Comparative Operator Deletion and the Functionally Extended AP

0. Introduction

comparative subclauses in English:

(1) a. Mary is taller than Peter is tall.
   b. The desk is longer than the office is wide.

Comparative Deletion: traditionally referring to the deletion of a GIVEN AP
cf. Bresnan (1973)
but: overt operators in English (dialectal differences):

(2) a. Mary is taller than what Peter is.
   b. *The desk is longer than what the office is wide.

other languages permit overt operators and APs, e.g. Hungarian:

(3) a. Mari magasabb, mint amilyen magas Péter volt.
   Mary taller than how tall Peter was
   ‘Mary is taller than Peter was.’
   b. Mari magasabb, mint amennyire Péter volt magas.
   Mary taller than how.much Peter was tall
   ‘Mary is taller than Peter.’

→ question: how differences in the operators and in the information structure interact
   i.e. how languages differ in terms of Comparative Deletion

proposal:
• Comparative Deletion is dependent on the overtness of the operator
• AP deletion is dependent on whether the AP may be stranded

1. Operator movement and the left periphery of the comparative subclause


(4) \[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{C} \quad \text{CP} \\
\text{than} \quad \text{Op} \\
\text{C} \quad \text{C'} \\
\text{Ø} \quad \ldots
\end{array}
\]

targets the lower [Spec; CP] position

comparative operator: relative operator

reasons for movement: comparatives obey islands

● wh-island:

(5)  a. *Jason killed more dragons than $OP_x$ Mary wondered [whether to kiss $t_x$].
    b. Jason killed more dragons than $OP_x$ Mary wanted to kiss $t_x$.

● complex NP islands:

(6)  a. *Jason killed more dragons than $OP_x$ he had outlined [a plan to kill $t_x$].
    b. Jason killed more dragons than $OP_x$ he planned to kill $t_x$.

overt operators also realised in the lower [Spec; CP] position – cf. (2) and (3)

syntactic motivation: regular movement of a [+rel] operator

→ not specific to comparatives

2. Givenness, F-marking and the copy theory of movement

two copies of the degree expression:

(7)  Mary is taller than [x-tall] Peter is [x-tall].

questions:

● what moves up to the lower [Spec; CP]
● what eliminates material from the lower [Spec; CP]
● what happens to the lower copy

in (7): movement of the entire degree expression

interrogatives with how:

(8)  a. How tall is John?
    b. *How is John tall?

operator inseparable from the lexical AP (← internal structure of the degree expression)
movement:

(9) 

```
+-----+
| CP  |
+-----+     +-----+
    / |     /     |
   C | CP   C' |CP
  /    |     /     |
QP   than x-tall C
     /     |
    C     IP
   /     |
Ø    Peter is t
```

deletion in [Spec; CP]: Comparative Deletion (cf. Bacskaia-Tkari 2012)

lower copy: regularly deleted at PF as a lower copy


in (7): possible because the AP is GIVEN
logically identical antecedent in the matrix clause (taller)
recoverability (cf. Merchant 2001)

→ both copies are deleted in (7):

(10) Mary is taller than [x-tall] Peter is [x-tall].

but: F-marked lower copies remain:

(11) The desk is longer than the office is wide.

underlyingly:

(12) The desk is longer than [x-wide] the office is [x-wide].

deletion of both copies not possible ← wide not GIVEN (not logically identical with longer)
higher copy has to be eliminated by Comparative Deletion
lower copy remains overt – the pronunciation of the higher copy would make the derivation crash at PF (cf. Bošković and Nunes 2007: 48)

wide in (11): not only not GIVEN but also F-marked
clausal-final position: canonical position for foci in English

cf. Selkirk (1984, 1986); Nespor and Vogel (1986); McCarthy and Prince (1993)
main contrast expressed by this QP

→ appears in a position so that it can bear main sentential stress
overt lower copy of a GIVEN AP: ungrammatical

should regularly be eliminated as a lower copy

should not appear in a contrastive position

(13) ??/* Mary is taller than Peter is tall.

3. On Hungarian operators

• operator amilyen ‘how’:

(14) a. Mari magasabb, mint amilyen magas Péter volt.
Mary taller than how tall Peter was
‘Mary is taller than Peter was.’

Mary taller than how Peter was tall
‘Mary is taller than Peter was.’

→ amilyen inseparable from the lexical AP

• operator amennyire ‘how much’:

(15) a. Mari magasabb, mint amennyire magas Péter volt.
Mary taller than how.much tall Peter was
‘Mary is taller than Peter was.’

b. Mari magasabb, mint amennyire Péter volt magas.
Mary taller than how.much Peter was tall
‘Mary is taller than Peter was.’

→ amennyire separable from the lexical AP

• no zero operator:

Mary taller than tall Peter was
‘Mary is taller than Peter was.’

