Degree Semantics, Polarity, and the Grammaticalisation of Comparative Operators into Complementisers

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Introduction

two kinds of comparative degree clauses:

- ▶ equatives (AS-clauses)
- ▶ comparatives proper (THAN-clauses)

English:

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

   b. Ralph is taller **than** Peter (is).

AS-clauses in Modern German

(2) Ralf   ist so groß **wie** Peter.

    Ralph is so   tall   as   Peter

    'Ralph is as tall as Peter.'

THAN-clauses in Modern German

(3) 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.'

AS-clauses in Modern Hungarian

(4) 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.'

THAN-clauses in Modern Hungarian

(5) 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 taller than Peter.'

Proposal

▶ THAN-clauses are negative polarity environments (Seuren 1973) ↔ AS-clauses

▶ negative polarity follows from comparative semantics – no true negation

▶ negative polarity has to be encoded by an overt functional head (no negative operator)

▶ an operator can replace the overtness of a THAN-head only if is a C head itself

Comparative and equative complementisers in German

Old High German (see Jäger 2010: 470–471):

AS-clauses introduced by *so* and other elements containing *so*, e.g. *also* (> *als*)

(6)   it sô giuuerðan mugi, **sô** thu mid thînun uuordun gisprikis

      it so happen   can   as you with your   words   say

      'may it happen as your words say' (*Heliand* 2.158)

Old High German

THAN-clauses introduced by *denn*(/*dann*/*thanne*)

▶ *dann*/*denn* etymologically related to English *then*/*than*, Dutch *dan* (Rutten 2012)

  → regular West Germanic pattern

▶ also a negative version: *wan*

  (→ negative *wan* and *weder* in Swiss German, see Friedli 2005)

(7) that he sî   betara **than** uui

  that he is.SBJV better than we

  'that he is better than we are' (*Heliand* 3.212)

Changes in German

- Middle High German mostly like Old High German (Jäger 2010: 471–472)

- changes from Early New High German onwards (Jäger 2010: 472–475)

  especially from the second half of the 16th century

AS-clauses: *wie* replacing *als*

THAN-clauses: *als* replacing *denn* (analogy from AS-clauses)

The combination *als wie*

wie appearing as an operator (interrogative operator in Old High German) ↔ *als*

  co-occurrence with *als* also possible

(8) Da   steh   ich nun, ich armer Tor!
  there stand.1SG I   now I   poor.M fool

  Und bin so klug **als**   **wie** zuvor
  and am so wise   than as   formerly

  'Here now I stand, poor fool, and see I'm just as wise as formerly.' (Goethe, *Faust* I.4)

Changes in AS-clauses

(9)   als → als (wie) / (als) wie → wie

status of *wie*: may be both an operator and a lower complementiser in the middle stage

last stage: must be a complementiser (not permitting former higher C head *als*)

wie also appearing in THAN-clauses – later, dialectal variation (south of Braunschweig–Berlin line, see Jäger 2010)

Changes in THAN-clauses

(10)   als → als (wie) → als (wie) / (als) wie → wie
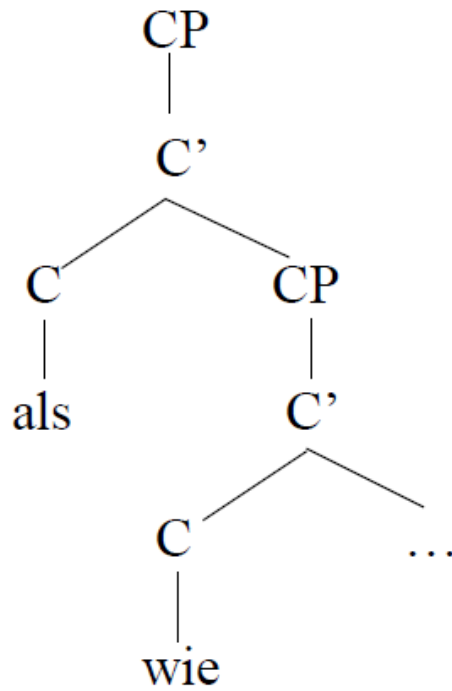
status of *wie*: must be a complementiser if it can
replace *als*, AND must also encode polarity

