# Towards a Cross-Linguistic Typology of Marking Polarity in Embedded Degree Clauses

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# Introduction

embedded degree clauses: AS-clauses and THAN-clauses

(1)   a.  Ralph is as tall **as** Mary is.

        b.  Ralph is taller **than** Mary is.

# Negative polarity

THAN-clauses: negative polarity environment (Seuren 1973)

negative polarity items, *any* licensed

(2)  a. He would rather continue complaining than **lift a finger** to improve his life.

b. Ralph has spent more time travelling than **any** other professor (has).

# Comparative semantics

▶ AS-clauses: degree equality (d=d')

▶ THAN-clauses: degree inequality (d≠d')

(3) a. *x* is as tall as *y*: $\exists d \exists d'[\text{TALL}(x,d) \;\&\; \text{TALL}(y,d') \;\&\; \mathbf{(d=d')}]$

b. *x* is taller than *y*: $\exists d \exists d'[\text{TALL}(x,d) \;\&\; \text{TALL}(y,d') \;\&\; \mathbf{(d>d')}]$

c. *x* is less tall than *y*: $\exists d \exists d'[\text{TALL}(x,d) \;\&\; \text{TALL}(y,d') \;\&\; \mathbf{(d<d')}]$

# Proposal

▶ question: which head can be responsible for marking negative polarity

▶ proposal: either a separate Pol head or a comparative C head (various subtypes)

even overt comparative operators cannot take over this function

→ operators first have to acquire head status – doubling or radical replacement

# Negative polarity heads

Italian (Seuren 1973: 535, exx. 45 and 46):

(4) a. Giovanni è più alto che **non** pensassi.

John is more tall.M that not thought.SBJV.1SG

'John is taller than I thought.'

b. Giovanni è più alto che pensavo.

John is more tall.M that thought.1SG

'John is taller than I thought.'

# French

*ne* appears with finite verbs (Seuren 1973: 535, ex. 44):

(5)  Jean  est  plus  grand  que  je  **ne**  pensais.
     John  is   more  tall.M  that  I   not  thought.1SG
     'John is taller than I thought.'

negative polarity not the same as clausal negation

French: polarity marker is *ne*, but negation carried rather by *pas* otherwise

# Old Hungarian

C head *hogy* 'that' + polarity marker *nem* 'not'

(6) Zōṇėkmīg te meltatlākodatod mv̇ èllènōc mẻt iob
cease.PRT you indignance.POSS we against because better

hog èlèuènėn zolgallonc Nabuhodonozor nag kiralnac &
that alive serve.1PL Nebuchadnezzar great king.DAT and

alazkoggonc te nèkėd **hog nē** meghaluāc mv̇
cringe.1PL you you.DAT that not PRT.dying.1PL we

vèzèdelmōcbèn mv̇nmagonc mv̇ zolgalatōknac
peril.POSS.INE ourselves we service.POSS.DAT

