

→ Target: adjectival, adverbial or nominal constituent (after movement to [Spec; CP])

(Kennedy–Merchant 2000)

Comparative Ellipsis:

- (4a) Mary is taller than Peter _____{CE} _____{CD}.
(_____{CE} = is; _____{CD} = x-much tall)
- (4b) The tiger ran faster than the man _____{CE} _____{CD}.
(_____{CE} = ran; _____{CD} = x-much fast)
- (4c) Susan has more cats than Peter _____{CE} _____{CD}.
(_____{CE} = has; _____{CD} = x-many cats)
- (4c) Susan has bigger cats than Peter _____{CE} _____{CD}.
(_____{CE} = has; _____{CD} = x-much big cats)

→ Target: any other recoverable constituent

CD universally obligatory – the parameter is [+CD], + referring to obligatoriness

CE universally optional – the parameter is [–CE], – referring to optionality

(Kennedy 2002, Lechner 1999, 2004, Bresnan 1973, 1975)

3. Comparative Deletion reconsidered

English is [+CD]:

- (5) *I fed cats more often than Peter bathed pigs often.

But the English pattern is not universal; consider the Hungarian example:

- (6) Többiször etettem macskát kaviárral, mint **ahányszor** Péter
more.often feed-1.Sg.Past.Ind. cat-Acc. caviar.with than **x-much often** Peter
fürdetett malacot szivaccsal.
bathe-3.Sg.Past.Ind. pig-Acc. sponge.with

‘I fed cats more often with caviar than Peter bathed pigs with a sponge.’

→ CD is not universally principled but there is a [±CD] parameter – Hungarian is [–CD] and English is [+CD]

→ defining CD on the basis of its being obligatory is fundamentally flawed: a functional definition is needed

4. Comparative Ellipsis reconsidered

English and Hungarian are [–CE], as shown by (3) and (6)

CE often claimed to be a superfluous term (Kennedy 2000; Lechner 1999, 2004):

- (7) Luisa goes to London more often than [DP **Mary**] goes [PP **to Oxford**] _____{CD}.
 (_____{CD} = x-much often)

But in some languages ellipsis other than CD is obligatory; consider the examples from Italian:

- (8) *Luisa ama più Pietro _____{CD} che ami Giorgio.
 Luisa love-3.Sg.Pres.Ind. more Peter that love-3.Sg.Pres.Subj. George
 ‘Luisa loves Peter more than she loves George.’ (_____{CD} = quanto ‘x-much’)

- (9) Luisa ama più Pietro _____{CD} che _____{CE} Giorgio.
 Luisa love-3.Sg.Pres.Ind. more Peter that George
 ‘Luisa loves Peter more than she loves George.’
 (_____{CD} = quanto ‘x-much’; _____{CE} = ami ‘love-3.Sg.Pres.Subj.’)

Italian *che*-comparatives tolerate only one overt constituent (which can be a PP, an AP or a non-finite VP as well, see Napoli–Nespor 1986) in the subclause:

- (10) Maria è più bella _____{CD} che _____{CE}
 Mary be-3.Sg.Pres.Ind. more beautiful-Fem.Sg. that
 diligente.
 diligent-Fem.Sg.

(_____{CD} = quanto ‘x-much’; _____{CE} = sia ‘be-3.Sg.Pres.Subj.’)

‘Mary is more beautiful than she is diligent.’

- (11) Viaggio più con Giorgio _____{CD} che _____{CE} con Sergio.
 travel-1.Sg.Pres.Ind. more with George that with Sergio
 ‘I travel more with George than with Sergio.’
 (_____{CD} = quanto ‘x-much’; _____{CE} = viaggi ‘travel-1.Sg.Pres.Subj.’)

- (12) Sergio vuole più ballare _____{CD} che _____{CE} lavorare.
 Sergio want-3.Sg.Pres.Ind. more dance-Inf. that work-Inf.
 ‘Sergio wants to dance more than he wants to work.’
 (_____{CD} = quanto ‘x-much’; _____{CE} = voglia ‘want-3.Sg.Pres.Subj.’)

A full subclause is possible if there is no CD – these are adjunct clauses, adjoined to the PP complement of the Deg head:

- (13) Luisa ama Pietro più di quanto Maria ama
 Luisa love-3.Sg.Pres.Ind. Peter more of x-much Mary love-3.Sg.Pres.Subj.
 Giorgio.
 George
 ‘Luisa loves Peter more than Mary loves George.’