Status of *wie* in Modern German

(11) a. Der   Tisch ist so   lang   **wie** das   Büro   **breit** ist.

      the.ᴍ   table is   so   long   as   the.ɴ office   wide   is

      'The table is as long as the office is wide.'

    b. *Der   Tisch ist so   lang   **wie breit** das   Büro   ist.

       the.ᴍ   table is   so   long   as   wide   the.ɴ   office   is

       'The table is as long as the office is wide.'

    c. % Der   Tisch ist länger   **als**   **wie** das   Büro   **breit** ist.

       the.ᴍ   table is   longer   than   as   the.ɴ   office   wide   is

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

    d. *Der   Tisch ist länger   **als**   **wie**   **breit** das   Büro   ist.

       the.ᴍ   table is   longer   than   as   wide   the.ɴ   office   is

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

Structure

(12)

```
              CP
              |
              C'
             /  \
           C      CP
           |      |
          als     C'
                 /  \
               C     …
               |
              wie
```

Diachronic developments in Hungarian

Old Hungarian: 9th–16th centuries

original equative/comparative complementiser: *hogy* 'how, that' (cf. Haader 2003)

THAN-clauses: *hogy* followed by the negative Pol head *nem* 'not' (or: *sem*)

→ *hogy nem* also fusing into *honnem* (Bacskai-Atkari 2014a, 2014b)

appearance of *mint* 'how, as' in Old Hungarian: as an operator (cf. Haader 2003)

Patterns in AS-clauses

▶ *hogy* as an operator/complementiser already in the earliest texts:

(13) furiſcte muſia!|| etetý ýmletí.   ug **hug** ana   ſciluttet.

  bathes   washes   feeds breastfeeds so how mother child.ACC

  'she bathes, washes, feeds and breastfeeds him as a mother does
   her child' (Königsberg Fragment)

Patterns in AS-clauses

▶ the combination of *hogy* and *mint*:

(14) mínd anne boṣegoṣ końhullatasoc mene a vízeknec

all so.much plenty crying.PL as.much the waters.DAT

sokassaghí sem volnanac en eloṭtem kellemetoṣek/ Auaǵ

multitude neither be.COND I before.1SG pleasant or

foganatosoc **hoǵ** **mint** akki zoṇetlen a kereztfanac oṭ

effective.PL that as who incessantly the rood.DAT he

keserúseget v́ testeben víselí

bitterness.POSS.ACC he body.POSS.INE bears

'not even as much crying as the multitude of waters would be as pleasant and touching to me as the one who incessantly bears the bitterness of the rood in his body' (Nagyszombat Codex 40–41)

Patterns in AS-clauses

▶ *mint* as an operator/complementiser
  (operator use already in the earliest texts):

(15) Ez   oz   ýſten **mynt**evt   eſmeríuc!

      this   the God   how.he.ACC know.1PL

      'this is God as we know him' (Königsberg Fragment)
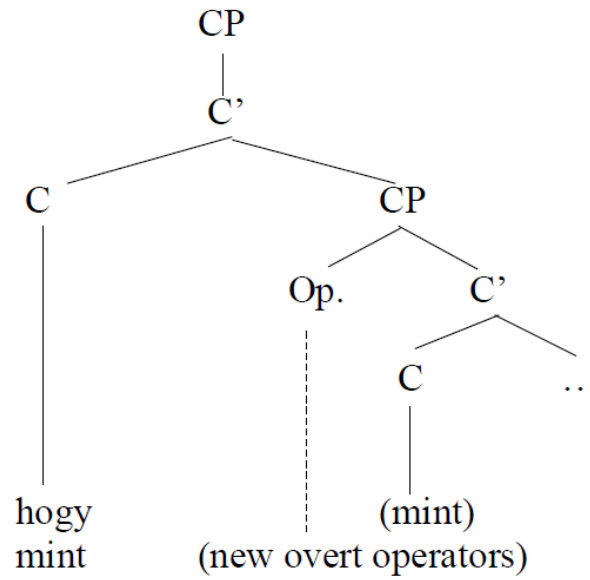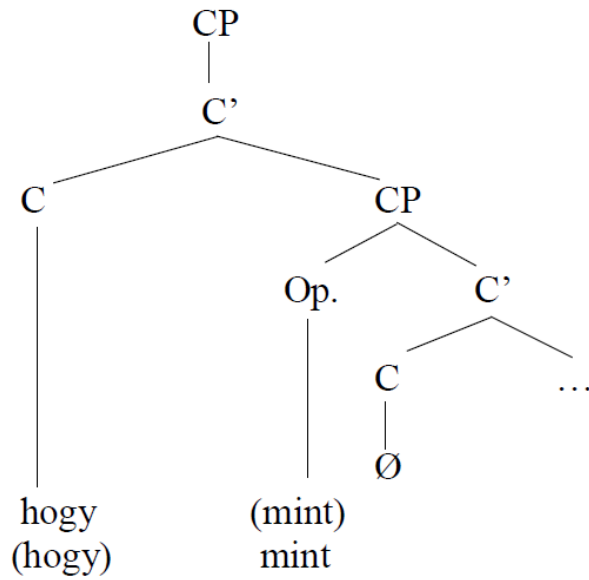
Changes in AS-clauses