karat zènuèggv̇c
damage.POSS.ACC suffer.1PL

'cease to be indignant towards us because it is better for us to serve the great king Nebuchadnezzar alive and to cringe before you that not (=than) to suffer the damages of our service dying'
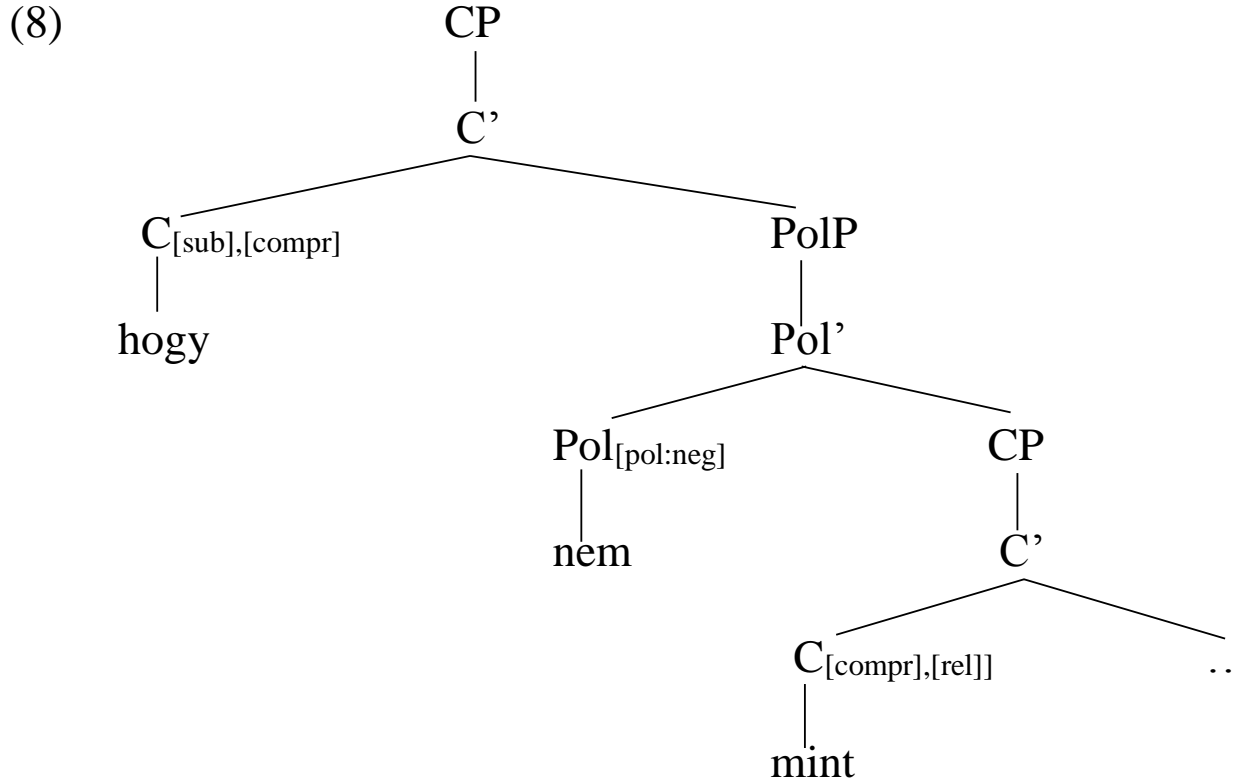
# Later Old Hungarian configuration

*mint* 'as' also appears as an overt operator (later lower C head):

(7) Te igyekevzeted az isteny zolgalatban jnkab légen arra
you diligence.POSS the divine service.INE rather be.SBJV that.SUB

hog az zent irasnak igy ebevl lelky ertelmet
that the sacred writing.DAT thus this.ELA spiritual sense.ACC

vegy es aytatossagnak keuansagat **hog nem mynt**
take and prayer.DAT desire.POSS.ACC that not than

vduarlokeppen eneklesnek mogyat tegyed
courting singing.DAT mode.POSS.ACC do.SBJV.2SG

'your diligence in serving God should be directed at gaining a spiritual understanding of the Scripture and a desire for prayer, rather than at taking the opportunity to sing for courting'

# Structure

(8)

CP
  |
C'
    /        \

$C_{[sub],[compr]}$          PolP
   |                 |
hogy              Pol'
                     /    \

$Pol_{[pol:neg]}$       CP
   |           |
nem         C'
              /   \

$C_{[compr],[rel]]}$    …
   |
mint

# Features

- ► [sub]: marking finite subordination; does not have to be overt; encoded by a functional C head

- ► [compr]: marking the comparative nature of the clause; has to be overt; encoded either by a functional C head or by an operator (operator movement to the specifier of the lower CP)

- ► [rel]: marking the relative nature of the clause; does not have to be overt (language-specific); encoded either by a functional head or an operator; ensures that the comparative operator moves to the left periphery (cf. Chomsky 1977, Kennedy 2002 on comparative operators being relative operators)