This kind of ellipsis is specific to comparatives in Italian and does not apply to ordinary relative clauses:

- (14) Ho letto il libro che Giovanni
 have-1.Sg.Pres.Ind. read-Past.Part. the-Masc.Sg. book that John
 ha letto.
 have-3.Sg.Pres.Ind. read-Past.Part.

‘I have read the book John has read.’

→ besides a [±CD] parameter, there is also a [±CE] parameter – Italian is [+CE], as opposed to Hungarian and English

→ CD cannot be defined on the basis of its being obligatory – it is not uniquely so

→ CE is not a superfluous term

5. The interaction of deletion phenomena – Comparative Verb Gapping

The application of CD may require ellipsis for the structure to converge.

Let us take the example in (6), repeated here as (15):

- (15) Többször etettem macskát kaviárral, mint **ahányszor** Péter
 more.often feed-1.Sg.Past.Ind. cat-Acc. caviar.with than **x-much often** Peter
 fürdetett malacot szivaccsal.
 bathe-3.Sg.Past.Ind. pig-Acc. sponge.with

‘I fed cats more often with caviar than Peter bathed pigs with a sponge.’

CD (and only CD) applied:

- (16) *Többször etettem macskát kaviárral, mint _____{CD} Péter
 more.often feed-1.Sg.Past.Ind. cat-Acc. caviar.with than Peter
 fürdetett malacot szivaccsal.
 bathe-3.Sg.Past.Ind. pig-Acc. sponge.with

(_____{CD} = ahányszor ‘x-much often’)

‘I fed cats more often with caviar than Peter bathed pigs with a sponge.’

The deletion of the finite verb by Comparative Verb Gapping (CVG) saves the construction (though the meaning will be different):

- (17) Többször etettem macskát kaviárral, mint _____{CD} Péter _____{CVG}
 more.often feed-1.Sg.Past.Ind. cat-Acc. caviar.with than Peter
 malacot fagylalttal.
 pig-Acc. ice-cream.with

(_____{CD} = ahányszor ‘x-much often’; _____{CVG} = etetett ‘feed-3.Sg.Past.Ind.’)

‘I fed cats more often with caviar than Peter fed pigs with ice-cream.’

Note that the ellipsis of the verb does not require the deletion of the operator:

- (18) Többször etettem macskát kaviárral, mint **ahányszor** Péter
 more.often feed-1.Sg.Past.Ind. cat-Acc. caviar.with than **x-much often** Peter
 ____E malacot fagylalttal.
 pig-Acc. ice-cream.with
 (____E = etetett ‘feed-3.Sg.Past.Ind.’)
 ‘I fed cats more often with caviar than Peter fed pigs with ice-cream.’

The absence of an overt comparative operator (*x-often*, Hungarian *ahányszor*) requires the ellipsis of the finite verb in Hungarian, where this operator is otherwise available ↔ in English, there is no overt operator and the deletion of the finite verb is not required.

→ Since the application of CVG is obligatory *iff* the operator has been deleted, CD cannot be considered as the only (possible) obligatory deletion process in comparatives.

6. The proposed analysis

Two major tasks: – to define what CD is
 – to give a more accurate analysis of other deletion phenomena

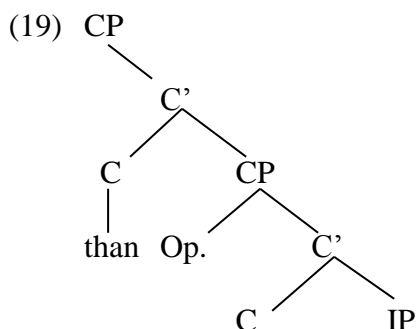
6.1. A novel analysis for Comparative Deletion

New definition of CD:

an operation responsible for eliminating the QP from the comparative subclause, if it is logically identical with the one in the matrix clause.

(for the structure of the functionally extended AP, see Corver 1990, 1997; for logical identity, see Merchant 2001: 13–31)

CD involves the movement of an element to [Spec; CP] (ordinary *wh*-movement): adopting Rizzi’s analysis for the cartographic approach for the Left Periphery (Rizzi 1997: 297, 1999: 1, 2004: 237-238; see also Rizzi 2002, Roberts 2004), I assume that this CP is the one below the CP headed by *than* (see also Lechner 2004, Kántor 2008b):



CD takes place in this position (not where the QP is base-generated) if the C head is equipped with a [CD] feature – this feature is always and obligatorily present in [+CD] languages

the deletion of the lower copy is carried out regularly by PF (see Chomsky 2005: 12; Bobaljik 2002):

← the lower copy has an appropriate antecedent (Lipták–Craenenbroeck 2006: 257; Merchant 2001: 23–37), if the QP in the matrix clause is logically identical with the one in the subclause

This is possible in non-comparative subordinate structures as well:

(20) She thought that he would go abroad [_{PP} before being asked to ~~go abroad~~].

