Suppletion in Czech Comparatives*

Karen De Clercq & Guido Vanden Wyngaerd
FWO/UGent & KU Leuven

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 The data in section 3.1 are taken from unpublished work by Caha.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) \([XP \ A \ B \ C ]\)
both the lexical items $\alpha$ and $\beta$ are candidates for insertion (by the Superset Principle)

(8c) is not a candidate

by the Elsewhere Principle, $\beta$ will be inserted, as it is a closer match for (7), blocking the insertion of $\alpha$

2.2 Nanosyntax of negation

languages quite often have a variety of negative markers (e.g. English not, non-, and un-)

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$^\text{Neg}$-markers take sentential scope, and can stack on all the others.
- Foc$^\text{Neg}$-markers take scope over the untensed predicate.
- Class$^\text{Neg}$-markers scope over the predicate term.
- Q$^\text{Neg}$-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).

<table>
<thead>
<tr>
<th>Language</th>
<th>T$^\text{Neg}$</th>
<th>Foc$^\text{Neg}$</th>
<th>Class$^\text{Neg}$</th>
<th>Q$^\text{Neg}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek</td>
<td>dhen</td>
<td>oxi</td>
<td>mi</td>
<td>a-</td>
</tr>
<tr>
<td>English (formal)</td>
<td>not</td>
<td>not</td>
<td>non</td>
<td>un-</td>
</tr>
<tr>
<td>English (informal)</td>
<td>n’t</td>
<td>not</td>
<td>non</td>
<td>un-</td>
</tr>
<tr>
<td>French (formal)</td>
<td>ne ... pas</td>
<td>pas</td>
<td>non</td>
<td>iN-</td>
</tr>
<tr>
<td>French (informal)</td>
<td>pas</td>
<td>pas</td>
<td>non</td>
<td>iN-</td>
</tr>
<tr>
<td>Chinese</td>
<td>bù</td>
<td>bù</td>
<td>fèi</td>
<td></td>
</tr>
<tr>
<td>MS Arabic</td>
<td>laa</td>
<td>laa</td>
<td>ghayr-</td>
<td>ghayr-</td>
</tr>
<tr>
<td>Persian</td>
<td>na</td>
<td>na</td>
<td>qheyr-</td>
<td>qheyr-</td>
</tr>
<tr>
<td>Moroccan Arabic</td>
<td>ma (ši)</td>
<td>muši</td>
<td>muši</td>
<td></td>
</tr>
<tr>
<td>Dutch</td>
<td>niet</td>
<td>niet</td>
<td>niet-</td>
<td>on-</td>
</tr>
<tr>
<td>Hungarian</td>
<td>nem</td>
<td>nem</td>
<td>nem</td>
<td>-tElEn</td>
</tr>
<tr>
<td>Czech</td>
<td>ne-</td>
<td>ne</td>
<td>ne-</td>
<td></td>
</tr>
</tbody>
</table>
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)  (NegP)
     /   
   (Neg)  TP
         /   
        T   (NegP)
            /   
           (Neg) FocP
                 /   
                Foc   (NegP)
                     /   
                    (Neg) ClassP
                        /   
                       Class   (NegP)
                                          /   
                                         (Neg)  QP
(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. $< /n\mathbf{t}/, \mathbf{NegP} \mathbf{Neg} \mathbf{TP} \mathbf{Foc} \mathbf{ClassP} \mathbf{Class} \mathbf{QP} \mathbf{Q} >$

b. $< /n\mathbf{on}/, \mathbf{NegP} \mathbf{Neg} \mathbf{ClassP} \mathbf{Class} \mathbf{QP} \mathbf{Q} >$

c. $< /\mathbf{un}/, \mathbf{NegP} \mathbf{Neg} \mathbf{QP} \mathbf{Q} >$

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 ($\sqrt{\cdot}$)
   - 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) $\mathbf{QP} \Rightarrow \text{positive gradable adjective} \quad (\text{e.g. happy})$
De Clercq & Vanden Wyngaerd (2016) argue that there exists a ban on stacking negative affixes that are structurally (not linearly) adjacent:

