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# ON THE MORPHOSYNTAX OF COMPARATIVE SEMANTICS
**Sinn und Bedeutung 16, Workshop on degree semantics and its interfaces, September 5, 2011**

Issue: Recent research into the semantics of comparatives and equatives (Heim (2000, 2006), Schwarzschild and Wilkinson (2002), Bhatt and Pancheva (2004), among many others) has converged on the configuration in (1a) (Bowers (1975), Jackendoff (1977), etc.). I will argue that this structure is incompatible with the morphosyntax of comparatives, which requires the structure in (1b) (Abney (1987), Bowers (1987), Corver (1990, 1991, 1997a, 1997b)).

(1)  a.
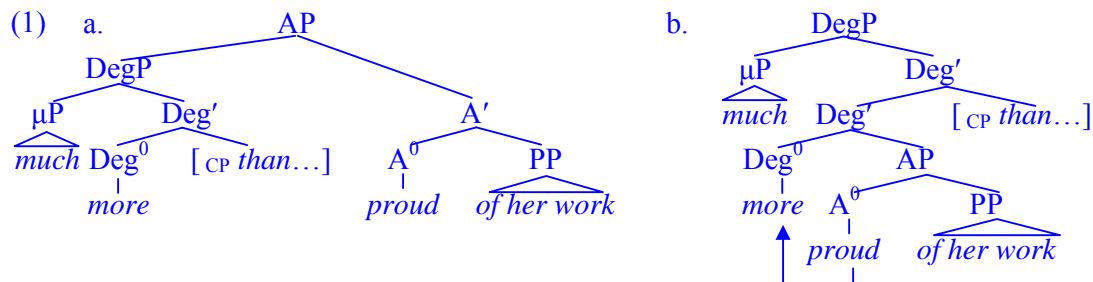


The structure of the talk:

  ➢ present the motivation for the standard semantics of comparatives and hence for the configuration in (1a)
  ➢ present the morphosyntactic evidence against the configuration in (1a) and for the structure in (1b)
  ➢ discuss the ways of resolving the conflict and evaluate the options available

## 1.  EVIDENCE FOR OPERATOR MOVEMENT IN THE COMPARATIVE CLAUSE

Bresnan (1973, 1975): comparatives involve PF-deletion

Chomsky (1977), Milner (1978): ***than*-clauses involve wh-movement of a null operator**
NB: Pinkham (1982): ellipsis resolution in comparatives requires an interpretative approach

### 1.1.  Cross-over

Ross (1967), Postal (1971): movement cannot cross over a co-referring pronoun:

(2)  a.   The students who $_i$ thought they $_i$ would flunk ___ $_i$ didn't flunk.
     b.  *The students who $_i$ thought ___ $_i$ would flunk they $_i$ didn't flunk.

(3)  a.   More students $_i$ flunked than ___ $_i$ thought they $_i$ would (flunk).
     b.  *More students $_i$ flunked than they $_i$ thought ___ $_i$ would (flunk).

NB No crossover would have arisen if only the degree operator had moved; the DP containing it is pied-piped

### 1.2.  Island configurations

Bresnan (1975): the gap in the comparative clause cannot be inside an island (Ross (1967)):

(4)  a.  *How hard did you believe the claim that these problems would be?      complex NP
     b.  *Wilt is taller than he knows a boy who is ___.

(5)  a.  *How hard do you consider these problems ___ and onerous?      coordinate structure
     b.  *Wilt is taller than Bill is strong and ___.

(6)  a.  *How hard is [that they will be ___ ] likely?                 sentential subject
     b.  *Wilt is taller than [that he is ___] is generally believed.

### 1.3.  Inversion

Milner (1978): the movement of the null operator inside the degree clause is confirmed by the availability of stylistic inversion in French, which, furthermore, takes place cyclically:

(7)   a.   Pierre  a     plus   de  livres  que      n'    en        a    Paul.
          Pierre  has   CMPR   of  books   CMPZR   NEG   PART.CL   has  Paul
          *Pierre has more books than Paul does.*

      b.   Il    est  aussi triste que      l'         était  Jeanne  hier.
          he   is    EQ    sad   CMPZR   PRED.CL was   Jeanne   yesterday
          *He is as sad as Jeanne was yesterday.*

Stylistic inversion indicates movement.
NB: Note that stylistic inversion only happens in the degree clause

### 1.4.  Intermediate summary

Evidence for Ā-movement in the comparative clause shows that the constituent moving can't be a head: head-movement is heavily constrained and cannot be cyclic (Travis (1984)).