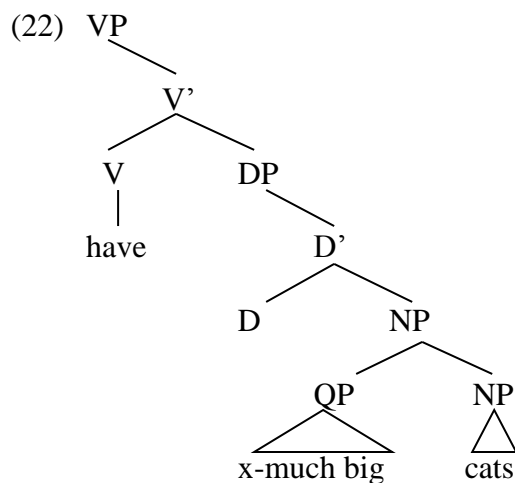
Advantages:

- Based on the target site → it is universally applicable since it allows for the [\pm CD] parametric variation
- It pertains to all types of comparatives: the distinction between adjectival/adverbial and nominal constituents becomes superfluous
- Subcomparatives do not have to be treated as exceptional

The target site is the same in all types of comparatives:

- both AdjPs and AdvPs are embedded in QPs:
- QPs in attributive comparatives are adjoined to NPs (Kántor 2008c: 149; Kennedy–Merchant 2000: 19):

(21) Susan has bigger cats than Peter has [_{DP} ~~x-much big cats~~].



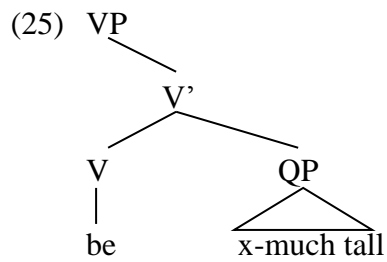
But: the entire DP has to be deleted, not just the QP:

(23) *Susan has bigger cats than Peter has _____{CD} cats.
(_____{CD} = x-much big)

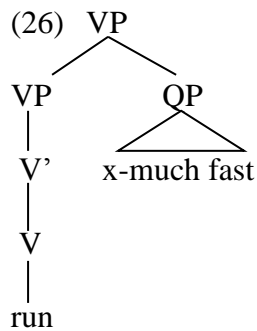
Island constraints: the QP cannot be moved out of a DP-island (Kántor 2008c: 148–149; Izvorski 1995: 217; Bošković 2005; Grebenyova 2004; Kayne 1983; Ross 1986); this holds for ordinary *wh*-movement as well:

(24) *[_{QP} How big]_i does Susan have [_{DP} [_{NP} *t*_i [_{NP} cats]]]]?

Movement in predicative comparatives:

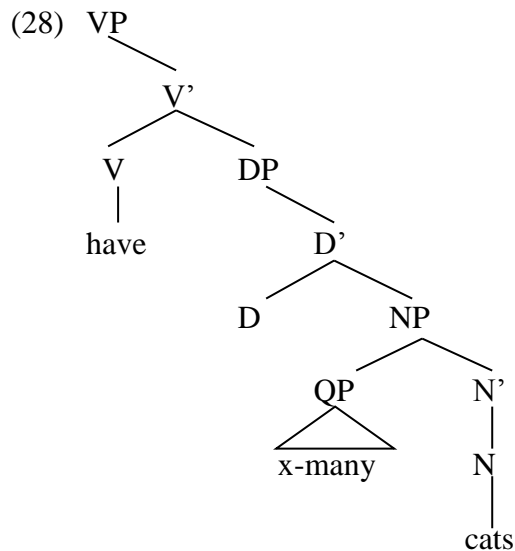


Similar movement for adjunct QPs:



Nominal comparatives: QP in [Spec; NP] as a post-determiner (Newson et al. 2006: 144–145; Zamparelli 2000: 13–26):

(27) Susan has more cats than Peter has [~~DP x-many cats~~].



The phenomenon is not specifically related to comparatives:

(29) *[QP How many]_i does Susan have [DP [NP *t_i* cats]]?

Subcomparatives: the relative quantities of different properties or entities are compared (Kennedy 2000)

(30) The desk is longer than the office is ~~long~~.

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

QPs not identical → regularly no deletion

Nominal subcomparatives:

(32) Susan has more cats than Peter has ~~eats~~.

(33) Susan has more cats than Peter has dogs.

