Suppletion in Czech Comparatives*

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1 Introduction

▷ The Czech positive gradable adjective *dobr-ý* 'good' has a suppletive stem *lep-*, which is used in the comparative *lep-š-í* 'better' (see (1)).
▷ Its antonym *ne-dobr-ý* 'bad' uses the same root, yet does not have the suppletive stem in the comparative (see (2)).

(1) a. dobr-ý
good-AGR
'good'
b. lep-š-í
good-CMPR-AGR
'better'

(2) a. ne-dobr-ý
NEG-good-AGR
'bad'
b. ne-dobř-ejš-í
NEG-good-CMPR-AGR
'worse'

▷ *malý* 'small' has a suppletive stem *men-* (3).
▷ its antonym *ne-mal-ý* 'big' also makes use of the suppletive stem (4).

(3) a. mal-ý
small-AGR
'small'
b. men-š-í
small-CMPR-AGR
'smaller'

(4) a. ne-mal-ý
NEG-small-AGR
'big, large'
b. ne-men-š-í
NEG-small-CMPR-AGR
'not smaller'

*We are very grateful to Pavel Caha, who pointed us to this data set. The data in section 3.1 are taken from unpublished work by Caha.

▷ The aim of this talk:
- to account for the data pattern above in terms of the presence of a negative feature in negative gradable adjectives;
- to show how the presence or absence of suppletion correlates with the different scopes that negative features can take.

▷ Structure of this talk:
- Prerequisites for the analysis
- The Czech data: analysis
- Conclusion

2 Prerequisites for the analysis

2.1 Nanosyntax: general principles

▷ late (postsyntactic) insertion
▷ phrasal spellout: lexical items are inserted at the *phrasal* level (not at the level of the head)
▷ in this way, lexical items can straightforwardly spell out *sets* of syntactic features (without the need for local dislocation, fusion, merger, etc.)
▷ account for syncretism in terms of overspecification (instead of underspecification)

(5) *Superset Principle*
A lexical entry may spell out a syntactic node iff the features of the lexical entry are a superset of the features dominated by the syntactic node.

(6) *The Elsewhere Principle*
In case two rules, R_1 and R_2, can apply in an environment E, R_1 takes precedence over R_2 if it applies in a proper subset of environments compared to R_2.

▷ Suppose we have a syntactic object XP containing the features A, B, and C (as in (7)), and a lexicon as in (8):

(7) $[_{XP}$ A B C]

(8) a. </α/, [A B C D]>
b. </β/, [A B C]>
c. </γ/, [A B]>

▷ both the lexical items α and β are candidates for insertion (by the Superset Principle)
▷ (8c) is not a candidate
▷ by the Elsewhere Principle, β will be inserted, as it is a closer match for (7), blocking the insertion of α

2.2 Nanosyntax of negation

▷ languages quite often have a variety of negative markers (e.g. English *not, non-*, and *un-*)
▷ these different negative markers have different scopes (e.g. sentence negation vs constituent negation)
▷ De Clercq (2013) distinguishes four different categories of negative markers (based on their functions, semantics, scope, and differences in stackability)
  ○ T^{Neg}-markers take sentential scope, and can stack on all the others.
  ○ Foc^{Neg}-markers take scope over the untensed predicate.
  ○ $Class^{Neg}$-markers scope over the predicate term.
  ○ Q^{Neg}-markers take lowest scope and do not stack on top of any others.
▷ studying syncretisms in negative markers in a sample of nine different languages, De Clercq (2013) has found that negative markers can be arranged in a paradigm that respects the *ABA-restriction (syncretism only affects contiguous cells).