(8)



*than Jean is ~~tall~~*
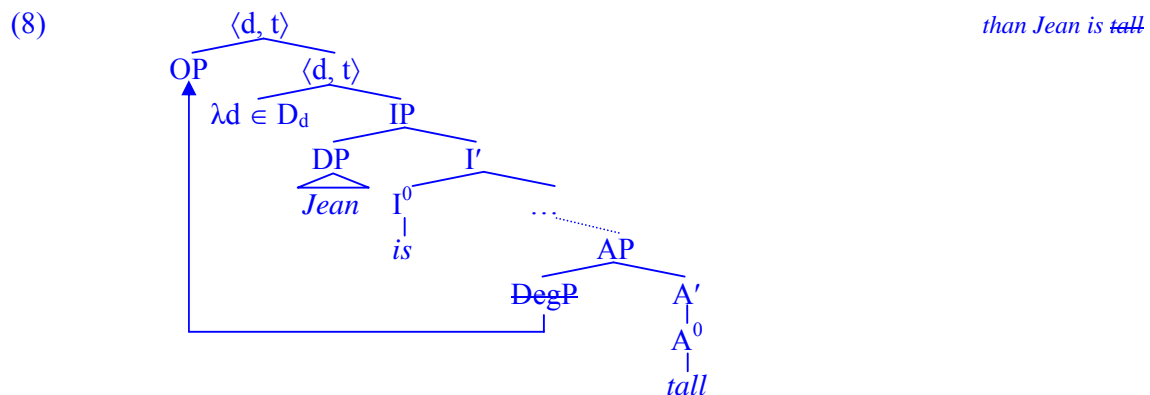
It is generally assumed that movement of the null operator in the comparative clause yields a predicate over degrees, but a definite description of a degree would achieve the same effect.

## 2.   EVIDENCE FOR OPERATOR MOVEMENT IN THE MAIN CLAUSE

### 2.1.  Interaction with ellipsis

Williams (1974), Heim (2000):

(9)   a.   My father tells me to work harder than my boss does.
      b.   My father tells me to work harder than my boss does ~~work t hard~~.
      c.   My father tells me to work harder than my boss does ~~tell me to work t hard~~.

The VP in the comparative clause must contain a trace.

Therefore its antecedent in the main clause must also contain a trace.

Therefore operator movement in the main clause is obligatory.

### 2.2.  ACD

English quantified DPs may appear in apparent infinite regression structures:

(10)  a.      Fred has bought every book that Ned has.
      b.      Dora will see no movie that Nora has.

To obtain the antecedent for VP-ellipsis in the relative clause, the quantified DP moves to its scope position (Sag (1976), Larson and May (1990), etc.):

(11)  a.      [every book that Ned has ___]$_i$ Fred has bought t$_i$.                              QR
      b.      [every book that Ned has ~~bought t$_j$~~]$_i$ Fred has bought t$_i$.       ellipsis resolution

Evidence that QR is involved: bare plural NPs cannot license ACD:

(12)  a.    *Fred was climbing trees that Jill was.

However, bare plurals modified by a comparative can **license ACD**:

(13)  a.      Fred was climbing more trees than Jill was.
      b.      Fred was climbing higher trees than Jill was.

Degree operators must license movement (Wold (1995) via Heim (2000)).

### 2.3.  Scope interactions with other quantifiers

Kennedy (1997/1999): if the degree operator moves, it should be able to take scope over other operators. Such readings are in fact not attested (see Heim (2000)):

(14)  John is 4 feet tall. Every girl is exactly 1 inch taller than that.
      a.      $\forall > $ -*er*: $\forall$x [girl(x) $\rightarrow$ max {d: tall(x,d)} = 4′ + 1′]
      b.    *-*er* $> \forall$: max {d: $\forall$x [girl(x) $\rightarrow$ tall(x,d)] = 4′ + 1′]

The reading in (14b), where the shortest girl is one inch taller than John and the rest are taller, is not available

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**(15)  Kennedy's generalization (Heim (2000)):**

     If the scope of a quantificational DP contains the trace of a degree operator, it also contains that degree operator itself.

---

However, degree operators do interact with **intensional predicates** (Heim (2000)); therefore, degree operators can scope, as shown by the ambiguity of (16):

(16)  This draft is 10 pages long. The paper is required to be exactly 5 pages longer than that.
      a.      *required > -er*: required [[exactly 5 pages -er than that][the paper be d-long]]
              $\forall$w $\in$ Acc: max {d: long$_w$ (p, d)} = 15 pages

              in every possible world compatible with what is required the maximal length of the paper is exactly 5 pages more than 10 pages. In other words, the paper cannot be longer or shorter than 15 pages.

      b.      *-er > required*: [exactly 5 pages -er than that] [required [the paper be d-long]]
              max {d:   w $\in$ Acc: long$_w$ (p, d)} = 15 pages

              As before, we construct the set of all degrees such that the paper is long to these degrees in any possible world compatible with what is required, and then take the maximal such degree. This maximal degree, corresponding to the length of the shortest paper compatible with what is required, has to be 5 pages more than 10 pages. Under this reading, the *minimal* length of the paper is exactly 15 pages; it can be longer than that.