No deletion of the lower copy in subcomparatives because of recoverability requirements (Lipták–Craenenbroeck 2006: 257) – but the higher copy in [Spec; CP] will be elided by CD

Languages with [–CD]: the higher copy may remain, when there is no [CD] feature on the C head – in this case, the lower copy is regularly deleted by PF, since it will be fully recoverable → the new definition of CD is favourable to the standard assumptions

6.2. Distinguishing Comparative Ellipsis from other processes

Different deletion processes in comparative subclauses:

(34) Mary loves Peter more than Susan did _____E _____{CD}.
(_____E = love Peter; _____{CD} = x-much)

(35) Mari jobban szereti Pétert, mint _____{CD} Zsuzsa _____{CVG}
Mary more love-3.Sg.Pres.Ind. Peter-Acc. than Susan

Gyurit.

George-Acc.

(_____{CD} = amennyire ‘x-much’; _____{CVG} = szereti ‘love-3.Sg.Pres.Ind.’)

‘Mary loves Peter more than Susan loves George.’

(36) Mari jobban szereti Pétert, mint _____{CD} Zsuzsa _____{CVG+E}
Mary more love-3.Sg.Pres.Ind. Peter-Acc. than Susan

‘Mary loves Peter more than Susan does.’

(_____{CD} = amennyire ‘x-much’; _____{CVG+E} = szereti Pétert ‘love-3.Sg.Pres.Ind. Peter-Acc.’)

(37) Maria ama Pietro più _____{CD} che Susanna _____{CE}.
Mary love-3.Sg.Pres.Ind. Peter more that Susan

‘Mary loves Peter more than Susan does.’

(_____{CD} = quanto ‘x-much’; _____{CE} = ami Pietro ‘love-3.Sg.Pres.Subj. Peter’)

CE: an operation obligatorily eliminating everything recoverable from the subclause and leaving only one overt constituent in the final structure

A similar PF operation: sluicing – deletes everything after a C head equipped with an [E] feature, for which the deleted material has to be fully recoverable (Merchant 2001; Lipták–Craenenbroeck 2006)

(38) Mary wrote something but she did not say what _____E.

(39) Mary wrote something but she did not say what she wrote.

CVG: distinct from CE as it targets only the finite verb

Estonian seems to have CVG similarly to Hungarian:

- (40) Mari kammis kassi enam kordi, kui **mitu korda** Peter
 Mary comb-3.Sg.Past.Ind. cats-Acc. more times than **x-many times** Peter
 vannitas.
 bathe-3.Sg.Past.Ind.

‘Mary combed cats more often than Peter bathed.’

- (41) *Mari kammis kassi enam kordi, kui ____{CD} Peter
 Mary comb-3.Sg.Past.Ind. cats-Acc. more times than Peter
 vannitas.
 bathe-3.Sg.Past.Ind.

(____{CD} = mitu korda ‘x-many times’)

‘Mary combed cats more often than Peter bathed.’

- (42) Mari kammis kassi enam kordi, kui ____{CD} Peter ____{CVG}.
 Mary comb-3.Sg.Past.Ind. cats-Acc. more times than Peter
 ‘Mary combed cats more often than Peter.’
 (____{CD} = mitu korda ‘x-many times’; ____{CVG} = kammis ‘comb-3.Sg.Past.Ind.’)

Processes not specific to comparatives:

– For the English example, VP-ellipsis is a possible analysis (Kennedy–Merchant 1997):

- (43a) Mary bought the book that Susan did ____E.
 (____E = buy)

- (43b) Mary arrived before Susan did ____E.
 (____E = arrive)

– Optional ellipsis in Hungarian comparatives is the same in other subclauses:

- (44a) Mari akkor látta Pétert, amikor Zsuzsa ____E Gyurit.
 Mary then see-3.Sg.Past.Ind. Peter-Acc. when Susan George-Acc.
 ‘Mary saw Peter when Susan did George.’ (____E = látta ‘see-3.Sg.Past.Ind.’)

- (44b) Mari akkor látta Pétert, amikor Zsuzsa ____E.
 Mary then see-3.Sg.Past.Ind. Peter-Acc. when Susan
 ‘Mary saw Peter when Susan did.’ (____E = látta Pétert ‘see-3.Sg.Past.Ind. Peter-Acc.’)