Mary taller than Peter was tall
‘Mary is taller than Peter was.’
differences not dependent on whether the AP is GIVEN or F-marked:

(17) a. Az asztal hosszabb, mint amilyen széles az iroda.
the desk longer than how wide the office
‘The desk is longer than the office is wide.’

b. *Az asztal hosszabb, mint amilyen az iroda széles.
the desk longer than how the office wide
‘The desk is longer than the office is wide.’

(18) a. Az asztal hosszabb, mint amennyire széles az iroda.
the desk longer than how.much wide the office
‘The desk is longer than the office is wide.’

b. Az asztal hosszabb, mint amennyire az iroda széles.
the desk longer than how.much the office wide
‘The desk is longer than the office is wide.’

(19) a. *Az asztal hosszabb, mint széles az iroda.
the desk longer than wide the office
‘The desk is longer than the office is wide.’

b. *Az asztal hosszabb, mint az iroda széles.
the desk longer than the office wide
‘The desk is longer than the office is wide.’

→ Hungarian has no Comparative Deletion

→ two types of operators

● amilyen: must move together with the AP:
  higher copy of the entire degree expression overt in [Spec; CP]
  lower copy of the entire degree expression deleted regularly

● amennyire: can move out on its own – if so:
  higher copy of amennyire appears overtly in [Spec; CP] but no AP there
  lower copy of amennyire deleted regularly, AP remains overtly in situ

difference also attested in interrogative operators:

● milyen ‘how’:

(20) a. Milyen magas volt Péter?
how tall was Peter
‘How tall was Peter?’

b. *Milyen volt Péter magas?
how was Peter tall
‘How tall was Peter?’
• *mennyire* ‘how much’:

(21) a. **Mennyire magas** volt Péter?
    how.much tall was Peter
    ‘How tall was Peter?’

b. **Mennyire** volt Péter **magas**?
    how.much was Peter tall
    ‘How tall was Peter?’

4. The structure of degree expressions

general structure:

(22)

```
   QP
     Q
      Op
      Qp
      Op

   DegP
     Deg'
     Deg
     DegP
     Q
     Op
     Qp
     Op

   AP'
   F'
   F
   G
```

DegP – degree head

• takes an FP that accommodates its arguments

    lexical AP (cf. Lechner 2004)

    Grade argument – standard value (cf. Lechner 2004)

• projects a QP layer

    Deg moves up to Q

    specifier of QP may host other QP modifiers
comparative degree expression in the matrix clause (e.g. *far more intelligent than Peter is*):

(23) 

```
  QP
   Q
     far
   much + -er_j
         AP_i
            intelligent
```

degree expressions in the subclause (e.g. *amilyen/amennyire magas* ‘how/how much tall’):

(24) 

```
  QP
   Q
     amennyire
   amilyen_j
         AP_i
            magas
```

economy → *amilyen* and *amennyire* cannot be co-present (~ Doubly Filled Comp Filter)
structural difference → *amennyire* may be extracted on its own (↔ *amilyen*)

5. Proforms

so far: degree expressions containing a lexical AP

*amilyen*: may appear without a lexical AP

(25) Mari magasabb, mint *amilyen* Péter volt.
    Mary taller than how Peter was
    ‘Mary is taller than Peter was.’

Deg head may not require an overt AP

prediction: *amennyire* should different

← QP modifier should be attached to a QP that has phonological content
(26) *Mari magasabb, mint amennyire Péter volt.  
Mary taller than how much Peter was  
‘Mary is taller than Peter was.’

6. Operators in English

three (possible) operators: zero, how, what

- **what**: invariably proform Deg head that prohibits the co-presence of an overt AP

(27) a. ? Mary is taller than what Peter is.
   b. *Mary is taller than what Peter is tall.
   c. *The desk is longer than what the office is wide.

similarly in interrogatives:

(28) a. *What tall is Peter?
   b. *What is Peter tall?

- **how**: available only for some speakers; Deg head requiring the co-presence of an overt AP

(29) a. *OK?Mary is taller than how tall Peter is.
   b. *Mary is taller than how Peter is tall.
   c. *Mary is taller than how Peter is.

- **zero**: Deg head

(30) ??/Mary is taller than Peter is tall.

7. A note on German

comparative (relative) operator usually similar to interrogative counterpart

*wie* ‘how’ in interrogatives:

(31) a. Wie groß ist Peter?
    how tall is Peter  
    ‘How tall is Peter?’
   b. *Wie ist Peter groß?
      how is Peter tall  
      ‘How tall is Peter?’