(9)

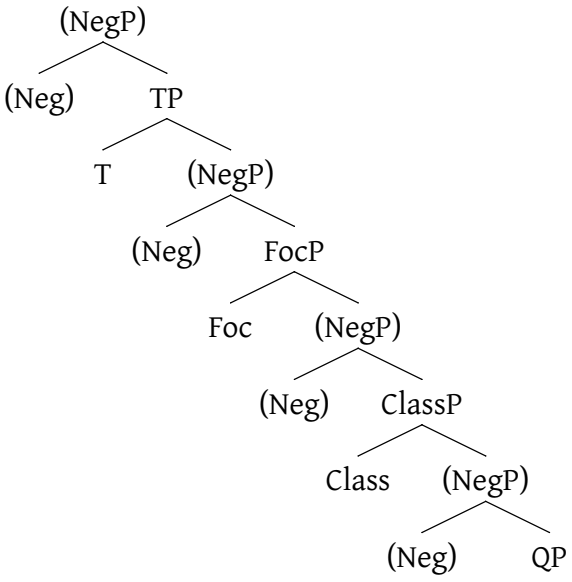
	T^{Neg}	**Foc^{Neg}**	**$Class^{Neg}$**	**Q^{Neg}**
Greek	dhen	oxi	mi	a-
English (formal)	not	not	non	un-
English (informal)	n't	not	non	un-
French (formal)	ne … pas	pas	non	iN-
French (informal)	pas	pas	non	iN-
Chinese	bù	bù	fēi	fēi
MS Arabic	laa	laa	ghayr-	ghayr-
Persian	na	na	qheyr-	qheyr-
Moroccan Arabic	ma (ši)	muši	muši	muši
Dutch	niet	niet	niet-	on-
Hungarian	nem	nem	nem	-tElEn
Czech	ne-	ne	ne-	ne-

- ▷ Greek does not show any syncretism, and therefore provides evidence for the existence of four different types of negation.
- ▷ Czech has a single syncretic negative marker (*ne-*), which is the equivalent of *not*, *non-* and *un-* in English.

(10)
a. Ja ne- jsem šťastný.
I NEG- am happy.
'I am not happy.'
b. Ja jsem ne- šťastný.
I am NEG- happy.
'I am unhappy.'
c. Je ne- americký.
is NEG American
'He is un-American.'
'He is non-American.'

- ▷ the Czech-type syncretism shows that there must be an underlying featural unity to all these negation types.
- ▷ the underlying featural unity resides (minimally) in the presence of the feature Neg.
- ▷ the Neg-feature is never spelled out alone: the different negative markers represent packagings of Neg with different sets of features.
- ▷ we assume an fseq for negative markers <T, Foc, Class, Q>.
- ▷ negative markers are built by adding a negative feature Neg on top of either QP, ClassP, FocP, or TP:

(11)



- ▷ (11) is shorthand for a series of four different trees, each corresponding to a particular negative marker
- ▷ (12) gives the lexical items for the negative markers *not, non*, and *un-*, respectively:

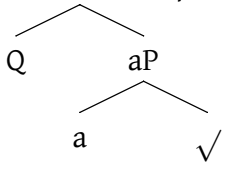
(12) a. < /nɒt/, [$_{\text{NegP}}$ Neg [$_{\text{TP}}$ T [$_{\text{FocP}}$ Foc [$_{\text{ClassP}}$ Class [$_{\text{QP}}$ Q]]]]] >
b. < /nɒn/, [$_{\text{NegP}}$ Neg [$_{\text{ClassP}}$ Class [$_{\text{QP}}$ Q]]] >
c. < /ʌn/, [$_{\text{NegP}}$ Neg [$_{\text{QP}}$ Q]] >

- ▷ negative markers also have an external syntax
- ▷ the clausal spine features the exact same functional sequence as in (11), including the potential presence of a NegP at each successive level
- ▷ the highest non-negative feature in the nanospine indicates where negation will take scope in the clausal spine
  - ○ if the nanospine spells out as *not*, its highest non-negative feature is either T or Foc; negation will then take scope high in the clausal spine, i.e. be inserted above either FocP or TP
  - ○ if the nanospine spells out as *un-*, its highest non-negative feature is Q; its scope will be limited to those positions in the clausal spine where a QP occurs (i.e. low in the clausal spine)

2.3 Adjectives: a difference in size

- ▷ gradable adjectives spell out:
  - ○ a root feature ($\sqrt{}$)
  - ○ a categorial head feature (*a*)
  - ○ a gradability feature (Q)
  - ○ negative gradable adjectives differ from positive ones in the presence of an additional Neg-feature

(13) QP ⇒ *positive gradable adjective* (e.g. *happy*)