References

- Bobaljik, Jonathan David (2002) A-chains at the PF-interface: Copies and ‘Covert’ Movement. *Natural Language and Linguistic Theory* 20.2. 197-267.
- Bošković, Željko (2005) On the Locality of Left Branch Extraction and the Structure of NP. *Studia Linguistica* 59 (1). 1–45.
- Bresnan, Joan (1973) The Syntax of the Comparative Clause Construction in English. *Linguistic Inquiry* 4.3. 275–343.
- Bresnan, Joan (1975) Comparative Deletion and the Constraints on Transformations. *Linguistic Analysis* 1.1. 25–74.
- Chomsky, Noam (2005) On Phases. Ms. Cambridge, MA: Massachusetts Institute of Technology.
- Corver, Norbert Ferdinand Marie (1990) *The Syntax of Left Branch Extractions*. PhD dissertation. Tilburg University.
- Corver, Norbert Ferdinand Marie (1997) *Much-Support as a Last Resort*. *Linguistic Inquiry* 28.1. 119–164.
- Grebenyova, Lydia (2004) Sluicing and Left-Branch Extraction out of Islands. In Chand, Vineeta et al. (eds.) *WCCFL 23: The Proceedings of the 23rd West Coast Conference on Formal Linguistics*. Somerville, Mass.: Cascadilla Press. 164–172.
- Izvorski, Roumyana (1995) A Solution to the Subcomparative Paradox. In Camacho, Jose et al. (eds.), *WCCFL 14: The Proceedings of the 14th West Coast Conference on Formal Linguistics*, Stanford: CSLI Publications. 203-219.
- Kántor, Gergely (2008a) A Phase-based Approach to Rightward Movement in Comparatives. *Newcastle Working Papers in Linguistics* 14. 81–99.
- Kántor, Gergely (2008b) On Hungarian Relative Operators. *The Even Yearbook* 8. 1–12.
- Kántor, Gergely (2008b) Komparatív korrelatív szerkezetek a magyarban. *Nyelvtudományi Közlemények* 105. 134–163.
- Kayne, Richard (1983) Connectedness. *Linguistic Inquiry* 14. 223–250.
- Kennedy, Christopher (2000) Comparative (Sub)deletion and Ranked, Violable Constraints in Syntax. *Proceedings of NELS 30*, Amherst, Massachusetts, GLSA.
- Kennedy, Christopher (2002) Comparative Deletion and Optimality in Syntax. *Natural Language & Linguistic Theory* 20. 553–621.
- Kennedy, Christopher–Jason Merchant (2000) Attributive Comparative Deletion. *Natural Language & Linguistic Theory* 18. 89–146.
- Lechner, Winfried (1999) *Comparatives and DP-structure*. PhD dissertation. Amherst, MA: University of Massachusetts Amherst.
- Lechner, Winfried (2004) *Ellipsis in Comparatives*. Berlin–New York: Mouton de Gruyter.
- Lipták, Anikó–Craenenbroeck, Jeroen van (2006) The Crosslinguistic Syntax of Sluicing: Evidence from Hungarian Relatives. *Syntax* 9.3. 248–274.
- Merchant, Jason (2001) *The Syntax of Silence: Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press.
- Newson, Mark–Pap, Dániel–Tóth, Gabriella–Szécsényi, Krisztina–Hordós, Marianna–Vincze, Veronika (2006) *Basic English Syntax with Exercises*. Budapest: Bölcsész Konzorcium.
- Napoli, Donna Jo–Nespor, Marina (1986) Comparative Structures in Italian. *Language* 62.3. 622–653.
- Rizzi, Luigi (1997) The Fine Structure of the Left Periphery. In Haegeman, Liliane (ed.) *Elements of Grammar*. Dordrecht: Kluwer. 281–337.
- Rizzi, Luigi (1999) *On the Position “Int(errogative)” in the Left Periphery of the Clause*. Retrieved March 31 2008, from <http://www.ciscl.unisi.it/persone/rizzi.htm>.
- Rizzi, Luigi (2002) *Locality and Left Periphery*. Retrieved 25 April 2008, from <http://www.ciscl.unisi.it/persone/rizzi.htm>.
- Rizzi, Luigi (2004) Locality in Left Periphery. In Belletti, Adriana (ed.) *Structures and Beyond: The Cartography of Syntactic Structures, Volume 3*. Oxford: Oxford University Press. 223–251.
- Roberts, Ian (2004) The C-System in Brythonic Celtic Languages, V2, and the EPP. In Rizzi, Luigi (ed.) *The Structure of CP and IP: The Cartography of Syntactic Structures, Volume 2*. Oxford: Oxford University Press. 297–328.
- Ross, John Robert (1986) *Infinite syntax*. Norwood: Ablex Publishing.
- Zamparelli, Roberto (2000) *Layers in the Determiner Phrase*. New York: Garland.