Further evidence for movement in comparatives comes from the interaction of the scope of comparatives with extraposition of the comparative clause (Williams (1974:194-195), Bhatt and Pancheva (2004)).

## 2.4. Intermediate summary

We now have evidence that the main clause of the comparative also involves movement and that the movement involved is QR of the comparative operator.

NB I personally have some doubts about the validity of (16): the ambiguity is clearly there (see also Bhatt and Pancheva (2004), Grosu and Horvath (2006)), but a different explanation can be envisaged. Ellipsis facts, on the other hand, are more difficult to account for.

## 3. MORPHOSYNTAX

To permit the degree morpheme to move as high as it is supposed to, it is necessary to choose the structure in (1a) (advocated by Bowers (1975), Jackendoff (1977), etc.) over the structure in (1b) (proposed by Abney (1987), Bowers (1987) and Corver (1990, 1991, 1997a, 1997b)):

(1) **a.**
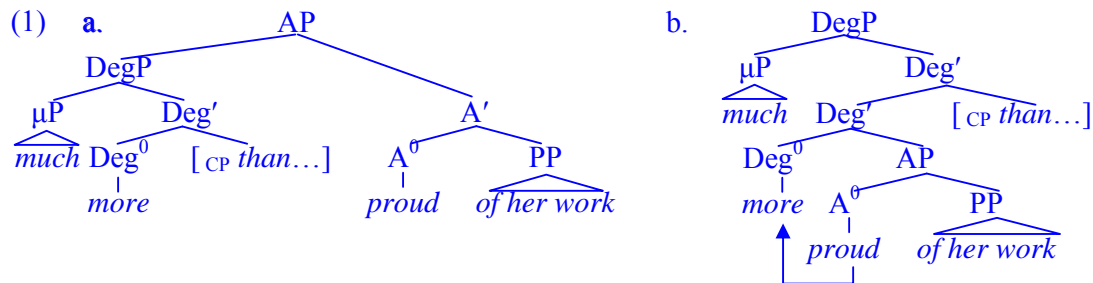


However, there exist several *a priori* reasons to exclude (1a).

## 3.1. Lexical integrity

Normally parts of words don't QR.

## 3.2. Surface adjacency

The structure in (1a) does not fit the constituency observed on the surface, where the degree clause/phrase and the degree morpheme can be adjacent only incidentally:

NB: Bhatt and Pancheva (2004) offer a possible semantic reason for degree clauses to merge late and in a high position, but Grosu and Horvath (2006) show that it doesn't work.

(17) a.   more intelligent **than Einstein**
    b.   *more **than Einstein** intelligent
    c.   smarter **than Einstein**

NB On the other hand, the comparative clause is clearly capable of extraposition, e.g., in *a smarter person than Einstein*, which somewhat weakens the argument.

## 3.3. Pronominalization

Milner (1978), Pinkham (1982): an overt pronoun may replace the AP in the degree phrase:

(18) Il   est   aussi triste que    **l'**     était Jeanne   hier.
     he   is   EQ   sad   CMPZR   PRED.CL was   Jeanne   yesterday
     *He is as sad as Jeanne was yesterday.*

A pronoun is generally taken to replace a maximal projection. While in (1a) such a maximal projection is not available, in (1b) the pronoun can be taken to replace the AP.

*So*-pronominalization in English seems to suggest the same conclusion:

(19)  Alice is incredibly tall, and Beth is even more **so**.

NB It should be also noted that in order to deal with predicate pronominalization it is necessary to assume that the subject is merged either in [Spec, aP] or in the specifier of the functional head Pred[0] (Bowers (1993, (2001)), but clearly not in [Spec, AP].