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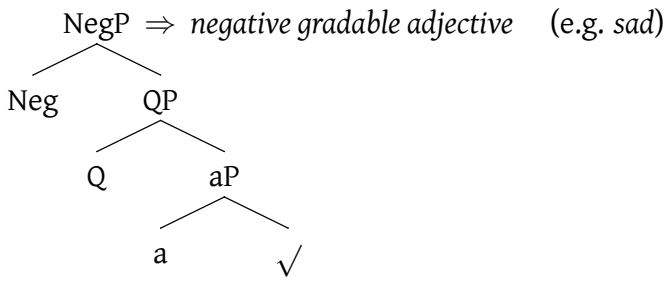


2.4 Evidence for a Neg-feature in negative adjectives

▷ De Clercq & Vanden Wyngaerd (2016) argue that there exists a ban on stacking negative affixes that are *structurally* (not linearly) adjacent:

(15) *UN+DIS

a. *undishonest, *undiscourteous, *undisloyal, *undiscomfortable
b. undisclosed, undisputed, undiscoverable, undiscouraged

(16) a. $[_A$ un $[_A$ dis $[_A$ honest]]]
b. $[_A$ un $[_A$ $[_V$ dis $[_V$ close]] d]

(17) *UN+LESS

a. *unuseless, *unbreathless, *unsenseless, *unmerciless, *uncheerless
b. uneventful, unfaithful, unhelpful

(18) a. $[_A$ un $[_A$ $[_N$ use] less]]
b. $[_A$ un $[_A$ $[_N$ event] ful]]

(19) *UN+IN

a. *unirreligious, *unillegitimate, *unillogical, *unimpossible, *unincoherent, *uninappropriate
b. uninconvenienced, unincapacitated, uninhibited, (unintelligible, uninterpretable, uninformed)

(20) *UN+UN, *DIS+DIS, *LESS+LESS

a. *ununhappy, *disdishonest, *breathlessless
b. ?ununcovered, ?ununlocked, ?ununduable, ?ununfolded

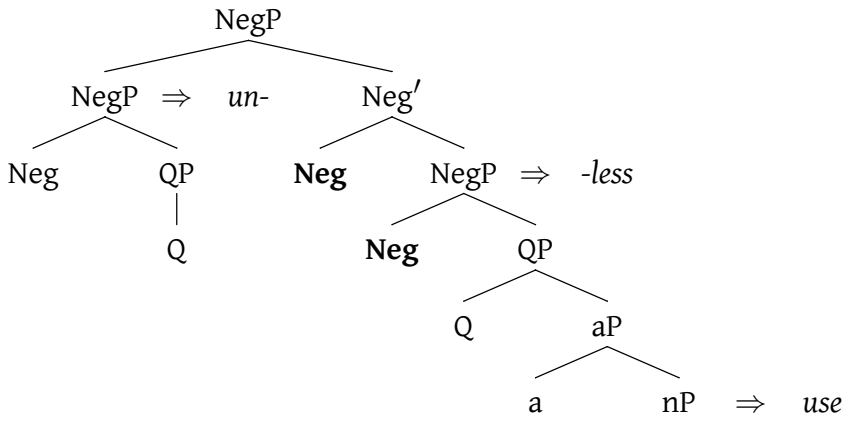
▷ the data in (21b) (Jespersen 1942, Zimmer 1964, Horn 1989) instantiate the same restriction as the ones in (15)-(20), under the assumption that negative adjectives have a Neg-feature (as shown in (14)) :

(21) a. unhappy, unwise, unclean, unfriendly, unhealthy, untrue
b. *unsad, *unfoolish, *undirty, *unhostile, *unsick, *unrude, *unfalse

▷ we argue that all of these facts follow from the following constraint on double negation:

(22) *<Neg, Neg>
The functional sequence must not contain two immediately consecutive Neg-features.

