Syntax and Semantics of Comparatives and Superlatives

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1. Comparatives across categories: the cast of characters

- Comparison between objects with respect to the degree to which they have some property. The major syntactic categories can express comparison using similar means.

(1) a. Boris is taller than Nina  
   height  
   Predicative AP
b. Ann is a quicker athlete than Kate  
   speed  
   Attributive AP
c. Mimi visits more often than Sasha  
   frequency of visits  
   AdvP
d. Peter has less bikes than Vanja  
   cardinality of bikes  
   NP
e. Sonia drinks more than Irina  
   amount/frequency of drinking  
   VP

(2) a. Boris is (the) tallest  
   height  
   Predicative AP
b. Ann is the quickest athlete  
   speed  
   Attributive AP
c. Mimi visits most often  
   frequency of visits  
   AdvP
d. Peter has the least bikes  
   cardinality of bikes  
   NP
e. Sonia drinks the most  
   amount/frequency  
   VP

- What is the grammar of comparison?
  - The lexical meaning of the functional elements involved: -er, more, less, than, -est, most, least
  - The lexical meaning of the predicates with which the functional elements compose: tall, quick athlete, bikes, often, drink
  - Syntax: what merges with what; what, if anything, moves where; timing; linearization
  - Logical semantics: interaction with quantifiers, modals, focus, negation
  - Cross-linguistic variation: syntax, lexical semantics
  - Commonalities/interaction with the domains of individuals, events, times

1.1 Degree morphemes

- Synthetic comparatives: specialized comparative and superlative inflection for adjectives and adverbs, and not for nouns or verbs

(3) absolute/positive  comparative  superlative
a. Adjective: tall  taller  tallest
b. Adverb: quickly  quicker  quickest

- Analytic comparatives: more, most for all syntactic categories

(4) a. more handsome  most handsome  
   Adjective
b. more importantly  most importantly  
   Adverb
c. more doctors  most doctors  
   Noun
d. drink more  drink the most  
   Verb
Note 1

- No dedicated inflection for comparative or superlative of inferiority; these are analytic for all categories (see Bobaljik to appear)

(5)  a. less handsome  least handsome
b. less importantly  least importantly
c. fewer doctors  fewest doctors
d. drink less  drink the least

- Cross-categorial comparative and superlative morphemes –er, –est + functional adjectives/adverbs many/much and few/little (in English the distinction marks countability)

(6)  a. -er + many/much = more  b. -est + many/much = most  
    (Bresnan 1973)  c. -er + little = less  d. -est + little = least
    e. -er + few = fewer  f. -est + few = fewest

- Similarly, in other languages: nominal and verbal comparatives require many, much

(7)  a. visok  ‘tall’  bârzo  ‘quickly’  
    Bulgarian  b. po-visok  ‘taller’  po-bârzo  ‘quicker’
    c. naj-visok  ‘tallest’  naj-bârzo  ‘quickest’

(8)  a. po-veče knigi,  naj-mnogo knigi  
    Bulgarian  po-many-suppl. books  naj-many books
    ‘more books’  ‘most books’
    b. pija po-veče,  pija naj-mnogo  
    drink po-much-suppl.  drink naj-many
    ‘drink more’  ‘drink the most’
    c. po-malko knigi,  naj-malko knigi  
    po-few books  naj-few books
    ‘fewer books’  ‘fewest books’
    d. pija po-malko,  pija naj-malko  
    drink po-little  drink naj-little
    ‘drink less’  ‘drink the least’

- In English, the analytic-synthetic distinction with respect to adjectives and adverbs is morpho-phonological. This suggests that much in such cases is not interpreted (see Corver 2007, Embick and Marantz 2008)

(9)  a. more handsome / ?? handsomer  most handsome / ?? handsomest
b. more interesting / * interestinger  most interesting / * interestingest
c. ? more tall / taller  tallest / ? most tall
d. drive ? more fast / drive faster  drive (the) most fast / drive (the)fastest

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1 Verbal comparatives may be somewhat more permissive, e.g. (ia) is possible alongside (ib) in Bulgarian.

(i) a. po-običam kafe  b. po-veče običam kafe
    -er-love.1sg coffee  -er-much-suppl. love.1sg coffee
    ‘I love coffee more.’  ‘I love coffee more.’

2 What are sometimes called meta-comparatives always use analytic more:

(i) John is more rich than happy.
In other languages, the analytic-synthetic forms or adjectives and adverbs exist side by side. The semantic role played by *much* in such cases seems to do with norm-relatedness (Matushansky 2001, Krasikova 2009 for Russian)

(10) a. Катя не высокая, но она выше, чем Сергей.  
   Katja ne vysokaya no ona vyše čem Sergej  
   ‘Katja isn’t tall but she is taller than Sergej.’

b. Катя не высокая, *но она более высокая, чем Сергей.  
   Katja ne vysokaya no ona bolee vysokaya čem Sergej  
   ‘Katja is not tall, but she is taller than Sergej.’

