Categories in the CP-domain

0. Introduction

CP-domain: complementisers (C heads) and clause-typing operators (C-operators)

distinction going back to Chomsky (1977, 1981):

(1)  

\[
\text{CP} \quad \begin{array}{c}
\text{OP} \\
\text{C} \\
\text{COMP} \\
\text{C'} \\
\text{…} \\
\end{array}
\]

grammaticalisation processes from OP to COMP often attested


change characterised by gradience (see Traugott and Trousdale 2010)

→ questions:

• categorial distinction between C heads and C-operators (status change implies difference)
• categorial closeness of C heads and C-operators (flexibility)

proposal: C-operators have to lose category-specific markers incompatible with C status

C head: denotes a status and a category ↔ C-operator: denotes a status, not a category

three criteria for modelling C-operator > C head changes:

Criterion 1 (syntactic): C-operators may take lexical XPs along, C heads may not
Criterion 2 (morpho-phonological): ban on complementiser-incompatible features in C
Criterion 3 (morpho-phonological): possible changes affect C-operators as a class
1. The distinction between C heads and C-operators

properties that distinguish C heads from C-operators – also overlaps

- syntactic category
  C heads: complementisers constitute a syntactic category
  C-operators: various types (e.g. DPs, AdvPs)

(2)  a. I hope that you are doing well.
    b. I asked if he was doing well.
    c. I asked which sauce was hot.
    d. I know where your cat lives.

but: the C head position may host other elements as well – e.g. V2 movement in German

(3) Mein Schwiegervater hat morgen Geburtstag.
    my father-in-law has tomorrow birthday
    ‘My father-in-law has birthday tomorrow.’

also: main clause interrogatives in English (cf. Pesetsky and Torrego 2000):

(4)  a. Where did you find your cat?
    b. Have you found your cat?

→ no one-to-one relationship between position and syntactic category in either case

- syntactic status: head versus phrase
  C heads: head-sized
  C-operators: phrases (the specifier position is a phrase position)

but: phrases are not necessarily visibly phrase-sized

(5)  a. He asked me how much I paid in rent for my flat in Charlottenburg.
    b. He asked me how old my turtle was.
    c. Dwyer told the players how he wanted to win.
       ‘Dwyer told the players that he wanted to win.’ (Willis 2007: 434)

reanalysis of head-sized phrases into heads possible (see also Van Gelderen 2013: 49)

→ head-sized C-elements are potentially ambiguous between C head and C-operators status

- movement versus base-generation
  complementisers: base-generated C heads
  C-operators: typically move from a clause-internal position

but: in principle, C-operators may be base-generated in the CP-domain (if they are not
  arguments of e.g. the verb – see Van Gelderen 2009)
C position can also be filled by movement

verb movement (e.g. in German main clauses, English main clause *wh*-questions with *do*-support)

complementisers moving from C to C in one left periphery (see Bacskai-Atkari 2014a for the evolution of certain complex complementisers)

C-operators may also move to the head position (Bayer and Brandner 2008)

(6)  
   a. I told them *who* I wanted to see.
   b. I told them *how* I had won the game.

reanalysis of head-sized phrases into heads possible in parallel with changing the landing site

Doubly Filled COMP effect in Bavarian (and Alemannic) embedded *wh*-questions

if the *wh*-element is phrase-sized (lexical XP, P head, even lexical case suffixes)

see Bayer and Brandner (2008)

events (Bayer and Brandner 2008: 88, ex. 3a and 4a):

(7)  
   a. I *frog-me, fia vos dass-ma an zwoatn Fernseher braucht.*
       I ask-REFL for what that-one a second TV needs
       ‘I wonder what one needs a second TV for.’
   b. I *hob koa Ahnung, mid vos fia-ra Farb dass-a zfrien waar.*
       I have no idea with what for-a colour that-he content would-be
       ‘I have no idea with what colour he would be happy.’

but: head-sized *wh*-elements in complementary distribution with *dass* ‘that’

Bayer and Brandner (2008: 88, ex. 5a):

(8)  
*I woass aa ned, **wer dass** allas am Sunndoch in da Kiach gwen is.*
     I know too not who that all at Sunday in the church been is
     ‘I don’t know either who all has been to church on Sunday.’

