Jurgen the picture  
 b. \*en de foto Jurgen. → **\*DO IO**  
 and the picture Jurgen  
 “I gave Stijn the book, and Jurgen the picture.”

#### 4.3.2 Nonfinite verb follows negation and DP objects

• Full sentence:

- (29) Ik heb Stijn <\*gegeven> het boek <\*gegeven> niet<gegeven>.  
 I have Stijn given the book given not given  
 “I didn’t give Stijn the book.” → **<\*V> DO <\*V> Neg <V>**

• Gapped clause:

(30) Ik heb Stijn het boek getoond, maar <\*gegeven> de foto  
 I have Stijn the book shown but given the picture  
 <\*gegeven> niet <gegeven>.  
 given not given  
 “I showed Stijn the book, but I didn’t give him the picture.”  
 → <\*V> DO <\*V> Neg <V>

4.3.3 Definite DPs precede negation, PPs preferably follow it

• Full sentence:

(31) Ik heb <\*niet> het boek <niet> aan Stijn <\*niet> gegeven.  
 I have not the book not to Stijn not given  
 “I didn’t give the book to Stijn.”  
 → <\*Neg> DP <Neg> PP <\*Neg> V

• Gapped clause:

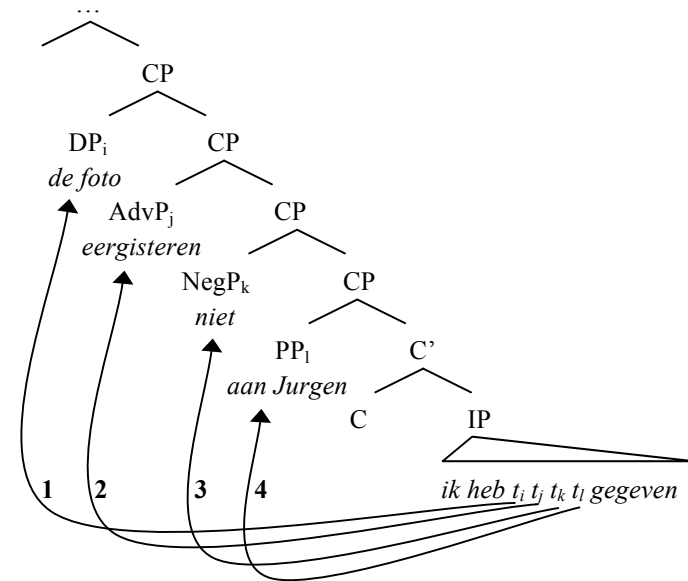
(32) Ik heb het boek aan Stijn gegeven, maar <\*niet> de foto  
 I have the book to Stijn given but not the picture  
 < niet> aan Jurgen <\* niet>.  
 not to Jurgen not  
 “I gave the book to Stijn, but I didn’t give the picture to Jurgen.”  
 → <\*Neg> DP <Neg> PP <\*Neg>

⇒ Movement and ellipsis analysis: gapping remnants are all attracted to multiple specifier positions of the same head → Richards (2002): crossing paths → same word order as before movement

→ [CONTRAST]-feature probes down and attracts 1<sup>st</sup> contrasted phrase it encounters; then the 2<sup>nd</sup> one is tucked in below the 1<sup>st</sup> one and so on (cf.(33) and the tree structure in (34))

(33) Ik heb het boek gisteren wel aan Stijn gegeven, maar de  
 I have the book yesterday AFF to Stijn given but the  
 foto eergisteren niet aan Jurgen.  
 picture the.day.before not to Jurgen  
 “I did give the book to Stijn yesterday, but the picture not to Jurgen  
 the day before.”

(34)



3.7 Answer to a question

A gapped clause can be used as an answer to a constituent question (cf.(35)) and to a yes-no question (cf.(36)):

- (35) A: Wie heeft wat aan Bert gegeven?  
 who has what to Bert given  
 B: Piet een fles wijn en Thomas een paasei.  
 Piet a bottle wine and Thomas an easter.egg

“Who gave what to Bert?” – “Piet a bottle of wine and Thomas an Easter egg.”

(36) Heeft iedereen met iedereen gepraat? – Nee, Sam niet met  
has everyone with everyone talked no Sam not with  
de baas.  
the boss  
“Did everyone talk to everyone?” – “No, Sam didn’t talk to the boss.”