(16) hogy

     ↓

hogy (mint) / (hogy) mint

     ↓

mint

Structures

(17)

```
        CP                                      CP
        |                                       |
        C'                                      C'
       /  \                                    /  \
      C    CP                                 C    CP
      |   /  \                                |   /  \
      |  Op.  C'                              |  Op.  C'
      |  |   /  \                             |  ┊   /  \
      |  |  C    …                            |  ┊  C    …
      |  |  |                                 |  ┊  |
      |  |  Ø                                 |  ┊  |
   hogy  (mint)                            hogy  (mint)
  (hogy)  mint                             mint  (new overt operators)
```

Patterns in THAN-clauses

▶ the C head *hogy* and the negative polarity marker *nem* (earliest pattern):

(18) Zōṇėkmɡ̄ te meltatlākodatod mv̇ èllènōc̣ mẻt iob
cease.PRT you indignance.POSS.2SG we against.1PL because better

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

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

vėzèdelmōc̣bèn mv̇nmagonc mv̇ zolgalatōknac
peril.POSS.1PL.INE ourselves we service.POSS.1PL.DAT

karat zènuèggu̇c
damage.POSS.ACC suffer.SBJV.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' (Vienna Codex 14)

Patterns in THAN-clauses

▶ the C head *hogy* + the negative polarity marker *nem* + the operator/complementiser *mint*:

(19) Te   igyekevzeted az   isteny zolgalatban jnkab léǵen   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.SBJV.2SG 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' (Horvát Codex 138v–139r)

Patterns in THAN-clauses

▶ the C head *hogy* and *mint*, without the negative polarity marker *nem*:

(20) edesseget   erze   nagyoban **hogymint** annak   eloͺtte

     sweetness.ACC   felt.3SG   greater   that-than   that.DAT   before.3SG

     '(s)he felt sweetness even more than before' (Lázár Codex 71r)

Patterns in THAN-clauses

▶ the C head *mint*:

(21) Es   parāčola   hog a   kèmencè hètzer   inkab gerièztètnec

    and commanded that the furnace   seven.times rather heat.COND

     mēt zokotvala   gerièztètni

     than use.PERF.be.PST heat.PASS.INF

    'and he commanded that they should heat the furnace one seven times more than it was wont to be heated' (Vienna Codex 127)