→ wie is a Deg head
comparative subclauses:

(32) a. ?/?Maria ist größer als wie Peter.
    Mary is taller than how Peter
    'Mary is taller than Peter.'

    b. *Maria ist größer als wie groß Peter ist.
    Mary is taller than how tall Peter is
    'Mary is taller than Peter.'

    c. ??/*Maria ist größer als wie Peter ist groß.
    Mary is taller than how Peter is tall
    'Mary is taller than Peter.'

with F-marked AP:

(33) a. *Der Tisch ist länger als wie breit das Büro ist.
    the-Masc. desk is longer than how wide the-Neut. office is
    'The desk is longer than the office is wide.'

    b. ?/? Der Tisch ist länger als wie das Büro breit ist.
    the-Masc. desk is longer than how the-Neut. office wide is
    'The desk is longer than the office is wide.'

→ wie in comparative subclauses cannot be an operator

instead: grammaticalised complementiser (cf. Jäger 2012)

~ in comparatives expressing equality (wie ‘as’)

(34) \[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{C} \\
\text{als} \\
\text{Op.} \\
\text{C'} \\
\text{C} \\
\text{wie} \\
\end{array}
\]

→ lexical AP cannot co-occur with wie in the CP domain
8. The role of information structure

Comparative Deletion ≠ the elimination of a GIVEN AP

but: GIVEN APs preferably eliminated

(35) Mary is taller than Peter is tall.

positional differences between GIVEN and F-marked APs

  no choice in position for an overt AP if the operator is a Deg head

  ● (standard) English: lower copy realised (← higher one deleted by CD)
  ● Hungarian amilyen, English how: higher copy realised

  if the operator is separable:

  ● GIVEN APs expected to appear in neutral positions
  ● F-marked APs expected to appear in stress positions

  ● Czech:

jak ‘how’ in interrogatives:

(36) a. Jak vysoký je Karel?
    how tall is Karel
    ‘How tall is Karel?’

   b. Jak je Karel vysoký?
    how is Karel tall
    ‘How tall is Karel?’

    → jak a QP separable from the AP

jak + GIVEN AP:

(37) a. ?? Marie je vyšší, než jak vysoký je Karel.
    Marie is taller than how tall is Karel
    ‘Marie is taller than Karel.’

   b. ? Marie je vyšší, než jak je vysoký Karel.
    Marie is taller than how is tall Karel
    ‘Marie is taller than Karel.’

   c. #Marie je vyšší, než jak je Karel vysoký.
    Marie is taller than how is Karel tall
    ‘Marie is taller than Karel.’

(37c): sentence stress realised by the GIVEN AP vysoký

    ↔ main contrast expressed by Karel

1 I owe many thanks to Radek Šimík both for his help with the Czech data and for highlighting crucial facts about information structure in Czech.
jak + F-marked AP:

(38) a. ?? Ten stůl je delší, než jak široká je ta kancelář.
   that desk is longer than how wide is that office
   ‘The desk is longer than the office is wide.’

   b. #Ten stůl je delší, než jak je široká ta kancelář.
   that desk is longer than wide is wide that office
   ‘The desk is longer than the office is wide.’

   c. Ten stůl je delší, než jak je ta kancelář široká.
   that desk is longer than wide is that office wide
   ‘The desk is longer than the office is wide.’

→ preferred position for the F-marked AP široká is the sentential stress position

   main contrast expressed by this AP

● Hungarian:

amennyire ‘how much’ + GIVEN AP:

(39) a. Mari magasabb, mint amennyire magas Péter volt.
   Mary taller than how.much tall Peter was
   ‘Mary is taller than Peter was.’

   b. #Mari magasabb, mint amennyire Péter magas volt.
   Mary taller than how.much Peter tall was
   ‘Mary is taller than Peter was.’

   c. ??Mari magasabb, mint amennyire Péter volt magas.
   Mary taller than how.much Peter was tall
   ‘Mary is taller than Peter was.’

   preverbal position: contrast position (focus)

amennyire ‘how much’ + F-marked AP:

(40) a. ??A macska kövérebb, mint amennyire széles a macskaajtó volt.
   the cat fatter than how.much wide the cat flap was
   ‘The cat is fatter than the cat flap was wide.’

   b. A macska kövérebb, mint amennyire a macskaajtó széles volt.
   the cat fatter than how.much the cat flap wide was
   ‘The cat is fatter than the cat flap was wide.’

   c. ??A macska kövérebb, mint amennyire a macskaajtó volt széles.
   the cat fatter than how.much the cat flap was wide
   ‘The cat is fatter than the cat flap was wide.’

→ preferred position for the F-marked AP széles is the canonical focus position (preverbal)


cyclic movement: from VP to FP, from FP to CP

   two positions for the AP to be left behind
Conclusion

three factors:
- overtness of the operator – Comparative Deletion
- position of the operator in the degree expression – AP separable
- information structure – preferred position of the AP

reducing Comparative Deletion:
  visibility condition on the operator taking a lexical AP in [Spec; CP] – operator position

References