→ movement and ellipsis approach: as long as it satisfies the conditions of recoverability, gapping does not need an antecedent in the same sentence. (parallel to stripping in Merchant 2003 and fragment answers in Merchant 2004)

⇒ remarkable fact, but explained by the movement and ellipsis analysis

#### 4 POSSIBLE PROBLEMS AND OPEN QUESTIONS

Overview:

4.1 Negation

4.2 Restriction to coordination

##### 4.1 Negation

• gapping can contain negation:

(37) Peter houdt van bananen, maar Jessica niet van peren.  
Peter loves of bananas but Jessica not of pears  
“Peter likes bananas, but Jessica doesn’t like pears.”

→ movement and ellipsis analysis: *niet* ‘not’ moves to [Spec,CP]

! **Puzzle:** *niet* cannot easily be moved to left periphery:

(38) \*Niet heb ik hem gezien.  
not have I him seen

→ in gapping *niet* **has** to move due to recoverability requirements (unlike in (38)):

(39) \*Peter houdt van bananen, maar Jessica van peren [<sub>IP</sub> houdt niet]  
Peter loves of bananas but Jessica of pears loves not  
Intended meaning: ‘Peter likes bananas, but Jessica doesn’t like pears.’

##### 4.2 Restriction to coordination

• Neijt (1979): gapping is disallowed in subordination (cf.(40))

(40) a.\*Sam heeft Ellen gekust, **omdat** Bert Mieke.  
Sam has Ellen kissed because Bert Mieke



b. Sam heeft Ellen gekust **en** Bert Mieke.  
 Sam has Ellen kissed and Bert Mieke  
 “Sam kissed Ellen and Bert Mieke.”

- subordinators (*omdat* ‘because’, *nadat* ‘after’ and *terwijl* ‘while’) are C-heads (cf.(41)a)



coordinating conjunctions (*en* ‘and’ and *maar* ‘but’) trigger verb second → not head of CP (cf. (41)b)

- (41) a. Sam heeft Ellen gekust, **omdat** Bert Mieke gekust **heeft**.  
 Sam has Ellen kissed because Bert Mieke kissed has  
 “Sam kissed Ellen because Bert kissed Mieke.”  
 b. Sam heeft Ellen gekust **en** Bert **heeft** Mieke gekust.  
 Sam has Ellen kissed and Bert has Mieke kissed  
 “Sam kissed Ellen and Bert kissed Mieke.”

- a gap can only be embedded if the entire conjunction is embedded under the same matrix verb (cf. (42)a).

- (42) a. **Antecedent & gapped clause both embedded under the same matrix verb**  
 Ik denk [ dat Peter van bananen houdt, en Jessica van peren].  
 I think that Peter of bananas loves and Jessica of pears  
 “I think that Peter likes bananas and Jessica pears.”

b. **Non-embedded antecedent & embedded gapped clause**

\*[Peter houdt van bananen], en [ ik denk [ **dat** Jessica van Peter loves of bananas and I think that Jessica of peren]].  
 pears

c. **Antecedent & gapped clause both embedded, but under a different matrix verb**

\*[Ik denk [ dat Peter niet van bananen houdt], maar [hij weet I think that Peter not of bananas loves but he knows [ **dat** Jessica van peren]].  
 that Jessica of pears

- **However:** embedded antecedent & non-embedded gapped clause = ok

- (43) [ Ik denk [ dat Peter niet van bananen houdt]], maar [ Jessica I think that Peter not of bananas loves but Jessica in elk geval van peren.  
 in any case of pears  
 “I think that Peter doesn’t like bananas, but Jessica definitely likes pears.”

→ no visible intervening C-head

→ [CONTRAST]-feature has specific syntactic requirements: it can only merge with an empty C<sub>[+FOC]</sub>-head (parallel to [E]-feature for sluicing in Merchant 2001)

**Subordinators:** filled C-head → no [CONTRAST]-feature → no gapping  
 ⇕  
**Conjunctions:** leave C empty → gapping

**Prediction:** embedded gapped clause improves when there is no overt complementizer (cf.(44))

- (44)?Kaat heeft de cd gekocht, en ik heb Piet verteld (\* dat)  
 Kate has the cd bought and I have Pete told that  
 Kim het boek.  
 Kim the book  
 “Kate bought the cd and I told Pete (that) Kim bought the book.”