\[(15) \quad \text{*UN+DIS} \]
\[a. \quad \text{*undishonest, *undiscourteous, *undisloyal, *undiscomfortable} \]
\[b. \quad \text{undisclosed, undisputed, undiscoverable, undiscouraged} \]

\[(16) \quad \text{a. } [A \text{ un } [A \text{ dis } [A \text{ honest } ]]] \]
\[\text{b. } [A \text{ un } [A \langle V \text{ close } ] d ] \]

\[(17) \quad \text{*UN+LESS} \]
\[a. \quad \text{*unuseless, *unbreathless, *unsenseless, *unmerciless, *uncheerless} \]
\[b. \quad \text{uneventful, unfaithful, unhelpful} \]

\[(18) \quad \text{a. } [A \text{ un } [A \langle N \text{ use } ] less ]] \]
\[\text{b. } [A \text{ un } [A \langle N \text{ event } ] ful ]] \]

\[(19) \quad \text{*UN+IN} \]
\[a. \quad \text{*unirreligious, *unillegitimate, *unillogical, *unimpossible, *unincoherent, *uninappropriate} \]
\[b. \quad \text{uninconvenienced, unicapacitated, uninhibited, (unintelligible, uninterpretable, uninformed)} \]

\[(20) \quad \text{*UN+UN, *DIS+DIS, *LESS+LESS} \]
\[a. \quad \text{*ununhappy, *disdishonest, *breathlessless} \]
\[b. \quad \text{?ununcovered, ?ununlocked, ?unundoable, ?ununfolded} \]

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)):
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) NegP
    /\    NegP ⇒ un-
    /      \
   Neg   Neg'
      |   /\   NegP ⇒ -less
      |   /       \
      |       Qneg  QP
      |       |   \
      |      aP   Q
      |     a       np ⇒ use

(24) NegP
    /\    NegP ⇒ un-
    /      \
   Neg   Neg'
      |   /\   NegP ⇒ sad
      |   /       \
      |       Qneg  QP
      |       |   \
      |      aP   Q
      |     a       np

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.):
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 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>dobr-</td>
<td>lep-š-i</td>
<td>nej-lep-š-i</td>
</tr>
<tr>
<td>špatn-</td>
<td>hor-š-i</td>
<td>nej-hor-š-i</td>
</tr>
<tr>
<td>mal-</td>
<td>men-š-i</td>
<td>nej-men-š-i</td>
</tr>
<tr>
<td>star-</td>
<td>star-š-i</td>
<td>nej-star-š-i</td>
</tr>
</tbody>
</table>

-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 |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>blizk-</td>
<td>bliz-š-i</td>
</tr>
<tr>
<td>dlouh-</td>
<td>del-š-i</td>
</tr>
<tr>
<td>vys-ok-</td>
<td>vyš-š-i</td>
</tr>
<tr>
<td>hloup-</td>
<td>hloup-ěj-š-i</td>
</tr>
<tr>
<td>div-ok-</td>
<td>div-oč-ěj-š-i</td>
</tr>
</tbody>
</table>

- 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) CmprP ⇒ -š-
    Cmpr σP ⇒ -ěj-
    σ QP ⇒ hloup-
    Q aP
    a √P

(30) a. <31 /-š-/, [CmprP Cmpr ]>
    b. <32 /-ěj-/, [σP σ ]>
    c. <33 /hloup-/, [QP Q [aP a [√P √ ]]]>
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):

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

### 3.2 Positive gradable adjectives and suppletion

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

\[(32) \quad QP \Rightarrow dobr-\]

\[\quad \quad Q \quad \quad aP\]

\[\quad \quad \quad \quad a \quad \quad \sqrt{P}\]

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:

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

\[(34) \quad XP_{24} \Rightarrow brought\]

\[\quad \quad bring \quad \leftarrow V_{22} \quad PastP_{23} \Rightarrow ed\]

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) \[ \text{CmprP} \Rightarrow -§- \]
\[ \text{Cmpr} \quad \sigma \text{P} \Rightarrow \text{lep}- \]
\[ \sigma \quad \text{QP} \Rightarrow \text{dobr}- \]
\[ Q \quad \text{aP} \]

