Clause typing, verb movement, and non-canonical matrix word orders*

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1 Introduction

CP-layer of the clause:

- responsible for clause typing – clausal Type in Cheng (1991) and Force in Chomsky (1995), Rizzi (1997: 283) – relating clause to a superordinate clause or to the discourse (see Rizzi 1997)

- responsible for encoding finiteness – Rizzi (1997: 283–285), following e.g. Holmberg & Platzack (1988); finiteness distinct from tense ($\leftrightarrow$ Den Besten 1983), CP rather encodes whether there is tense at all (e.g. English *that* co-occurring with tensed verbs, *for* co-occurring with infinitives, see Chomsky & Lasnik 1977) – relating CP to its complement domain

- CPs can be iterated – minimal CP (Bacskai-Atkari 2015, Sobin 2002), as opposed to cartographic template of Rizzi (1997)
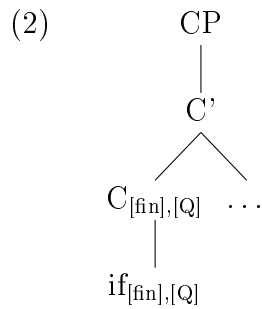
complementisers encoding clause type and finiteness in embedded clauses:

(1)   a.   I know **that** Mary has arrived.
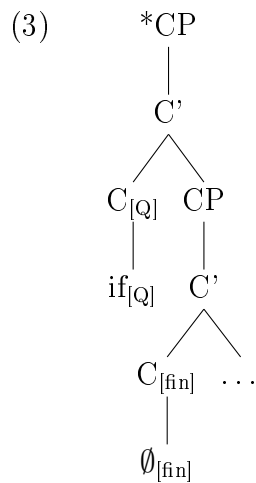   b.   I don't know **if** Mary has arrived.

complementiser *if* in (1b): typing the clause as interrogative [Q] and finite; restricted to subordinate/dependent clauses

structure:

(2)

```
          CP
          |
          C'
         /  \
   C[fin],[Q]  ...
        |
   if[fin],[Q]
```

rejected alternative (cartographic) analysis (cf. Bacskai-Atkari 2016b):

(3)

```
        *CP
         |
         C'
        /  \
    C[Q]   CP
      |     |
   if[Q]    C'
           /  \
       C[fin]  ...
          |
        Ø[fin]
```

proposed approach: minimal CP, general avoidance of empty projections

but: absence of overt complementiser in embedded and matrix clauses attested

(4)   a.   I know _ Mary has arrived.
         b.   I know who _ has arrived.
         c.   I don't know whether _ Mary has arrived.
         d.   _ Mary has arrived.
         e.   **Has** Mary arrived?
         f.   When **did** Mary arrive?

absence of overt element in C or verb movement

verb movement in German V2 (canonical):

(5)   a.   Ralf **hat** gestern eine Torte gebacken.
              Ralph has yesterday a.F.ACC cake baked.PTCP
              'Ralph baked a cake yesterday.'

         b.   Gestern **hat** Ralf eine Torte gebacken.
              yesterday has Ralph a.F.ACC cake baked.PTCP
              'Ralph baked a cake yesterday.'

pattern attested more generally across Germanic (English: historically)

questions:

- what are the conditions licensing an empty C head

- why verb movement takes place and how it is related to other ways of lexicalising the C head

- whether and to what extent movement/insertion to [Spec,CP] is related to the lexicalisation of the C head

proposal:

- regular West Germanic pattern: [fin] on C has to be lexicalised by an overt element (interface condition) – complementiser or verb movement

- zero complementiser: has to be licensed, cross-linguistic variation in its interpretability

- movement/insertion to [Spec,CP]: due to clause-typing features such as [wh] or [Q], insertion of anaphor or to [edge] feature, but: no overtness requirement

- filling of [Spec,CP] and C essentially independent → V1 and V3 matrix word orders possible

2 Embedded clauses

variation in the overtness of *that* in English:

(6) a. Peter says **that** she likes books.
     b. Peter says she likes books.
     c. **That** she likes books is surprising.
     d. *She likes books is surprising.

zero subordinator has to be licensed by a preceding matrix predicate

German:

(7) a. Peter sagt, **dass** sie Bücher mag.
         Peter says that she books   likes.
         'Peter says that she likes books.'

     b. *Peter sagt, sie Bücher mag.
         Peter says she books   likes
         'Peter says that she likes books.'

     c. Peter sagt, sie **mag** Bücher.
         Peter says she likes books
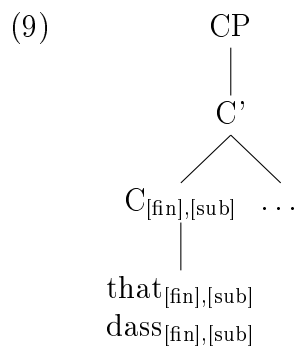   'Peter says that she likes books.'

insertion of *dass* alternates with verb movement (V2 clause)

differences among verbs: "bridging verbs" allowing V2, not others (see Featherston 2004
    for a detailed analysis of the distinction):

(8)   a.   Peter bezweifelt, **dass** sie Bücher mag.
            Peter doubts   that she books   likes.
            'Peter doubts that she likes books.'

       b. *Peter bezweifelt, sie **mag** Bücher.
            Peter doubts   she likes books
   'Peter doubts that she likes books.'

→ matrix predicate imposes selectional restrictions on its complement, including the par-
    ticular functional head

structure for overt complementiser (English and German):

(9)   CP
                   |
                   C'
                  ╱╲
        C$_{[fin],[sub]}$ $\cdots$
                |
          that$_{[fin],[sub]}$
          dass$_{[fin],[sub]}$

[sub]: shorthand for subordination, indicates that the clause is a complement clause and
    has to be licensed by a matrix predicate

zero complementiser in English:

(10)   CP
                   |
                   C'
                  ╱╲
        C$_{[fin],[sub]}$ $\cdots$
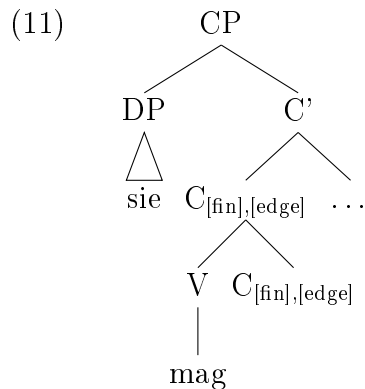 |
          $\emptyset_{[fin],[sub]}$
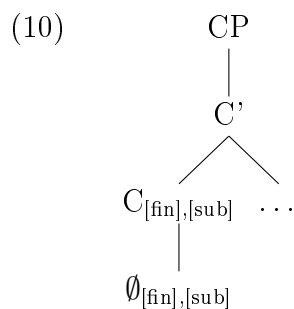
only difference from (9): zero complementiser needs the matrix predicate as an antecedent

German: no zero declarative complementiser in the lexicon

→ first step: insertion of feature bundle wit the category C without parallel insertion of
    a lexical element – this comes with an [edge] feature which ensures that a phrase is
    projected since [edge] requires the specifier to be filled; lexicalising [fin] on C: head
    adjunction (verb movement)

structure:

(11)

```
                    CP
              ┌──────┴──────┐
             DP            C'
             /\      ┌──────┴──────┐
            sie  C[fin],[edge]    …
                    ┌────┴────┐
                   V    C[fin],[edge]
                   │
                  mag
```

Fanselow (2009): movement to [Spec,CP]: due to an [edge] feature – no direct relation between movement to [Spec,CP] and verb movement to C

standard analysis of V2 (see e.g. Den Besten 1989, Fanselow 2002; 2004a;b; 2009, Frey 2005): XP in [Spec,CP] and the verb to C (adjoining to C via head adjunction), XP not restricted to subject DPs

selectional restrictions imposed by the matrix verb: whether the [edge] feature is allowed on the C head – distinction between proper complement clauses (canonical subordination) versus other dependent clauses
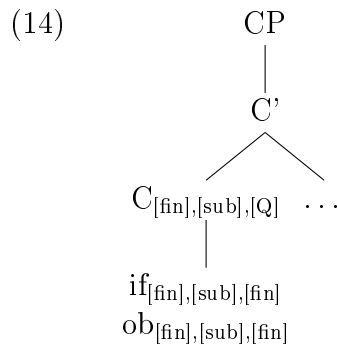
variation between complementiser and verb movement in other clause types:

(12)   a.   Peter schreit, **als wäre**   er beim   Zahnarzt.
            Peter shouts as   be.COND.3SG he at.the dentist
            'Peter is shouting as if he were at the dentist's.'

       b.   Peter schreit, **als ob** er beim   Zahnarzt wäre.
            Peter shouts as if   he at.the dentist   be.COND.3SG
            'Peter is shouting as if he were at the dentist's.'

       c.   Plan an escape route, **if** fire should break out.

       d.   Plan an escape route, **should** fire break out.

embedded polar questions with an overt complementiser:

(13)   a.   I wonder **if** Mary is coming.

       b.   Ich frage   mich,   **ob** Maria kommt.
            I   ask.1SG me.ACC if   Mary comes
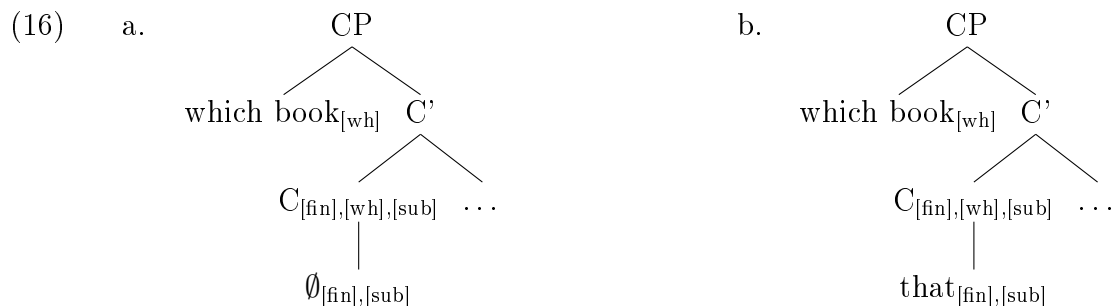   'I wonder if Mary is coming.'

structure:

(14)

```
            CP
            |
            C'
           /  \
  C[fin],[sub],[Q]  ...
           |
  if[fin],[sub],[fin]
  ob[fin],[sub],[fin]
```

embedded *wh*-questions (also: polar questions with *whether*):

(15)   a.   I wonder **which book (% that)** Mary likes.

       b.   Ich frage   mich,   **welches Buch (% dass)** Maria mag.
            I   ask.1SG me.ACC which.N book   that   Mary likes.
            'I wonder which book Mary likes.'

standard varieties: no complementiser inserted ↔ certain dialects (see e.g. Weiß 2013, Bayer & Brandner 2008 for German)

Bacskai-Atkari (2016a): substandard dialects showing Doubly Filled COMP effects regular in lexicalising [fin] on C by an overt element

structures:

(16)   a.
```
            CP
           /  \
  which book[wh]  C'
                 /  \
        C[fin],[wh],[sub]  ...
                 |
         ∅[fin],[sub]
```
       b.
```
            CP
           /  \
  which book[wh]  C'
                 /  \
        C[fin],[wh],[sub]  ...
                 |
         that[fin],[sub]
```

difference between the dialects: lexical difference (*that* vs. zero) but not in terms of the syntactic features: [wh] feature present on the C head

zero subordinator not exceptional in English (see declaratives) but [fin] regularly lexicalised by an overt element in interrogatives (Bacskai-Atkari 2016a)

German: licensing of the zero subordinator restricted to embedded constituent questions (Standard pattern)

Doubly Filled COMP dialects in German: regular insertion of the finite subordinator *dass*

question: why no verb movement – selectional restrictions by matrix element (no [edge] feature)

3   Main clauses and V2

canonical order in German main clauses: V2

(17)   a.   Ralf **hat** gestern   eine   Torte gebacken.
           Ralph has yesterday a.F.ACC cake   baked.PTCP
           'Ralph baked a cake yesterday.'

       b.   Gestern   **hat** Ralf   eine   Torte gebacken.
           yesterday has Ralph a.F.ACC cake   baked.PTCP
           'Ralph baked a cake yesterday.'