(23)



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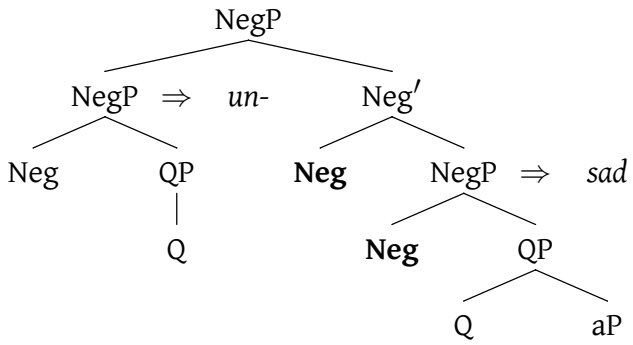
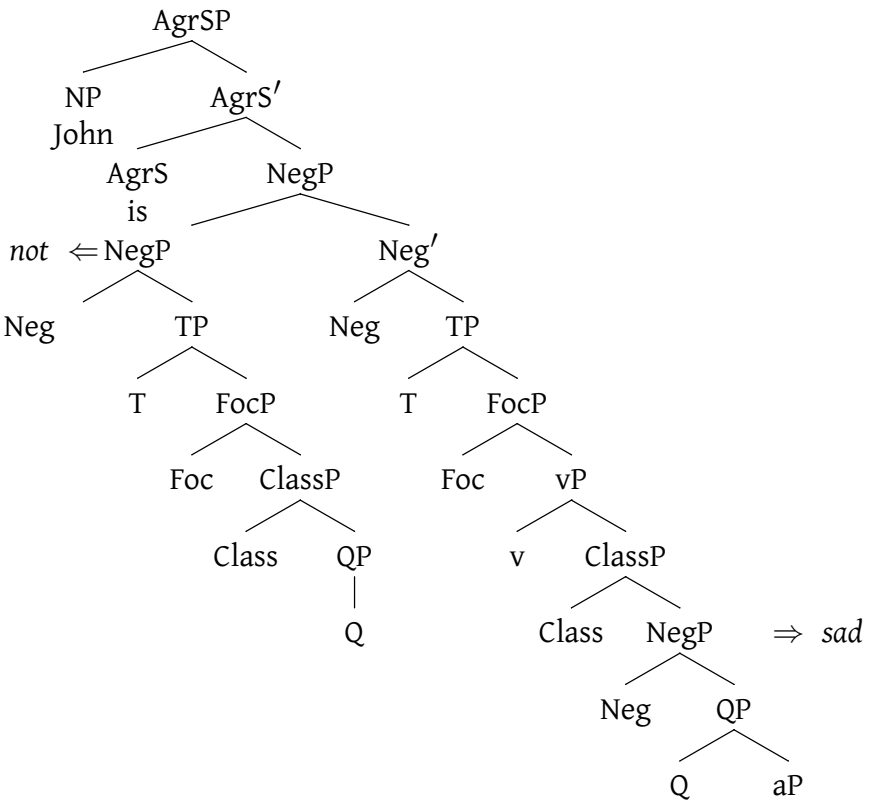


▷ the prefixes *un-*, *iN-*, *dis-* and the suffix *-less* all take scope in the same position, at QP
▷ the negative marker *not* takes higher scope, and can therefore be stacked onto *un/iN/dis/less* without violating (22) (e.g. *not disloyal/not useless/not impossible/not sad*, etc.):

(25)



3 The Czech data: analysis

3.1 Czech comparatives

▷ the Czech comparative in Czech is formed with the suffix *-(ěj)š-*

(26)

cerven-ěj-š-i	'redder'
hloup-ěj-š-i	'more stupid'
moudř-ej-š-i	'wiser'

▷ the *-ěj-*morpheme remains absent in a number of cases
▷ some of these cases are predictable: e.g. with suppletive comparatives, there is never an *-ěj-*morpheme.

(27)

Equative	Comparative	Superlative	
dobr-y	lep-š-i	nej-lep-š-i	‘good’
špatn-y	hor-š-i	nej-hor-š-i	‘bad’
mal-y	men-š-i	nej-men-š-i	‘small’
star-y	star-š-i	nej-star-š-i	‘old’

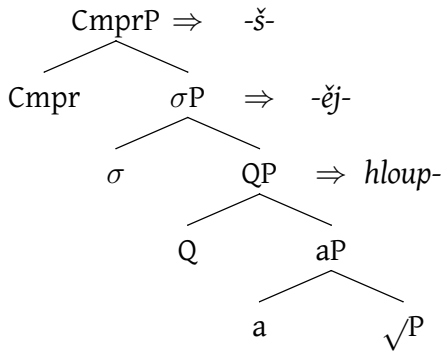
▷ *-ěj-* can also remain absent (unpredictably) with regular comparatives (e.g. *star-y* ‘old’)
▷ in other cases, there is a templatic change to the root that correlates with the absence of the *-ěj-*morpheme:
  ○ shortened root → no *-ěj-*
  ○ regular root → *-ěj-*