A family of ‘degree’ morphemes

(11) a. as (+ many/much)  as tall, as often, as many books, as much salt, drink as much
b. too (+ many/much)   too tall, too often, too many books, too much salt, drink too much
c. enough   tall enough, often enough, enough books, enough salt, drink enough
d. so (+ many/much)   so tall, so often, so many books, so much salt, drink so much
e. how (+ many/much)   how tall, how often, how many books, how much salt, drink how much
f. that (+ many/much)   that tall, that often, that many books, that much salt, drink that much
g. POS (+ many/much)   POS tall, POS often, POS many books, POS much salt, drink POS much

Questions:
- What is the syntax and semantics of the degree morphemes? What is their common component? How are they different?
- What is the role of many/much/few/little? When and how are they associated with norm-relatedness?
- Do all languages have these degree morphemes? Are there other ways to express comparison?

1.2 Measure phrases and differentials

Measure phrases as “differentials” in comparatives, as in (12b), even for predicates whose absolute form does not accept measure phrases (12a)

(12) a. 6 ft tall, 6 yrs old, 20 miles long, (*120 lb heavy, *10km/h fast, *30ºC hot)

b. 6 ft taller, 6 yrs older, 20 miles longer, 120 lb heavier, 10km/h faster, 30ºC hotter

Multiplicative differentials are also acceptable with evaluative gradable adjectives

(13) John is three times as smart/handsome/impressive as Bill is.

Implicit comparatives – comparatives without an –er (or too) – do not accept measure phrases as differentials

(14) * John is 5 inches tall, compared to Bill

Superlatives do not allow bare measure phrases as differentials, only by-phrases
(15) a. John is 5 inches taller than his twin brothers.
    b. * John is 5 inches (the) tallest.
    c. John is (the) tallest by far.

1.3 Degree clauses

- Selectional restrictions exist between the degree morpheme and its associated clause yet the two are discontinuous, obligatorily so

(16) a. -er tall [than Bill is], -er much interesting [than the movie is]
    b. as tall [as Bill is]
    c. too tall [to go on this ride]
    d. tall enough [to go on this ride]
    e. so tall [that he cannot go on this ride]

(17) a. Cleo ate more apples {than / *as / *that} Matilda did.
    b. Anastasia is as tall {as / *than / *that} Daniel is.
    c. Eric is too shy {to ask / *that he asked} Miriam out.
    d. Sophie was tired enough {to fall / that she fell} asleep at her desk.
    e. Polly was so tired {*than / *as / that} she fell asleep at her desk.

(18) a. -er (+ many/much/little/few) ... than + finite clause
    b. as (+ many/much/little/few) ... as + finite clause
    c. too (+ many/much/little/few) ... non-finite clause
    d. enough ... non-finite or finite clause
    e. so(+ many/much/little/few) ...that + finite clause

Questions:
- Does the degree morpheme first combine with its associated clause? If so, why the obligatory extraposition of the degree clause? Where does the degree clause extrapose to?
- Or does the degree morpheme first combine with the gradable predicate? If so, how are the selectional restrictions determined? When and where does the degree clause merge?
- What is the role of the markers for the standard (the clause–introducers)? Are they complementizers, prepositions, conjunctions? Do they have a meaning or are they playing a purely syntactic role?
- What is the internal syntax of the degree clause? What is its meaning?
- Is there cross-linguistic variability in the overall architecture, the internal syntax of the degree clause, or the role of the clause-introducer?

2. Cross-linguistic variation in the syntax of comparatives

2.1 Variability in the availability of –er

- Not all languages have a counterpart of –er. The absence of an overt –er may have very different sources:
  - “Implicit comparison” vs. “explicit comparison” (Kennedy 2007)
  - Explicit comparatives can be “exceed”-comparatives, and English-type comparatives with -er.
  - In an English-type comparative -er may be covert
• ‘Exceed’ comparatives (cf. (19))

(19) *Hausa* (Stassen 1985)

Doki ya-fi rago girma
Horse it-exceed goat bigness
‘A horse exceeds a goat in height.’

• Null –er? (“Explicit comparison” (Kennedy 2007))³

(20) a. *Javanese* (Kennedy 2007)

Enak daging karo iwak
is-good meat than fish
‘Meat is better than fish.’


Nihongo-wa doitsgo yori muzukashi
Japanese-TOP German from difficult
‘Japanese is more difficult than German.’


John Bill-se (zyaadaa) lambaa hai
John Bill-than (much) tall is
‘John is taller than Bill.’

• “Implicit comparison” (Kennedy 2007): absolute, not comparative, form of the adjective; English (21), possibly Samoan (22) as well.

(21) John is tall, compared to Bill.