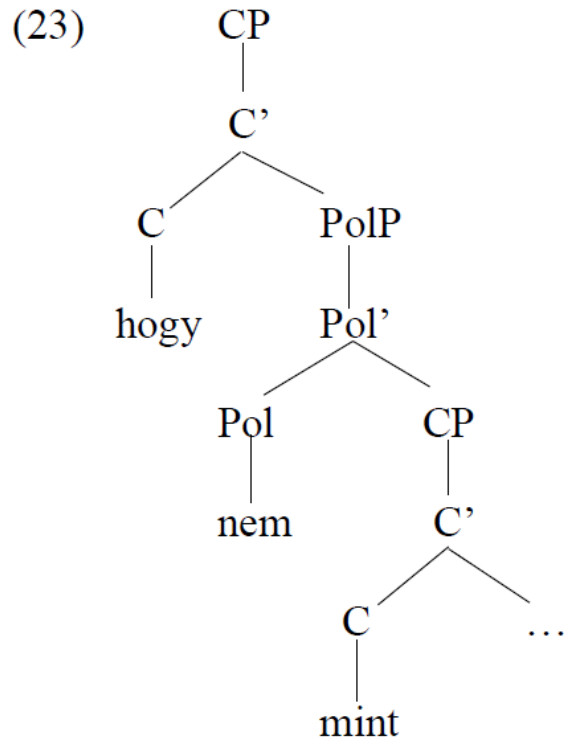# Changes in THAN-clauses

(22) hogy nem

    ↓

hogy nem (mint)

    ↓

hogy nem (mint) / hogy (nem) mint

    ↓

(hogy) mint

Structure

(23)

```
                    CP
                    |
                    C'
                   / \
                  C   PolP
                  |    |
                hogy  Pol'
                     /  \
                   Pol   CP
                    |     |
                   nem    C'
                         /  \
                        C    ...
                        |
                      mint
```

Comparative semantics and negative polarity

the THAN-clause is a negative polarity environment (Seuren 1973)

negative polarity items licensed:

(24)   She would rather die than **lift a finger** to help.

Italian

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

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

John is more tall.ᴍ that not thought.sʙJᴠ.1sɢ

'John is older than I thought.'

b. Giovanni è più alto che pensavo.

John is more tall.ᴍ that thought.1sɢ

'John is older than I thought.'

French

(Seuren 1973: 535, ex. 44)

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

Negation and negative polarity

negative polarity does not imply true negation

- ▶ explicitly negative-like element is often absent
- ▶ French: polarity marker is *ne*, but negation carried rather by *pas* otherwise

Comparative semantics

(27) a. *x* is as tall as *y*: ∃d∃d′[TALL (x,d) & TALL (y,d′) & **(d=d′)**]

   b. *x* is taller than *y*: ∃d∃d′[TALL (x,d) & TALL (y,d′) & **(d>d′)**]

   c. *x* is less tall than *y*: ∃d∃d′[TALL (x,d) & TALL (y,d′) & **(d<d′)**]

▶ *d* carried by the degree expression (DegP) in the matrix clause (**as** tall, tall**er**, **less** tall)

▶ *d′* associated with the comparative operator

Relation between the two degrees

encoded by the matrix Deg and partially by the subclause:

► AS-clauses

  Deg (*as*) and AS-CP both encode equality ($d=d'$)

► THAN-clauses

  Deg encodes superiority (-*er*/*more*) or inferiority (*less*), hence $d>d'$ or $d<d'$

  THAN-CP encodes merely inequality ($d \neq d'$) → negative polarity

  evidence: matrix degree determines choice between AS and THAN, but no subtype according to *more*/*less*

Relevant features in AS-clauses and THAN-clauses

▶ [compr]: responsible for marking the comparative nature of the clause

has to be overt but can be carried either by a C head or an operator

   interpretable on both

   note: operator is a relative operator, has to move because not licensed in situ

→ makes sure that some C-element is overt

Relevant features in AS-clauses and THAN-clauses

▶ [sub]: responsible for marking the subordinate nature of the clause

does not have to be overt, carried by a C head

Relevant features in AS-clauses and THAN-clauses

- ▶ [pol:neg]: responsible for the marking of the negative polarity of the clause (in THAN-clauses)

has to be overt – negative polarity/negation marked morphologically, unlike e.g. yes-no interrogatives, where intonation may suffice, cf. Dryer (2013)

has to be carried by a functional head (C or Pol) – no negative operator to check the uninterpretable [pol:neg] feature of a null head

Reanalysis

original operator into a comparative C head: features passed on from higher C head (and possibly a separate Pol head, if any)

▶ AS-clauses: [compr] carried by the operator anyway, [sub] not necessarily overt

→ an operator may mark the clause on its own as soon as it is overt

▶ THAN-clauses: [pol:neg] has to be passed on

→ reanalysis has to take place

continued use of higher C together with lower C already potentially associated with [pol:neg]

  grammaticalisation takes place over time – variation

  higher C marking [sub]