### 3.4.  Superlative morpheme ordering

The superlative form contains the comparative one (Ultan (1972), Stateva (2002, 2003) and Bobaljik (2007)):
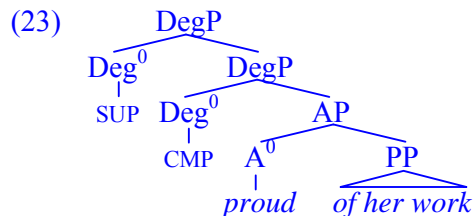
(20)  a.    olcsó-bb 'cheaper'                                          Hungarian, Ultan (1972:140)
      b.    leg-olcsó-bb 'cheapest'

(21)  a.    Ivan  je  pametn-iji  od      Milene.              Serbo-Croatian (Stateva (2003))
            Ivan  is  smart-er     than  Milena
            *Ivan is smarter than Milena.*

      b.    Ivan  je  naj-pametn-iji.
            Ivan  is  most-smart-er
            *Ivan is the smartest.*

      c.    *Ivan  je  naj-pametan.
            Ivan  is  most-smart

(22)  a.    graž-iau 'more beautiful-NSG'                        Lithuanian, Bobaljik (2007)
      b.    graž-iau-sia 'most beautiful-NSG'

Semantically the superlative morpheme provides universal quantification over the standard of comparison (*more than all*).

The two morpheme orderings are only available with the following constituency:

(23)

```
              DegP
           ___/  \___
        Deg⁰        DegP
         |        __/   \__
        SUP    Deg⁰        AP
                |        _/  \_
               CMP     A⁰      PP
                       |      _/ \_
                     proud  of her work
```

If the comparative and the superlative morphemes had been in the same Spec, they couldn't have appeared on different sides of the root

If the two morphemes appear in the Specs of different functional heads, the constituency is the same as above, but additional questions arise (the nature of the functional projections, the argument structure on the comparative morpheme, etc. – see Stateva (2000, 2002))

### 3.5.  Intermediate summary

Morphosyntax rather favors the structure in (1b), where the AP is merged as the complement of Deg[0], because this structure allows head-movement, which is necessary for morphological processes to take place.

However, the structure in (1b) is incompatible with QR:
  ➢    The head-movement constraint blocks QR
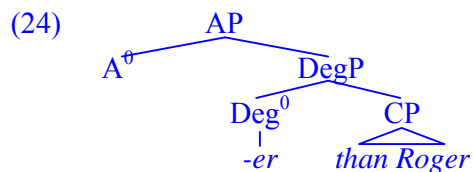  ➢    The degree head and the comparison clause cannot move as a unit

**Thus semantics and morphosyntax lead us to different conclusions.**

## 4. POSSIBLE SOLUTIONS

- ➢ DegP is the complement of A
- ➢ the semantics of comparison doesn't reside in $Deg^0$
- ➢ synthetic comparatives are not created by head movement

## 4.1. DegP is the complement of A

I have seen this idea floating around in different contexts, but I can't remember where and when:

(24)

```
              AP
         ╱         ╲
      A⁰           DegP
              ╱          ╲
          Deg⁰            CP
            │           ╱    ╲
          -er      than Roger
```

Advantages:

- ➢ solves constituency and XP-movement puzzle
- ➢ DegPs are assimilated to DPs: they appear in an argument position

Problems:

- ➢ the pre-adjectival position of a measure phrase in the positive form is unexpected

  - • an AP could be head-final in English, and placing measure phrases into the complement position of an adjective allows one to account for the fact that some scalar adjectives but not others can take measure phrases: it could be an issue of idiosyncratic case assignment

- ➢ the pre-adjectival position of a measure phrase in the comparative is unexpected
  - • perhaps it is due to scrambling, or the AP could be head-final (the question would still remain why DP-internal APs do not allow measure phrases)
- ➢ the pre-adjectival position of *more* is unexpected

  - • perhaps it moves above the AP and reprojects (cf. Koeneman (2000)). This would allow us to account for multiple comparative marking, as in *the most unkindest cut of all* (Corver (2005)), or the AP could be head-final

- ➢ adjectives are generally assumed to have their thematic arguments (cf. *proud of her work*) as complements

  - • I don't think anybody ever seriously tested whether these PPs really appear in the complement position. Two verification strategies come to mind: (1) some adjectives, even in English, appear to assign case (e.g., *near*, *worth* or *like*, cf. Maling (1983)) -- can they assign case in the comparative form? (2) do ergative adjectives (Cinque (1990)) form comparatives?