structure:

(18)
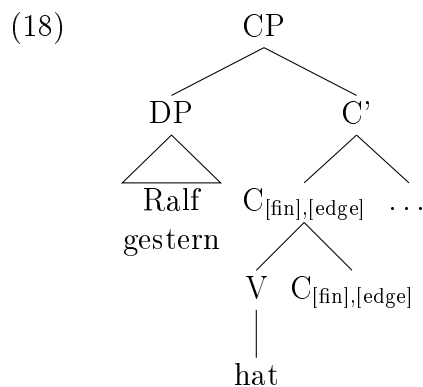
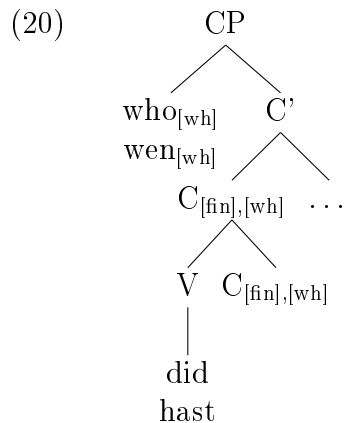filling of [Spec,CP]: result of [edge] feature (Fanselow 2009)

verb movement to C: more general requirement on lexicalising [fin] on C overtly, not
      possible to insert a zero complementiser (no licensor from a matrix clause)

English different: no V2 – zero declarative complementiser does not have to be licensed
      by a matrix element → no [edge] feature, no need to lexicalise [fin] on C by an overt
      element

matrix constituent questions: *wh*-element in [Spec,CP] and verb in C

(19)   a.   **Who did** you invite?

       b.   **Wen**   **hast**   du eingeladen?
           who.ACC have.2SG you invited.PTCP
           'Who did you invite?'

structure:

(20)

```
                CP
              /    \
      who[wh]       C'
      wen[wh]      /  \
            C[fin],[wh]  …
              /    \
             V    C[fin],[wh]
             |
            did
            hast
```

verb movement even in English – zero complementiser either declarative or mere subor-
dinator, not available in main clause interrogatives; remnant of earlier V2 pattern,
English regularly lexicalising [fin] overtly in interrogatives

4 Non-canonical matrix word orders

surface V1 clauses in German – question: underlyingly V1 (no element in the [Spec,CP]
position) or underlyingly V2

claim here: zero elements in V1 main clauses not unmotivated (↔ Zwart 2005)

matrix polar questions:

(21) **Hast**   du Peter gesehen?
      have.2SG you Peter seen
      'Have you seen Peter?'

first position: polar operator corresponding to *whether* (Larson 1985) – inserted directly
into the [Spec,CP] position (Bianchi & Cruschina 2016); covert operator inserted if
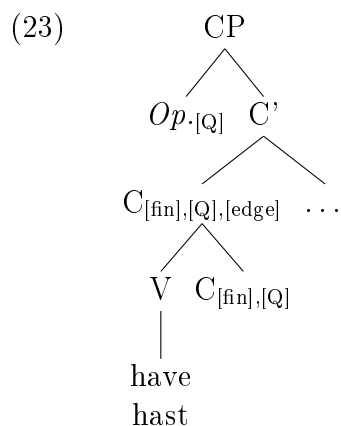the complementiser is overt (e.g. *if*, German *ob*), cf. Zimmermann (2013: 86)

note: polar operator not entirely specific to interrogative contexts – disjunctive opera-
tors (but not *wh*-type polar operators, e.g. *whether*) in conditionals, similarly to
morphophonologically identical complementisers between the two clause types (cf.
Bhatt & Pancheva 2006, Arsenijević 2009, Danckaert & Haegeman 2012)

overt operator *whether* in English: restricted to embedded interrogatives in Late Modern English but attested in main clauses in earlier periods (often with verb movement of the lexical verb or T-to-C movement of *do*):