but: *wer* ‘who’ in (8) definitely an argument of the verb → dual status

also: movement may be detected even if not tied to a visible element

   e.g. island effects in comparatives Kennedy (2002: 558, ex. 9):

(9)  
   a. *Michael has more scoring titles than Dennis is a guy who has.*
   b. *Michael has more scoring titles than Dennis is a guy who has tattoos.*

in (9): movement of a degree expression (*x-many scoring titles, or x-many*) rather than of *than*

→ movement vs. base-generation cannot fully grasp the distinction of C heads and operators
2. Lexical phrases

Criterion 1 (syntactic): C-operators may take lexical XPs along, C heads may not
embedded degree clauses cross-linguistically: degree operators may take lexical APs (or NPs)
(10) a. % Mary is as tall as how tall Peter is.
b. % Mary is taller than how tall Peter is.
movement: triggered by the [rel] feature of the operator

see Chomsky (1977) on comparative clauses as relative clauses

movement of lexical XP: [EDGE] feature of the operator may (have to) percolate up to a
maximal projection containing both the operator and the lexical XP
operators may not be extracted from within the maximal projection

see Bacskai-Atkari (2014b) for the distinction

extractability of degree operators may vary for the same subtype and also within a language

Hungarian patterns with amilyen ‘how’ and amennyire ‘how much’ (Bacskai-Atkari 2014b):
(11) a. Mari magasabb, mint amilyen magas Péter.
Mary taller than how tall Peter
‘Mary is taller than Peter.’
Mary taller than how Peter tall
‘Mary is taller than Peter.’
c. Mari magasabb, mint amennyire magas Péter.
Mary taller than how tall Peter
‘Mary is taller than Peter.’
d. Mari magasabb, mint amennyire Péter magas.
Mary taller than how Peter tall
‘Mary is taller than Peter.’

coop-presence of a lexical XP: makes the C-operator visibly phrase-sized

→ reinterpretation as a C head not possible

lexical XP can also be the one containing the operator

e.g. PPs – including case suffixes (KPs – Kase Phrase) – cf. Alemannic/Bavarian
embedded interrogatives (Bayer and Brandner 2008)

(12) a. This is the book about which I was talking.
b. This is the book which I was talking about.

but: there are operators that regularly take no lexical XP – e.g. VP-adverbs

cyclic changes in Hungarian comparatives: reanalysis of original operators hogy ‘how’
and later mint ‘how’ (similarly: als and wie in German, see Jäger 2010)

↔ present-day Hungarian degree operators typically can take lexical XPs, see (11)
above (cf. Bacskai-Atkari 2014a)
English *how*: no reanalysis in comparatives (takes lexical APs, see (10) above)

\[ \leftrightarrow \text{how as a VP-adverb reanalysed as a subordination marker ‘that’} \]

\[ \rightarrow \text{reanalysis for the same element across categories (e.g. *how*) or for different elements with similar function (e.g. Old Hungarian *mint* ‘how’ vs. Modern Hungarian *amilyen* ‘how’)} \]

can be licensed/blocked depending on whether a lexical XP is present

Criterion 1: universal one-way implications

- co-presence of lexical XP \( \rightarrow \) C-element is a C-operator
- absence of lexical XP \( \leftarrow \) C-element is a complementiser (C head)

3. **Complementiser-incompatible features**

Criterion 2 (morpho-phonological): ban on complementiser-incompatible features in C

recall: C head (as a base-generated complementiser) is a syntactic category, C-operator is not