- ➢ It seems strange that a functional projection should be the complement of a lexical projection

  - • functional projections like DPs do appear in the complement of a lexical head V -- and a DegP, like a DP, is a generalized quantifier
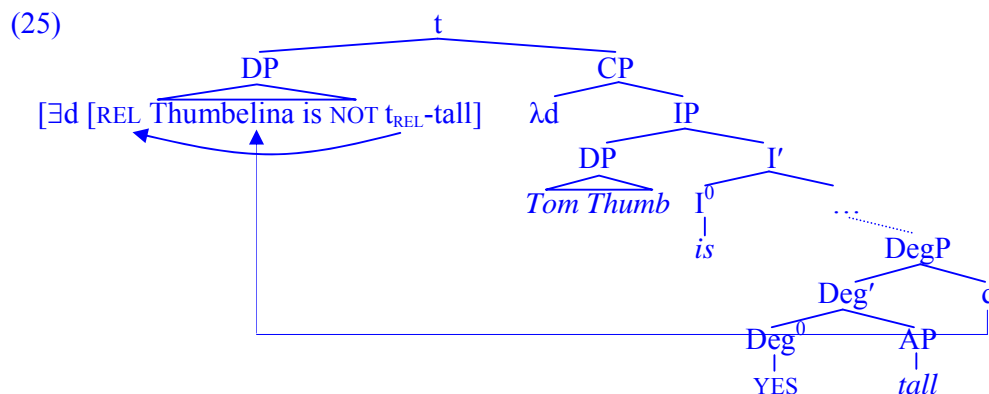
Summary: not completely excluded

## 4.2. Existential approach

Ross (1969), McConnell-Ginet (1973), Seuren (1973),  Klein (1980), Larson (1988), Stassen (1984): comparatives involve existential quantification combined with negation in the degree clause.

Matushansky (2010): the "degree morpheme" **-er** is a **positive verum marker**, similar to *bien* in French or *wel* in Dutch. Its counterpart in the degree clause is the **null negative verum marker**.

The degree clause is basically a relative clause (cf. von Stechow (1984)):

(25)

$$t$$

DP        CP

[∃d [REL Thumbelina is NOT t_REL-tall]   λd   IP

DP    I′

*Tom Thumb*  I⁰

*is*   ...

DegP

Deg′  d

Deg⁰  AP

YES  *tall*

Overt "negative"/scope marker in French degree clauses; overt negation in Italian, negation copying in cockney English:

(26) a.   Jean  est  plus  grand  que  je  **ne**  pensais.
         Jean is    more  tall    than I  NEG  thought
         *Jean is taller than I thought.*

      b.   Giovanni è  più  alto  che  **non**  pensassi.
         Giovanni is more tall   than  NEG  think-SBJ-1SG
         *Giovanni is taller than I thought.*

(27) a.   He has never been no good to no woman, not never.
      b.   She did a better job than what I never thought she would.

Problems:

- ➢   to get the truth conditions right when quantification is involved it is necessary to assume that negation in the comparative clause can appear higher than the surface position of the subject and therefore higher than the extended AP
- ➢   the comparative marker really doesn't look like emphasis (e.g., it can be affixal and it doesn't bear stress)
- ➢   it is unclear where the intuition of comparison comes from

Conversely, the story allows for a really neat account of differentials and factor phrases

## 5.   LOCAL DISLOCATION IN DETAIL

Potential solution: synthetic comparatives are not created by head movement

Embick and Noyer (2001), Embick (2007): the traditional head-movement approach cannot account for the prosodic constraint on synthetic comparative formation:

The prosodic constraint on the formation of synthetic comparatives and superlatives (cf. Quirk*, et al.* (1985)) -- only monosyllabic adjectives and disyllabic adjectives with a light second syllable (cf. *silly – sillier*, *yellow – yellower*) can give rise to synthetic forms -- is actually incorrect: quite a few disyllabic adjectives that allow synthetic comparatives do not have a light second syllable. The study of the Corpus of Contemporary American English (COCA) yields among others, *stupider* and *remoter*.

(28)  a.      smarter, #more smart
      b.      *beautifuller, more beautiful

Since head movement happens before vocabulary insertion, no effect from the choice of the lexical root is expected.

Local Dislocation applies after Vocabulary Insertion and linearization, and affects both linear order and hierarchy:

(29)  a.      $[_{XP} X [_{YP} [_{ZP} Z] Y]]$
      b.      $[X *[ Z * Y]]$
      c.      $[[_Z^0 Z+X] * Y]$

Note that, as with Affix Hopping, a new complex head $Z^0$ is created.

## 5.1.  Suppletion

The combination of an adjective and a comparative morpheme can yield a suppleted form:

(30)  a.      more + good → better                                                          English
      b.      plus + bon → meilleur                                                          French

Suppletion can only take place within a single head.

As Local Dislocation is a post-syntactic operation sensitive to individual lexical items, it can only apply after Vocabulary Insertion.

Before Local Dislocation there is no context for suppletion.