(28)

Equative	Comparative	
blizk-y	**bliz**-š-i	‘close’
dlouh-y	**del**-š-i	‘long’
vys-**ok**-y	vyš-š-i	‘tall’
hloup-y	hloup-ěj-š-i	‘stupid’
div-ok-y	div-oč-ej-š-i	‘wild’

▷ these data suggest that the Czech comparative morpheme needs to be decomposed into two separate morphemes, each spelling out a different feature:
  ○ *-š-* spells out a feature Cmpr (cf. Bobaljik 2012)
  ○ *-ěj-* spells out a feature σ
▷ the tree for a regular case *hloup-ěj-š-(i)* ‘more stupid’ is given in (29), with the corresponding lexical items given in (30):

(29)



(30) a. $<_{31}$ /-š-/, [$_{\text{CmprP}}$ Cmpr] >
b. $<_{32}$ /-ěj-/, [$_{\sigma\text{P}}$ σ] >
c. $<_{33}$ /hloup-/, [$_{\text{QP}}$ Q [$_{\text{aP}}$ a [$_{\sqrt{\text{P}}}$ $\sqrt{}$]]] >

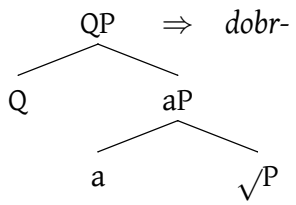
- ▷ QP is merged, the lexicon is consulted, and *hloup-* spells out QP
- ▷ at σP, spell-out driven movement raises QP into SpecσP, and *-ěj-* spells out σP, yielding *hloup-ěj-*
- ▷ at CmprP, the comparative suffix is spelled out (modulo the raising of σP into SpecCmprP), yielding *hloup-ěj-š-*
- ▷ the superlative is formed by prefixing the comparative with *nej-* (e.g. *nej-hloup-ěj-š-í* 'most stupid')
- ▷ *nej-* only spells out the Sprl feature (in line with the analysis of Bobaljik 2012 of the superlative as containing the comparative):

(31) < /nej-/, [$_{\text{SprlP}}$ Sprl] >

3.2 Positive gradable adjectives and suppletion

- ▷ the positive gradable adjective *dobr-* spells out the following structure:

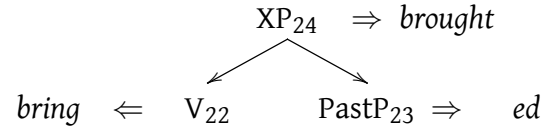
(32)



- ▷ in the comparative, the suppletive root *lep-* appears (*lep-š-í* 'better')
- ▷ nanosyntactic approach to suppletion: pointers in lexical items, pointing to other lexical items
- ▷ *bring/brought* suppletion: the lexical item of *brought* contains a pointer to the lexical items for *bring* and the past tense morpheme *-ed*:

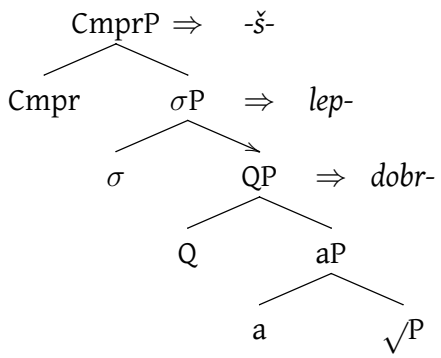
(33) a. <$_{24}$ /brought/, [$_{\text{XP}}$ 22 23]>
b. <$_{22}$ /bring/, V>
c. <$_{23}$ /ed/, PastP>

(34)



- ▷ suppletion in the comparative and superlative is different, as it concerns only the root, not the affix (e.g. *good, bett-er, be(t)-st*)
- ▷ we propose that the suppletive root spells out σP, as shown in (35):