- ‘complementizers’ *want* ‘for’ and *dus* ‘so’ trigger verb second, see (45)  
 → not in C-head (position for verb second)

- (45) Sam heeft Ellen gekust, **want/dus** Bert **heeft** Mieke gekust.  
 Sam has Ellen kissed for / so Bert has Mieke kissed  
 “Sam kissed Ellen, for/so Bert kissed Mieke.”

**Prediction:** they should not block gapping

- (46) ?Sam heeft Ellen gekust, **want/dus** Bert Mieke.  
 Sam has Ellen kissed for so Bert Mieke  
 “Sam kissed Ellen, for/so Bert kissed Mieke.”

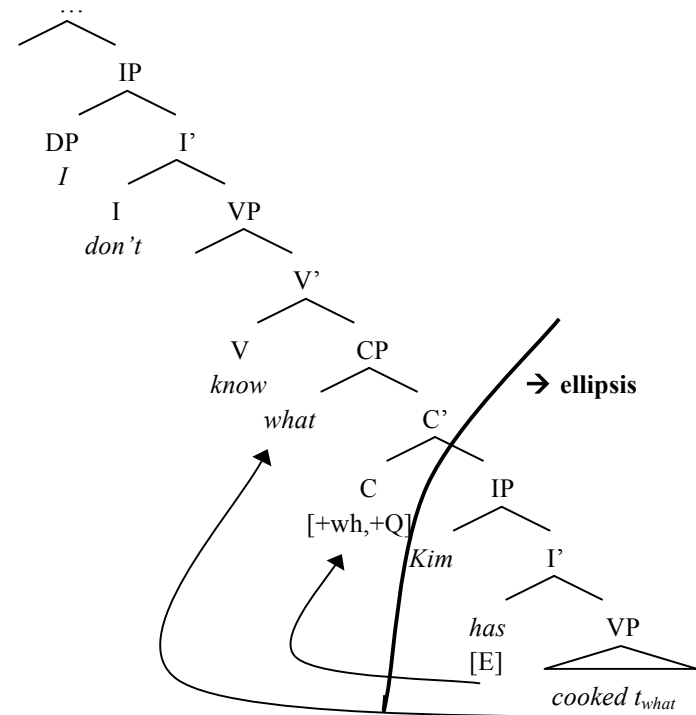
• **Questions:**

- ❶ evidence for empty C<sub>[+FOC]</sub>-head in Dutch?
- ❷ compatibility with double CP-layer account?

5 ELLIPSIS IS NON-SPELL-OUT (Gengel 2006a, 2006b)

- Merchant (2001, 2003, 2004): [E]-feature is responsible for ellipsis  
 e.g. [E<sub>S</sub>]-feature for sluicing: marks the complement of the C-head it occurs on for non-pronunciation

(47)



- My analysis: [CONTRAST]- feature merged with C-head both
  - attracts contrasted constituents and
  - marks the complement of its head for ellipsis.

→ see also Gengel (2006a, 2006b)

→ phase heads have same double function:

- ❶ send off their complement (the domain of the phase) to Spell-out
- ❷ can attract a constituent to the edge of the phase in order to prevent its being sent to Spell-out.

⇒ ellipsis = non-Spell-out → consequence of a phase head property

→ phase head

- ❶ sends its complement off to Spell-out, either for being spelt out or for being left unpronounced
- ❷ can attract an element to its specifier position, either to provide an ‘escape hatch’ from spell-out or to save it from ellipsis.

## 6 CONCLUSION

### ❶ Main claim: gapping involve movement and clausal ellipsis

[CONTRAST]-feature merged with empty C-head attracts the contrasted constituents to the specifier of CP and elides IP

### ❷ Main arguments:

- ❶ gapping is island-sensitive
- ❷ link between preposition stranding and preposition gapping
- ❸ number of remnants
- ❹ ellipsis of the finite verb
- ❺ contrastiveness
- ❻ word order
- ❼ answer to a question

### ❸ Further research:

- ❶ movement of negation in gapping
- ❷ restriction to coordination and the exact nature of the [CONTRAST]-feature

### ❹ ellipsis and spell-out are two sides of the same coin

The double function of [CONTRAST]-feature is characteristic of phase heads: these too trigger movement of constituents to their edge and send off their complement to Spell-out

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