## 5.2.  Effects of the adverb

Embick and Noyer (2001): if an adjective is modified by an adverb, synthetic comparative or superlative formation becomes impossible:

(31)  a.      Mary is the most amazingly smart person.
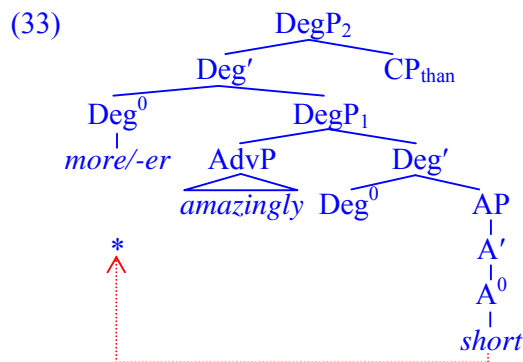      b.      *Mary is the amazingly smartest person.

My claim: this is **not a phonological** intervention effect; *amazingly* is a degree modifier (the degree to which Mary is smart is amazing).

(32)  a.      Jude is smarter to an amazing degree than Joe.
      b.      Jude is smarter than Joe to an amazing degree.

The comparative morpheme does not seem to take scope over *smart to an amazing degree* in synthetic forms.

If there are two DegPs, an intervening functional head disrupts head movement:

(33)

$$
\begin{array}{c}
\text{DegP}_2 \\
\text{Deg}' \quad\quad \text{CP}_{\text{than}} \\
\text{Deg}^0 \quad\quad \text{DegP}_1 \\
more/\text{-}er \quad \text{AdvP} \quad\quad \text{Deg}' \\
amazingly \quad \text{Deg}^0 \quad\quad \text{AP} \\
* \quad\quad\quad\quad \text{A}' \\
\text{A}^0 \\
short
\end{array}
$$

Local Dislocation predicts sensitivity only to the intervening adverb; a PP is not intervening linearly.

A different choice of an adverb changes matters:

(34) a.    This building is more structurally weak than that one.
     b.    This building is structurally weaker than that one.

Embick (2007): if head movement could have taken place, the synthetic comparative would have appeared to the left of the adverb:

(35) a.    This building is more structurally weak than that one.
     b.    This building is structurally weaker than that one.
     c.   *This building is weaker structurally than that one.

Dutch, where any adjective can form a synthetic comparative, also places the adverb before the comparative by default. This will become important later.

Hidden presupposition: an adverb is uniformly inserted below the degree operator.

(36) a.    A **probably better option** will be to create an artificial drug.
     b.   *A more probably good option will be to create an artificial drug.

=> some adverbs must be inserted higher than DegP.

Also, with analytic comparatives and superlatives, where no movement is assumed to have taken place, both options are possible:
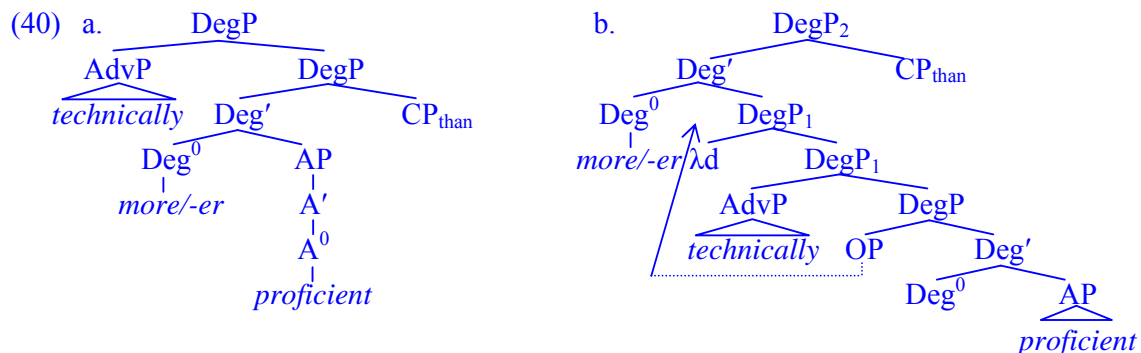
(37) a.    I became a **technically more proficient** guitarist.
     b.    I became a **more technically proficient** guitarist.

Hypothesis: an adverb cannot combine with a scalar adjective directly.

We know it doesn't have to:

(38) a.    a technically oriented seminar
     b.    a technically proficient guitarist
     c.    a technically legal solution

(39) a.    a structurally deficient scheme
     b.    top 10 structurally amazing bridges
     c.    a structurally flawed approach

Assuming no type shifting:

(40) a. [DegP [AdvP *technically*] [DegP [Deg′ [Deg⁰ *more/-er*] [AP [A′ [A⁰ *proficient*]]]] CP_than]]

b. [DegP₂ [Deg′ [Deg⁰ *more/-er* λd] [DegP₁ [DegP₁ [AdvP *technically*] [OP ... ] [Deg′ [Deg⁰] [AP *proficient*]]]]] CP_than]

Be what may, relative positions of the degree operator and an adverb do not seem to be fixed.