- C-operators have features in line with their own specific category

prerequisite for grammaticalisation: loss of C-incompatible features

- features may be overt or covert \( \rightarrow \) lack or disappearance of overt features decisive

some categories have fewer visible features – e.g. VP-adverbs

- e.g. *als* and *wie* in German: ‘how’ \( \rightarrow \) ‘as’/’than’

nominal elements – case, number, person features may be present
- case: if lexical case, also a PP projection – ruled out as a lexical phrase

lack of overt marking – e.g. English: grammaticalisation of *that*
- see Van Gelderen (2004, 2009)

grammaticalisation of Hungarian operators into C heads in Old/Middle Hungarian

grammaticalisation possible for adverbs

- *hogy* ‘how’ \( \rightarrow \) ‘that’ (before Old Hungarian, partially Early Old Hungarian)
- *ha* ‘when’ \( \rightarrow \) ‘if’ (before Old Hungarian)
- *mint* ‘how’ \( \rightarrow \) ‘as/than’ (during Old Hungarian, partially Early Middle Hungarian)
- *mert* ‘why’ \( \rightarrow \) ‘because’ (during Old Hungarian, partially Early Middle Hungarian)

no grammaticalisation for ordinary relative operators in the same period
- e.g. *ki* ‘who’, *mi* ‘what’ – always marked for case, person, number

C heads incompatible with such features in Hungarian (all periods)
operators moving to C in Bavarian/Alemannic: wer ‘who.NOM’, wen ‘who.ACC’, was ‘what’, wie ‘how’, wo ‘where’ (Bayer and Brandner 2008: 89)

question of wen – marked for case

proposal: complementiser-incompatible features are subject to cross-linguistic variation

Bavarian shows complementiser agreement (see Fuß 2004)

examples (Fuß 2004: 60, exx. 1a und 3a):

(13) a. ob-st noch Minga kumm-st
    whether-2SG to Munich come-2SG
    ‘whether you come to Munich’

    b. ob-st DU noch Minga kumm-st
    whether-2SG you.SG to Munich come-2SG
    ‘whether you come to Munich’

features associated with a domain lower than the CP may be present in the CP-domain

also: German V2-clauses involve the movement of V to C ↔ other languages have a more restricted CP-domain, e.g. Hungarian (many functional layers in Hungarian associated with the functional vP-layer)

→ reanalysis of an operator into a C head only if complementiser-incompatible features lost, but these features are subject to cross-linguistic variation

Criterion 2: universally applicable, language-specific one-way implications

presence of complementiser-incompatible features → C-element is a C-operator

absence of complementiser-incompatible features ← C-element is a complementiser

4. Changes affecting operators

Criterion 3 (morpho-phonological): possible changes affect C-operators as a class

morpho-phonological changes affecting a (sub)class of operators (e.g. interrogative operators, relative operators) apply to all members of the (sub)class – change serves as a morphophonological distinction of the common property of the class

Old Hungarian relative operators: morphophonological shape identical to interrogatives

change in Late Old Hungarian and Middle Hungarian: relative operators distinguished


changes in the system:

<table>
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<tr>
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<th>Old Hungarian</th>
<th>Middle/Modern Hungarian</th>
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<td>relative</td>
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<td>‘who’</td>
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relative operators starting with *a*- (reanalysed from a matrix pronominal element, see Bacskai-Atkari and Dékány 2015 for a formal analysis)

similar morphological distinction between interrogative and relative operators in several languages – e.g. Slovene (*kdo* ‘who.INT’ vs. *kdor* ‘who.REL’)

but: already grammaticalised complementisers not affected

e.g. *mint* ‘as/than’ in comparatives

individual examples of *mint* ambiguous between ‘how’ and ‘as’ before relative pronouns grammaticalise in the *a*- forms:

(14) Mët iťèn nem vgā fenēgēt mēt èmber
because God not so threatens how/as human
‘for God does not threaten as/in the way a human being does’ (Vienna Codex 27)

but: after *a*-forms grammaticalise, no ambiguity

→ longitudinal distinction

→ reanalysis may not show surface distinctions until non-reanalysed forms undergo change

problems: distinction only over time (no disambiguation of individual examples), morphophonological changes affecting the (sub)class in question not necessary

Criterion 3: universally applicable, language-specific two-way implications

changes affecting operators attested ↔ C-element a C-operator

changes affecting operators attested ↔ C-element a complementiser (C head)

**Conclusion**

grammaticalisation processes from OP to COMP often attested – gradience
categorial distinction and closeness between C heads and C-operators

status change implies difference and flexibility

proposal: C-operators have to lose category-specific markers incompatible with C status

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three criteria for modelling C-operator > complementiser changes:

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criteria universally applicable but the particular settings may be language-specific
References