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Categories in Grammar –
Criteria and Limitations
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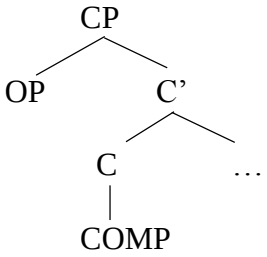
Categories in the CP-domain

0. Introduction

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

distinction going back to Chomsky (1977, 1981):

(1)



grammaticalisation processes from OP to COMP often attested

cf. Van Gelderen (2004, 2009, 2013)

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

cf. e.g. Fanselow (2002, 2004a, 2004b), Frey (2005), Den Besten (1989)

(3) Mein Schwiegervater **hat** morgen Geburtstag.
my.M 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)

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

(7) a. I frog-me, **fia wos 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 wos 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.'

b. *Mari magasabb, mint **amilyen** Péter **magas**.
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.'

co-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)

↔ *how* as a VP-adverb reanalysed as a subordination marker 'that' – (5)

→ 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 → C-element is a C-operator

absence of lexical XP ← 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 → 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' → '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

cf. Bacskai-Atkari (2014a, 2014b)

grammaticalisation possible for adverbs

hogy 'how' → 'that' (before Old Hungarian, partially Early Old Hungarian)

ha 'when' → 'if' (before Old Hungarian)

mint 'how' → 'as/than' (during Old Hungarian, partially Early Middle Hungarian)

mert 'why' → '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

cf. Sipos (1991), G. Varga (1992), Juhász (1992), Haader (1995)

changes in the system:

	Old Hungarian		**Middle/Modern Hungarian**	
	interrogative	relative	interrogative	relative
'who'	*ki*	*ki*	*ki*	***a****ki*
'what'	*mi*	*mi*	*mi*	***a****mi*
'where'	*hol*	*hol*	*hol*	***a****hol*
'when'	*mikor*	*mikor*	*mikor*	***a****mikor*

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) Mȅt iſtèn nem vgā fenėgèt **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

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

three criteria for modelling C-operator > complementiser changes:

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

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