Inventory of [pol:neg] markers

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

Conclusion

synchronic and diachronic asymmetries between AS-clauses and THAN-clauses

      e.g. German and Hungarian

THAN-clauses are negative polarity environments ↔ AS-clauses

▶ negative polarity follows from comparative semantics

▶ negative polarity has to be encoded by an overt functional head

▶ an operator can replace the overtness of a THAN-head only if is a C head itself

→ operators are more readily available as overt markers in AS-clauses

→ the absence of negative polarity facilitates the grammaticalisation processes in AS-clauses

Thank you!
Takk fyrir!
☺

References

- Bacskai-Atkari, Julia (2014a) *The Syntax of Comparative Constructions: Operators, Ellipsis Phenomena and Functional Left Peripheries*. Potsdam: Universitätsverlag Potsdam.

- Bacskai-Atkari, Julia (2014b) Cyclical Change in Hungarian Comparatives. *Diachronica* 31.4. 465–505.

- Bacskai-Atkari, Julia and Éva Dékány (2014) From Non-finite to Finite Subordination: The History of Embedded Clauses. In: Katalin É. Kiss (ed.) *The Evolution of Functional Left Peripheries in Hungarian Syntax*. Oxford: Oxford University Press. 148–223.

- Bayer, Josef and Ellen Brandner (2008) On Wh-Head-Movement and the Doubly-Filled-Comp Filter. In: Charles B. Chang and Hannah J. Haynie (eds.) *Proceedings of the 26th West Coast Conference on Formal Linguistics*. Somerville, MA: Cascadilla Proceedings Project. 87–95.

- Chomsky, Noam (1995) *The Minimalist Program*. Cambridge, MA: MIT Press.

References

▶ Dryer, Matthew S. (2013) Negative Morphemes. In: Matthew S. Dryer and Martin Haspelmath (eds.) *The World Atlas of Language Structures Online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. Available at http://wals.info/chapter/112 (Last accessed: 14 May 2015)

▶ Eggs, Friederike (2006) *Die Grammatik von* als *und* wie. Tübingen: Narr.

▶ Friedli, Matthias (2005) *Si isch grösser weder ig!* Zum Komparativanschluss im Schweizerdeutschen. *Linguistik Online* 24. S. 79–113.

▶ Haader, Lea (2003) Az ómagyar kor: Mondattörténet: Az összetett mondat [The Old Hungarian period: Syntax: Complex sentences]. In: Jenő Kiss and Ferenc Pusztai (eds.) *Magyar nyelvtörténet*. Budapest: Osiris Kiadó. 500–560.

References

► Jäger, Agnes (2010) Der Komparativzyklus und die Position der Vergleichspartikeln. *Linguistische Berichte* 224. 467–493.

► Kenesei, István (1992) On Hungarian Complementizers. In: István Kenesei and Csaba Pléh (eds.) *Approaches to Hungarian 4*. JATE, Szeged: JATE. 37–50.

► Lipold, Günter (1983) Möglichkeiten der Komparation in den deutschen Dialekten. In: Werner Besch et al. (eds.) *Dialektologie: Ein Handbuch zur deutschen und allgemeinen Dialektforschung*. Berlin: Mouton de Gruyter. 1232–1241.

► Rutten, Gijsbert (2012) From Adverb to Conjunction and Back: The (de)grammaticalisation of Dutch *dan*. *Diachronica* 29.3. 301–325.

► Weise, Oskar (1918) Die vergleichenden Konjunktionen in den deutschen Mundarten. *Zeitschrift für deutsche Mundarten* 13. 169–181.

Appendix: Double CP in comparatives

marking of [compr]

▶ operator movement triggered by an uninterpretable [compr] feature on a null C head

▶ if the C head is filled, the [compr] is interpretable
→ no trigger for operator movement

   but: the relative operator is not licensed in situ

   moving to a higher CP would violate the Minimal Link Condition (Chomsky 1995)

→ two CPs: overt + null, operator always follows the overt C

▶ two overt C heads: lower one moves as an operator and re-merges as a C head

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