When an adverb and a scalar adjective combine, the result may not be scalar.

## 5.3. Synthetic blocking

Synthetic forms are not allowed in English for non-scalar adjectives and with metalinguistic comparatives:

(41) a.    My aunt is *Frencher/✓more French than Napoleon.
     b.    The guy is *taller/✓more tall than gaunt.

Important: languages differ in this respect:
Dutch is currently undergoing a linguistic change towards allowing analytic comparatives similarly to English.

(42) a.    Jan  is  Franser/       ?meer  Frans    dan    Piet.
           Jan  is  French+cmp  more   French  than   Piet
           *Jan is more French than Piet.*

     b.    Jan  is  *dikker/       meer   dik      dan    vet.
           Jan  is  thick+cmp   more   thick   than   fat
           *Jan is more overweight than obese.*

Metalinguistic comparatives are special.

Locality constraints on Local Dislocation should be the same cross-linguistically... and since, as mentioned above, Dutch also places the adverb before the comparative, by Embick and Noyer's reasoning it should also derive synthetic comparatives by Local Dislocation.

### 5.3.1.    Semantic constraints on synthetic comparatives

Non-intersective adjectives don't permit either synthetic or analytic comparatives:

(43) a.    This is the *mainer/*/??more main reason.
     b.    He is a *paster/*/??more past king.

Non-scalar intersective monosyllabic adjectives, such as *French*, *right* or *male*, allow analytic comparatives only (in English; not in Dutch):

(44) a.    *My aunt is Frencher/deader/wronger than Napoleon.
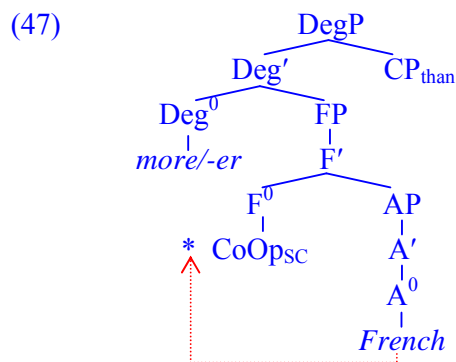     b.     My aunt is more French/more dead/more wrong than Napoleon.

Non-intersective adjectives cannot be coerced.

Intersective non-scalar predicates can:

(45) a. You're such a linguist.       ≈ You're such a typical linguist.
    b. You're such a fool.       ≈ You're an utter fool.

(46) a. You're so tall.       ≈ You're tall to such a high degree.
    b. You're so French.       ≈ You correspond so well to a stereotypical Frenchman.

As is easy to see, when a non-scalar predicate is combined with a degree operator or a degree adverb (such as *amazingly* or *very*), its meaning shifts from 'having the property X' towards 'having d-many properties stereotypically associated with having the property X', with the newly added degree argument associated with the number of the relevant properties.

I hypothesize that this meaning shift is accomplished by an additional functional head $F^0$ taking the relevant predicate as a complement and blocking head movement:

(47)

```
                      DegP
                    /      \
                 Deg'       CP_than
                /    \
             Deg⁰     FP
              |        |
           more/-er    F'
                     /     \
                   F⁰       AP
                  /  \       |
                *    CoOp_SC  A'
                               |
                              A⁰
                               |
                             French
```

Intensional adjectives, such as *past*, or subsective adjectives, such as *main*, are of the wrong semantic type to combine with the coercion operator in (47).

Dutch differs from English in the fact that such additional functional heads do not block head movement.

It is unclear whether Local Dislocation should be affected by the presence of a null functional head, but no cross-linguistic variability is predicted.

### 5.3.2. Metalinguistic comparison

Bresnan (1973) notes that in certain environments synthetic comparatives are ungrammatical:

(48) a.     I am more angry than sad.
    b.  *I am angrier than sad.

The interpretation of (48) is metalinguistic or, in Bresnan's terms 'It's more true of me than I'm sad than that I'm angry'.

In exactly the same environment *much*-support is necessary with *as*:

(49) a.     I'm as much sad as angry.
    b.  *I'm as sad as angry.