- ► [pol:neg]: marking the negative polarity of the clause in the absence of clausal negation; has to be overt; encoded by a functional head

# The overtness of comparative C heads

possible patterns in Modern Hungarian AS-clauses:

(9) a. Mari olyan magas, **mint amilyen (magas)** Péter.
    Mary so  tall  as  how.REL  tall  Peter
    'Mary is as tall as Peter.'

  b. Mari olyan magas, **mint** Péter.
    Mary so  tall  as  Peter
    'Mary is as tall as Peter.'

  c. Mari olyan magas, **amilyen (magas)** Péter.
    Mary so  tall  how.REL tall  Peter
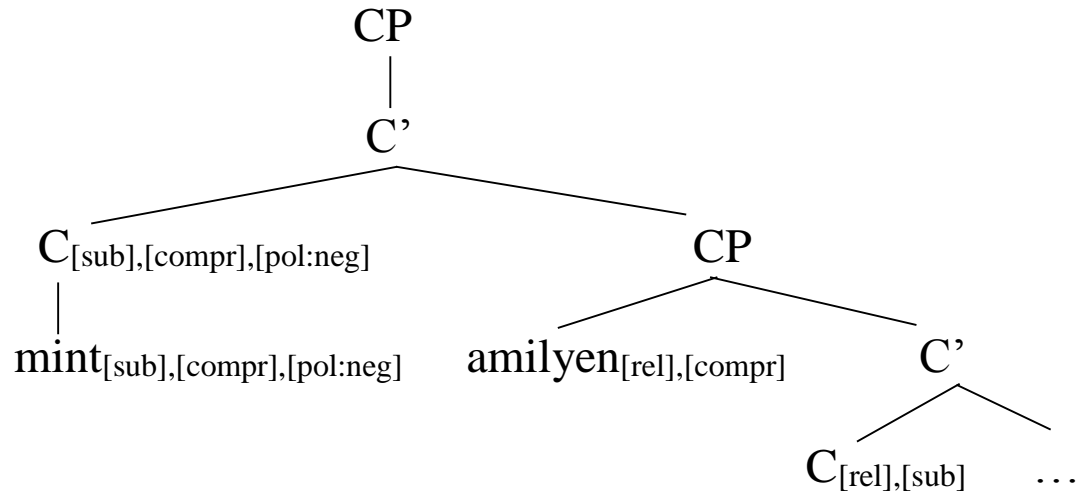    'Mary is as tall as Peter.'

# Hungarian comparative subclauses

*mint* cannot be absent in THAN-clauses:

(10) a. Mari  magasabb,  **mint  amilyen  (magas)**  Péter.

      Mary  taller  as  how.REL  tall  Peter

      'Mary is taller than Peter.'

   b. Mari  magasabb,  **mint**  Péter.

      Mary  taller  as  Peter

      'Mary is taller than Peter.'

   c. *Mari  magasabb,  **amilyen  (magas)**  Péter.

      Mary  taller  how.REL  tall  Peter

      'Mary is than Peter.'

# Structure

(11)

$$CP$$

$$C'$$

$C_{[sub],[compr],[pol:neg]}$        $CP$

$mint_{[sub],[compr],[pol:neg]}$     $amilyen_{[rel],[compr]}$     $C'$

$C_{[rel],[sub]}$     . . .

# Equatives in Czech

AS-clauses in Czech with the operator *jak*:

(12) a. Ten stůl je stejně dlouhý, **jak siroká** je ta kancelář.
      the table is same long as wide is the office
      'The table is as long as the office is wide.'

   b. Ten stůl je stejně dlouhý, **jak** je ta kancelář **siroká**.
      the table is same long how is the office wide
      'The table is long as long as the office is wide.'