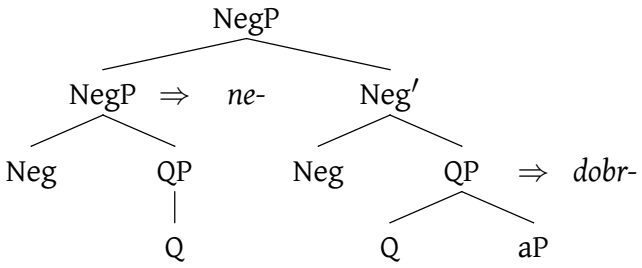
(35)



(36) a. < /-š-/, [$_{\text{CmprP}}$ Cmpr]] >
b. <$_{34}$ /lep-/, [$_{\sigma\text{P}}$ σ 32]] >
c. <$_{32}$ /dobr-/, [$_{\text{QP}}$ [$_{\text{aP}}$ [$\sqrt{}$]]] >

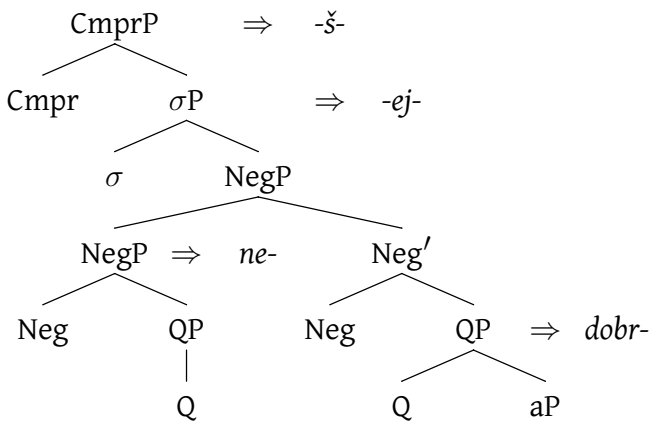
▷ *dobr-* spells out QP
▷ at σP, *dobr-* is overwritten by the suppletive form *lep-*
▷ at CmprP the comparative suffix is spelled out (modulo raising of σP into SpecCmprP), yielding *lep-š-*
▷ this analysis explains why suppletive roots never have the *-ěj-*morpheme in Czech: the σ-feature is already spelled out by the suppletive root
▷ the comparative of *ne-dobr-* 'bad' shows no suppletion (**ne-lep-š-í* vs *ne-dobř-ej-š-í* 'worse').
▷ we assume that *ne-dobr-* 'bad' has a structure similar to that of negative gradable adjectives (see (14) above), except that there is a complex specifier in SpecNegP (similar to *un-happy*):

(37)



▷ the structure we propose for the comparative adds σP and CmprP to (37):

(38)



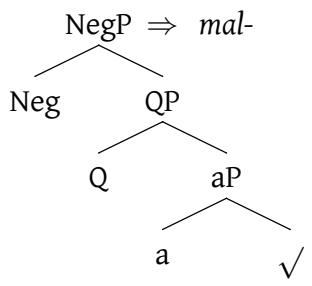
▷ no constituent in (38) could spell out the suppletive root *lep-* 'bett-'.
▷ σP dominates a Neg-feature that is not present in the lexical item *lep-* (36b)
▷ because of the Superset Principle, *lep-* is not a candidate for spelling out σP
▷ as a result, *-ěj-* is needed to spell out σP and *-š-* to spell out CmprP, deriving *ne-dobr-ejší* (modulo two consecutive raising-to-spec operations to derive the correct ordering of morphemes)

> ▷ A negated positive gradable adjective cannot get a suppletive comparative root because the node that spells out the suppletive root, σP, dominates a NegP, and the the lexical entry for the suppletive root of a positive gradable adjective does not contain a Neg-feature.