Embick (2007) (following Bresnan (1973)) hypothesizes the presence of more structure:
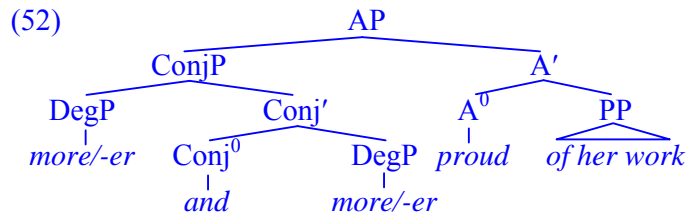
(50) John is lazy [more than stupid].

Under the same assumptions the locality conditions on head movement will not be met.

## 5.4. Curiouser and curiouser
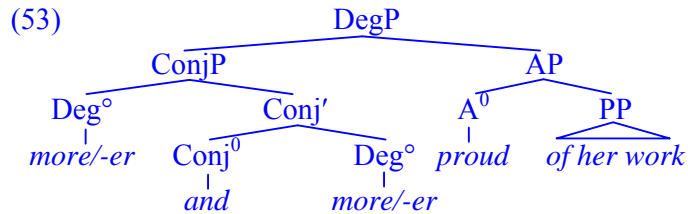
Jackendoff (2000): (51) cannot be derived.

(51)  a.  more and more beautiful
      b.  prettier and prettier

Neither head-movement nor Affix Hopping is compatible with the hypothesis that the degree morpheme is in [Spec, AP]:

(52)

```
                        AP
         ConjP                      A′
  DegP          Conj′         A⁰        PP
 more/-er   Conj⁰      DegP  proud  of her work
             and      more/-er
```
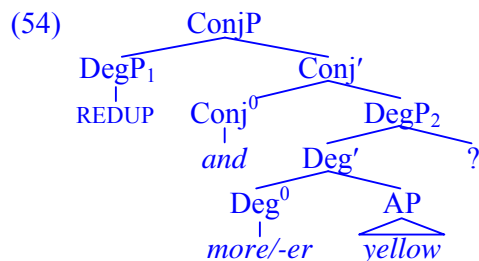
Local Dislocation cannot affect the first conjunct.

Suppose now that the AP is the complement of Deg° and that heads can be coordinated:

(53)

```
                        DegP
         ConjP                      AP
  Deg°          Conj′         A⁰        PP
 more/-er   Conj⁰      Deg°  proud  of her work
             and      more/-er
```

Affix Hopping (or Local Dislocation) does not explain where the second copy of an adjective comes from.

If the same adjective can move across the board into two different heads, head-movement is possible. Otherwise this would have to be a coordination of DegPs.

Alternatively, it could be a coordination of DegPs with reduplication:

(54)

```
           ConjP
  DegP₁            Conj′
 REDUP     Conj⁰         DegP₂
            and    Deg′         ?
                Deg⁰      AP
               more/-er  yellow
```

The structure in (54) derives both (51a), where reduplication results in the repetition of the degree morpheme, and (51b), where reduplication is preceded by head-movement of the adjective into Deg⁰ yielding a complex head that serves as a source for the reduplicative morpheme.

Local Dislocation leads to incorrect results in this structure. Alternative structures based on (1a) make wrong predictions.

## 5.5.  Summary

A post-syntactic operation such as Local Dislocation predicts lack of suppletion in synthetic comparatives and no cross-linguistic variability as to the environments where their formation is possible.

A narrow syntactic operation such as head movement should not be sensitive to individual lexical items (by current assumptions).

However...

> ➢ Like any movement, head movement should involve a copying operation.
>
> ➢ The comparative *-er* (unlike the equative *as*) is an affix.
>
> ➢ This property is usually assumed to be a syntactic feature visible in the narrow syntax.

An affix must be supported and thus $A^0$-to-$Deg^0$ movement is obligatory. As a result, after movement two copies of the $A^0$ head are present: in the base position and adjoined to $Deg^0$. In the course of Vocabulary Insertion (including suppletion), the resulting structure is evaluated and the lexical properties of various morphemes come into play. Thus *-er* imposes a prosodic constraint on the stem it attaches to: only "light" adjectives are allowed. Suppose that a "heavy" adjectival stem found in this position cannot be pronounced, which leads to the Last Resort operation of *much*-support. The need to spell out the phonological features of the adjective then forces the "heavy" stem to be pronounced in its base position, thus yielding an analytic form.

However, the problem is, I now become more and more concerned with the theoretical status of Last Resort operations...

The structure compatible with head movement is not compatible with Heim's compositional semantics.

## 6. CONCLUSION

The most prevalent semantics of comparatives requires that the comparative morpheme and the comparative clause form a constituent.

Morphology suggests that the comparative morpheme forms an exclusive constituent with the adjective.

Syntax rather favors the latter view.

The three ways of resolving the conflict that we have examined all seem unsatisfactory, but in different ways.

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