# Comparatives in Czech

(13) a. ᵀⁿTen stůl je delší, **než jak široká** je ta kancelář.

the table is longer than how wide is the office

'The table is longer than the office is wide.'

b. Ten stůl je delší, **než jak** je ta kancelář **široká**.

the table is longer than how is the office wide

'The table is longer than the office is wide.'

c. *Ten stůl je delší, **jak široká** je ta kancelář.

the table is longer how wide is the office

'The table is longer than the office is wide.'

d. *Ten stůl je delší, **jak** je ta kancelář **široká**.

the table is longer wide is the office wide

'The table is longer than the office is wide.'

# So…

overtness of comparative C heads follows from marking [pol:neg]

▶ but the C head does not have to be negative-like, though it can be

▶ negative C heads differ from Pol heads: Pol heads co-occur with a real C head

# Multiple C heads

double CPs attested in Hungarian comparatives historically – *hogy* 'that' + *mint* 'as'

> lower C head taking over: passing on features, including [pol:neg]

patterns in German THAN-clauses (cf. Jäger 2010, Eggs 2006, Lipold 1983, Weise 1918):
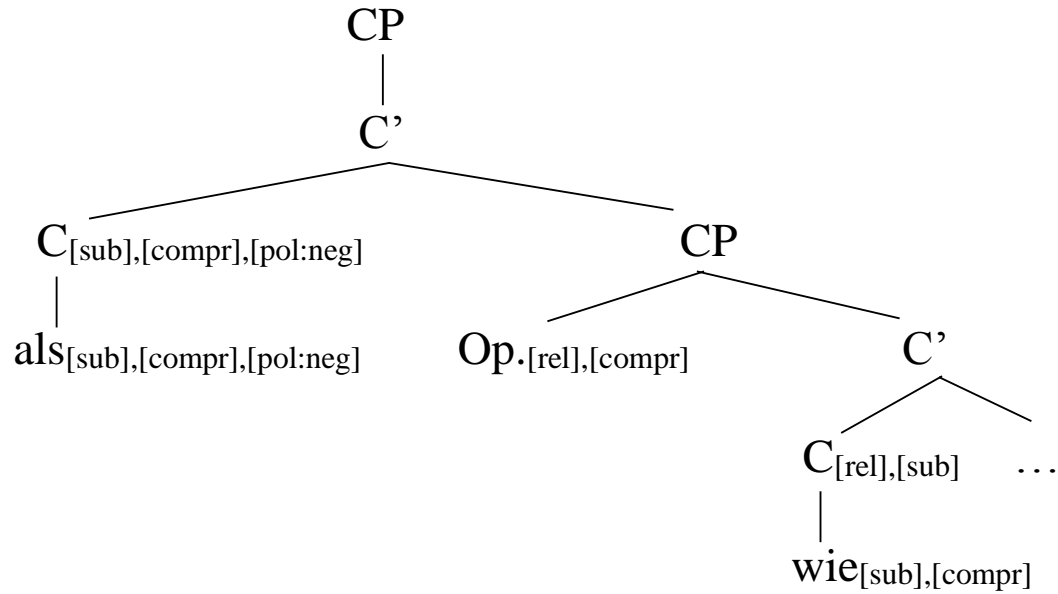
- Standard German/northern dialects: *als* 'than'

- certain dialects (e.g. Alemannic, Hessian): *als wie* 'than as'

- southern dialects (e.g. Bavarian): *wie* 'as'

# Patterns in German

(14) a. Ralf    ist  größer  **als**   Peter.

        Ralph  is    taller   than  Peter

        'Ralph is taller than Peter.'

    b. % Ralf    ist   größer  **als**   **wie**  Peter.

        Ralph  is    taller   than  as    Peter

        'Ralph is taller than Peter.'

    c. % Ralf    ist   größer  **wie**  Peter.

        Ralph  is    taller   as    Peter

        'Ralph is taller than Peter.'

# Structure

(15)

CP

C'

C$_{[sub],[compr],[pol:neg]}$

als$_{[sub],[compr],[pol:neg]}$

CP

Op.$_{[rel],[compr]}$

C'

C$_{[rel],[sub]}$ . . .

wie$_{[sub],[compr]}$

# Comparatives in Serbo-Croatian

basic pattern with *nego* 'than' or *no* 'than':

(16) a.  Pavao  je  viši  **nego**  Petar.