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

\(\text{dobr-} \) spells out \(\text{QP}\)
\(\text{at} \sigma \text{P}, \text{dobr-} \) is overwritten by the suppletive form \(\text{lep-}\)
\(\text{at CmprP the comparative suffix is spelled out (modulo raising of} \sigma \text{P into SpecCmprP), yielding} \text{lep-§-} \)
\(\text{this analysis explains why suppletive roots never have the} -\text{ěj-morpheme in} \) Czech: \(\sigma\)-feature is already spelled out by the suppletive root
\(\text{the comparative of} \text{ne-dobr-} \) ‘bad’ shows no suppletion (\(\text{ne-lep-§-i} \) vs \(\text{ne-dobr-} -\text{ěj-§-i} \) ‘worse’).
\(\text{we assume that} \text{ne-dobr-} \) ‘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 \text{un-happy}):

(37)
\[ \text{NegP} \]
\[ \text{NegP} \Rightarrow \text{ne-} \quad \text{Neg} \]
\[ \text{Neg} \quad \text{QP} \quad \text{Neg} \quad \text{QP} \Rightarrow \text{dobr-} \]
\[ Q \quad Q \quad \text{aP} \]

\(\text{the structure we propose for the comparative adds} \sigma \text{P and CmprP to (37):} \)
(38)

\[
\begin{array}{c}
\text{CmprP} \quad \Rightarrow \quad -\acute{s} - \\
\text{Cmpr} \quad \sigma P \quad \Rightarrow \quad -e\acute{j} - \\
\sigma \quad \text{NegP} \\
\text{NegP} \quad \Rightarrow \quad \text{ne-} \\
\text{Neg} \quad \text{QP} \quad \text{Neg} \quad \text{QP} \quad \Rightarrow \quad \text{dobr-} \\
\text{Q} \quad \text{aP} \\
\end{array}
\]

- no constituent in (38) could spell out the suppletive root \(\text{lep- ‘bett-’}\).
- \(\sigma P\) dominates a Neg-feature that is not present in the lexical item \(\text{lep-}\) (36b)
- because of the Superset Principle, \(\text{lep-}\) is not a candidate for spelling out \(\sigma P\)
- as a result, \(-e\acute{j}-\) is needed to spell out \(\sigma P\) and \(-\acute{s}-\) 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, \(\sigma P\), dominates a NegP, and 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 \(\text{malý ‘small’}\) spells out one extra feature as compared with positive gradable adjectives (see (14) above):

(39)

\[
\begin{array}{c}
\text{NegP} \quad \Rightarrow \quad \text{mal-} \\
\text{Neg} \quad \text{QP} \\
\text{Q} \quad \text{aP} \\
\text{a} \quad \checkmark \\
\end{array}
\]

- \(\text{mal-ý ‘small’}\) has a suppletive comparative \(\text{men-š-í}\)
- the suppletive form is not blocked in the context of the negative prefix: \(\text{ne-}\)
men-š-í (neg-small-er).

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

\[
\text{(40)}
\]

\[
\begin{array}{c}
\text{NegP} \\
\text{NegP} \Rightarrow ne- \\
\text{Neg} \\
\text{FocP} \\
\text{Neg} \\
\text{CmprP} \Rightarrow -š- \\
\text{Foc} \\
\text{ClassP} \\
\text{Cmpr} \\
\text{σP} \Rightarrow men- \\
\text{Class} \\
\text{QP} \\
\text{Neg} \\
\text{QP} \\
\text{Q} \\
\text{aP}
\end{array}
\]

\[
\text{(41)}
\]

a. < /-š-/, [CmprP Cmpr ]>

b. <66 /men-/, [σP σ 65 ]>

c. <65 /mal-/, [NegP [QP [aP [ √ ]]]]>

▷ 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. \([\text{ne-dobř-}j]\text{-š-}\] = [\text{MORE [NOT-GOOD]}] i.e. ‘worse’
   b. \([\text{ne-[men-š-]}\] = [\text{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)
References