(22)   a.   **Hwæðer wæs** iohannes fulluht   þe   of heofonum þe of mannum
whether was   John's   baptism that of heavens   or of man
'Was the baptism of John done by heaven or by man?' (*West Saxon Gospel*)
(Van Gelderen 2009: 141, ex. 15)

       b.   And the Lord seide to Caym, Where is Abel thi brother? The which answeryde, I wote neuere; **whether am** I the keper of my brother?
(Wycliffe Bible older version, Genesis 4.9)[1]

       c.   **Whether did** he open the Basket?
(*The Tryal of Thomas Earl of Macclesfield*)
(source: Salmon, Thomas and Sollom Emlyn (1730) A complete collection of state-trials, and proceedings for high-treason, and other crimes and misdemeanours: 1715–1725)

operator in polar interrogatives semantically motivated

structure:

(23)

$$
\begin{array}{c}
\text{CP} \\
\diagup\diagdown \\
Op.{}_{[Q]} \quad \text{C'} \\
\diagup\diagdown \\
\text{C}_{[\text{fin}],[Q],[\text{edge}]} \quad \dots \\
\diagup\diagdown \\
\text{V} \quad \text{C}_{[\text{fin}],[Q]} \\
| \\
\text{have} \\
\text{hast}
\end{array}
$$

no matrix complementiser to be inserted – but [edge] feature possible since no restrictions from a matrix predicate; [Q] more specific than [edge], [edge] satisfied by covert operator in [Spec,CP]

V1 conditionals:

(24)   Ist die   Entscheidung gefallen, **gilt**   sie für alle.
is   the.F decision   fallen   applies she for all
'Once the decision has been taken, it applies to all.'

---

[1]The example is taken from the Michigan Corpus of Middle English Prose and Verse.

anaphoric elements possible:

(25)   Ist die   Entscheidung gefallen, dann / so **gilt**   sie für alle.
        is   the.F decision   fallen   then   so applies she for all
        'Once the decision has been taken, it applies to all.'

structure: as in (23)

both the zero anaphor and *dann/so* need an antecedent – order of the clauses cannot be
    changed (no matter whether the subclause is introduced by *wenn* or not):

(26)   a. *∅/So/Dann **gilt**   die   Entscheidung für alle, ist sie gefallen.
            ∅/so/then   applies the.F decision   for all   is she fallen
            'The decision applies to all once it has been taken.'

        b. *∅/So/Dann **gilt**   die   Entscheidung für alle, wenn sie gefallen ist.
            ∅/so/then   applies the.F decision   for all   when she fallen   is
            'The decision applies to all once it has been taken.'

zero anaphor semantically and syntactically motivated

V1 declaratives:

(27)   A: Peter ist gekommen.
            Peter is come.PTCP
            'Peter has arrived.'

        B: **Hab** ich (schon) gesehen.
            have.1SG I already seen
            'I have (already) seen it.'

zero anaphor (corresponds to a demonstrative) in the [Spec,CP] – structure like (23)

clause in (27) cannot be uttered without an appropriate antecedent – not possible out of
    the blue:

(28)   ***Hab**   ich (schon) gesehen, dass Peter gekommen ist.
        have.1SG I   already seen   that Peter come.PTCP is
        'I have (already) seen that Peter has arrived.'

V1 clauses examined here: underlyingly V2 – no overtness requirement on the element
    in the specifier (even if anaphors move via [edge] feature and not a clause-typing
    feature), no surface V2 requirement – restrictions on the specifier and lexicalising
    [fin] on C not tied together

further consequence: neither [edge] nor [fin] rules out V3 orders – Kiezdeutsch (Wiese
    2009: 787):

(29)   Morgen   ich geh Arbeitsamt.
        tomorrow I   go   job.centre
        'Tomorrow I will go to the job centre'.

multiple CPs – second CP generated with [edge] feature since there is no complementiser, no [fin] to be lexicalised since [fin] checked off in the first CP already

5 Conclusion

elements in C and their role in clause typing

- overt complementisers – canonical configuration, availability subject to licensing conditions (cases examined here: restricted to embedded/dependent clauses); [fin] lexicalised by an overt element regularly; no [edge] feature

- zero complementisers – cross-linguistic variation, available lexical items in certain languages (embedded and/or main clauses)

- verb movement – head adjunction, no complementiser in C – [fin] lexicalised by the verb adjoined to C; [edge] feature present to project the phrase, element in [Spec,CP] either overt (surface V2) or not (surface V1)

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