Paul  is  taller  than  Peter

'Paul is taller than Peter.'

b.  Pavao  je  viši  **no**  Petar.

Paul  is  taller  than  Peter

'Paul is taller than Peter.'

# Multiple C heads in Serbo-Croatian

lower C heads:

(17) a. Pavao  je  viši    **nego što**    je  Petar.
               Paul    is   taller  than  what  is  Peter

               'Paul is taller than Peter.'

       b. ?Pavao  je  viši    **nego koliko**  je  Petar.
               Paul    is   taller  than  as       is  Peter

               'Paul is taller than Peter.'

# Radical replacement and Chain Uniformity

recall: Czech *jak* 'how' cannot replace *než* 'than' as an operator:

(18) a. <sup>?</sup>Ten stůl je delší, **\*(než) jak široká** je ta kancelář.

      the  table  is  longer  than  how  wide  is  the  office

      'The table is longer than the office is wide.'

   b. Ten stůl je delší, **\*(než) jak** je ta kancelář **široká**.

      the  table  is  longer  than  how  is  the office  wide

      'The table is longer than the office is wide.'

# Elliptical clauses in Czech

*jak* is possible in THAN-clauses as a C head iff the clause is elliptical:

(19) a.  Marie  je  vyšší, **jak**  (*je) Karel.

        Mary  is  taller how  is  Charles

        'Mary is taller than Charles.'

    b.  Renault  stojí  víc  **jak**  (*stojí) Dacia.

        Renault  costs  more  how  costs  Dacia

        'A Renault costs more than a Dacia.'

# Embedded *wh*-questions in Alemannic and Bavarian

regular pattern in Alemannic/Bavarian: *wh*-phrase + *dass* 'that' in the C head position

Doubly Filled COMP effect

but: not with head-sized *wh*-element – complementary distribution with *dass*

(20) I   woass   aa   ned,   **wer (*dass)**   allas   am   Sunndoch   in
     I   know    too  not    who    that       all     at   Sunday     in

     da   Kiach   gwen   is.
     the  church  been   is

     'I don't know either who all has been to church on Sunday.'

# Chain Uniformity

question of Chain Uniformity (cf. Chomsky 1995)

phrase moving to a head position

Bayer and Brandner (2008): dual status of head-sized phrases

but: in embedded questions the operator moves to a head
position of the same CP that hosts operators otherwise

# Comparatives

*jak* has to move to a C head responsible for [pol:neg] not for [rel]

otherwise *jak* would be preceded by a separate head (*než*)

reason: lower CP not generated (similar to Hungarian elliptical comparatives)

but: the [pol:neg] CP not filled by merging *než* but by moving *jak*

ellipsis: the visible base-generation site of *jak* would cause an operator interpretation

mismatch, [rel] not available in situ (↔ *wh*)

radical replacement of complementiser by operator: dual status, not grammaticalisation

# Conclusion

cross-linguistic typology of polarity marking:

| Types | | Examples |
|---|---|---|
| (I) | separate Pol head | ● Old Hungarian *nem/sem*<br>● Italian *non*<br>● French *ne* |
| (II) | incorporated negative C head | ● English dialectal *nor*<br>● Old/Middle High German *wan*<br>● Swiss German dialectal *wan/weder*<br>● Czech *než*<br>● Polish *niz*<br>● Serbo-Croatian *nego/no* |
| (III) | THAN-C head | ● English *than*<br>● German *als*<br>● Old High German *denn*<br>● Dutch *dan*<br>● Russian *chem* |
| (IV) | comparative C head | ● German dialectal *wie*<br>● Hungarian *mint* |
| (V) | more general C head | ● Italian *che*<br>● French *que* |

# Thank you!
# Danke!
☺

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