3.3 Negative gradable adjectives and suppletion

▷ the negative gradable adjective *malý* 'small' spells out one extra feature as compared with positive gradable adjectives (see (14) above):

(39)

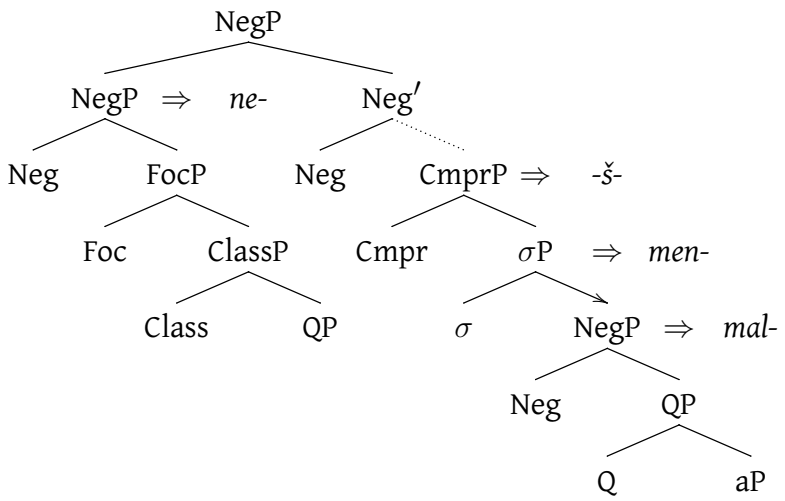


▷ *mal-ý* 'small' has a suppletive comparative *men-š-í*
▷ the suppletive form is not blocked in the context of the negative prefix: *ne-*

men-š-í (neg-small-er).

▷ the tree structure in (40) and the lexical items in (41) explain why this is the case:

(40)



(41) a. < /-š-/, [$_{\text{CmprP}}$ Cmpr]] >
b. <$_{66}$ /men-/, [$_{\sigma\text{P}}$ σ 65]] >
c. <$_{65}$ /mal-/, [$_{\text{NegP}}$ [$_{\text{QP}}$ [$_{\text{aP}}$ [$\sqrt{}$]]]] >

▷ *mal-* 'small' spells out NegP.

▷ at σP, *mal-* is overwritten by the suppletive root *men-*.

▷ the *ne*-marker preceding the negative adjective cannot be merged at QP because of the ban on double negation

▷ *ne* is merged higher in the structure, i.e. it takes scope higher than CmprP (e.g. at the FocP level).

▷ A negated negative adjective can get a suppletive stem because a negative adjective spells out NegP, and a suppletive negative root spells out σP immediately dominating this NegP

▷ as a result, the visible negative marker *ne-* must be merged higher in the structure

3.4 Readings of negated comparatives

▷ our analysis entails a different scope for the overt negative marker in *ne-dobr-ej-š-í* 'worse' and *ne-men-š-í* 'not smaller'.

▷ this structural difference entails a scopal and meaning difference:

(42) a. [[ne-dobř-]ej-š-] = [MORE [NOT-GOOD]] i.e. 'worse'
b. [ne-[men-š-]] = [NOT [MORE SMALL]] i.e. 'not smaller' (rather than 'bigger')

▷ (42a) is *inconsistent* with a situation where the two entities being compared are equally bad
▷ (42b) is *consistent* with a situation where the two entities being compared are equally small

(43) a. Your lunch was bad, but mine was (even) worse.
b. Your donation was big, but mine was (*even) not smaller.

▷ in the latter case, the scalar focus marker *even* is not possible, whereas it is possible (in fact preferred) in the former one.
▷ these expectations are confirmed.

4 Conclusion

▷ We accounted for the Czech data pattern in terms of
  ○ the presence of a negative feature in negative gradable adjectives
  ○ a ban on stacking two structurally adjacent Neg heads
▷ In negated *positive* adjectives there is no suppletion:
  ○ the negative marker *ne-* takes low scope, between Cmpr and Q
  ○ the suppletive root of a positive adjective cannot spell out this structure because of the intervening Neg-head introduced by *ne-*
▷ In a negated *negative* adjective there is suppletion:
  ○ the negative marker *ne-* takes high scope, because the adjective already contains a negative feature, and because of the ban on double negation
  ○ as a result, the negative marker *ne-* does not act as an intervener between Cmpr and Q
  ○ suppletion takes place in the same manner as with positive adjectives: there is a lexical item that contains one extra feature (σ) as compared with the nonsuppletive root.
▷ Czech provides evidence for decomposing Bobaljik's Cmpr-feature into two distinct features (Cmpr and σ)

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