(22) *Samoan* (Kennedy 2007)

Ua tele le Queen Mary, ua la’itiiti le Aquitania.
is big the Queen Mary, is small the Aquitania
‘The *Queen Mary* is bigger than the *Aquitania.*’

• Kennedy’s (2007): 3 tests for distinguishing between implicit and explicit comparison (cf. Fults 2006)

  ♦ Contexts of very slight difference

(23) A 600 word essay and a 200 word essay
  a. This essay is longer than that one.       b. Compared to that essay, this one is long.

(24) A 600 word essay and a 597 word essay
  a. This essay is longer than that one.       b. # Compared to that essay, this one is long.

  ♦ Minimum standard gradable adjectives: open, bent, impure

(25) Rod A:  Rod B:  

  a. ?? Compared to A, B is bent.           b. B is more bent than A.

³ Bhatt and Takahashi (2011) propose that Hindi-Urdu and Japanese have null –er. Beck et al. (2004) argue that Japanese does not have null –er, but implicit comparatives, using the positive form of the adjective.
Measure phrases

(26) a. * Compared to Lee, Kim is 10cm tall.  b. Kim is 10 cm taller than Lee.

- In implicit-comparison constructions, at least in English, *much* or *many* are also needed with verbal and nominal comparatives.

(27) a. John has *many* books, compared to Bill.
    b. John doesn’t drink *much* wine, compared to Bill.
    c. John doesn’t visit *much*, compared to Bill.

- In sum:
  - Languages may have comparative words like *-er*, which may be overt or covert (in both cases we speak of explicit comparison), or they may lack such words altogether (implicit comparison). Much less is known about cross-linguistic variation in superlative words such as *–est*.
  - Verbal and nominal comparatives require a *many/much* adverb, at least in languages with explicit comparison (we don’t know much about languages with implicit comparison, though in the English “compared to-” implicit-comparison construction this is the case too)

2.2 Variability in the availability and syntax of degree clauses

- Cross-linguistically, there appears to be variability in the syntax of the degree clause
  - ‘Exceed’ comparatives (cf. (19)) have no degree clause
  - No overt clause-introducer, possibly paratactic constructions (cf. (28), (22)) – yet what is the role of *more* in (28), cf. the absence of *more* in (22)? While the *than*-clause is typically taken to be a complement of *-er*, some have proposed that it is in fact a conjunct to the main clause and used ellipsis as the key argument (Lechner 2004, Moltmann 1992)

(28) a. *Motu* (Stassen 1985)
   Ina na namo herea una na dia namo P(a), ¬P(b)
   This is good more that is not good
   ‘This is better than that is.’

b. *Miskito* (Stassen 1985)
   Yan kau tukta, man almuk P(a), polar-opposite-P(b)
   I more young he old
   ‘I am younger than he is.’

- Wh-words in the comparative clause, overt or covert, as in English

(29) *Bulgarian*
   Ivan e po-visok ot-kolkoto e Maria
   Ivan e -er-tall from-how-much is Maria
   ‘Ivan is taller than Maria is’

(30) *Hindi-Urdu* (Bhatt and Takahashi 2011)
   Bill *jintaal* lambaa hai John us-se zyaadaa lambaa hai
   Bill how tall is John that-than more tall is
   ‘John is taller than Bill is’
Negation in the degree clause (cf. (28a)) (cf. Napoli and Nespor 1976, Pinkham 1982, Price 1990; see also Schwarzschild 2008)

(31) **French** (Rich 2010)
Luc en veut plus que Thierry n’en a
‘Luc wants more of it than Thierry has’

(32) **Italian** (Napoli and Nespor 1976)
Maria è più intelligente di quanto a. e Carlo b. non sia Carlo
‘Maria is more intelligent than Carlo is (not).’

(33) **Bangla** (Priyanka Biswas, p.c.)
bil jOto (na) lOmba, jOn tar theke (beSi) lOmba
‘John is taller than Bill is.’

In sum, there may be variation in comparative clauses in terms of whether they are adjuncts, clausal conjuncts or arguments to -er.

### 2.3 Degree phrases

Both phrases and clauses can appear as complements of *than/as*

(34) a. -er tall [than he is] /[than him] b. as tall [as he is] / [as him]

(35) **Russian**

a. Anna sil’nee čem (byl) Ivan. b. Anna sil’nee Ivan
Anna strong-er than (was) Ivan,NOM Anna strong-er Ivan,GEN
‘Anna is stronger than Ivan (was)’ ‘Anna is stronger than Ivan’

(36) **Bangla** (Priyanka Biswas, p.c.)

jOn bil-er theke lOmba
‘John is taller than Bill.’

Questions:

- Do clausal and phrasal comparatives have different syntax, and correspondingly different modes of semantic composition? Is it the case that the two perform two cognitively different types of comparison – “comparison of degrees” vs. “comparison of individuals” (e.g., Kennedy 2007)? Or is the underlying syntax the same, but ellipsis masks that?
- Is the same *than/as* involved in clausal and phrasal comparatives?
- What is the extent of the cross-linguistic variation?

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4 The placement of the optional negation is similar to that found in subjunctive clauses (see Bhattacharya 1998)