1. SUPPLETION

(1) The replacement of a form which is missing from a grammatical paradigm by one derived from a different root. (OED)

(2) "... for the signs X and Y to be suppletive their semantic correlation should be maximally regular (i.e., grammatical = inflectional or derivational), while their formal (i.e. phonological) correlation is maximally irregular..." (Mel'čuk 1994, 358; Mel’čuk, 2006 #2772c, 406)

(3) a. row row-ed regular
b. throw threw irregular (ablaut)
c. go went suppletive

(4) a. good – better – best
b. être – suis be.inf – be.1sg (French)
c. biti – sam be.inf – be.1sg (Serbo-Croatian)
d. člověk - ljudi person – people (Russian)
e. er – liang two – two (+Cl) (Mandarin)

(5) "Owing to [the] quantitative character of regularity the words regular and non-regular will hereafter be understood as 'lying above/below some threshold of regularity' (set by the analyst)" (Mel’čuk, 1976 #3755c)

(6) go n/a "defective" (O.Ecut)
trend went ca. 15" C (OED)

(7) contrast suppletion via phonological erosion

Long form Short form (Clitic) ('be' Serbo-Croatian)
jesam jesmo sam smo
jesi jeste si ste
jest jesu je su

(8) Suppletion and phrasal blocking

gros plus gros 'big – more big’ (French)
bon meilleur *plus bon 'good – better'

Some issues:

(9) (im)possible words/rules: anything goes?
phrasal blocking: domain of competition

2. INTRODUCTION

(10) The Comparative-Superlative Generalization (CSG):

If the comparative degree of an adjective is suppletive, then the superlative is also suppletive. (cf. Ulan 1972, 144)

(11) The Comparative-Change-of-State Generalization (CCSG):

If the comparative degree of an adjective is suppletive, then the basic corresponding change-of-state verb (inchoative or causative) is also suppletive.

(12) CSG: bad – worse – worst *baddest
CCSG: bad – worse – worsen *to bad(den)

(13) CSG: bonus – melior – optimus Latin ‘good’
CCSG? (good – better – improve)

(14) A A A “regular” A,B,C = roots
A B B “suppletive”
A B C “doubly-suppletive”
A B A * unattested
A A C * unattested (for 10))

(15) General Proposal:

Nested Word-Structure: [ [ [ ADJ ] -CMPR ] -SPRL / V ]

Suppletion as Contextual Allomorphy: a → B / [ ___ CMPR ]

Pattern *A-B-A is unstatable. Any rule referring to the comparative also picks out the superlative, unless the superlative is bled by a more specific rule:

a → C / [ ___ CMPR ] SPRL ]

- CSG: Definitions and Qualifications;
  - Analysis;
  - Morphological Implications
- CCG: Analysis;
  - Semantic Implications
  - Explaining away apparent counter-examples
- Blocking and Related Issues
  - *ABA - extensions and (*)AAC
3. THE COMPARATIVE-SUPERLATIVE GENERALIZATION

(16) A-B-B see data in appendix, (cf. Ultan 1972, p.144)
Top of column for each language: regular CMPR/SPRL
(17) A-B-C few exx., prominently: Latin, Welsh 'good' (Cl. Greek?)
(18) *A-B-A but see doublets in Basque (good), Welsh (near)
in no case (0≤150) in ABA the only option, contrast ABB,ABC
(19) Majority of cases are root suppletion (bett-er)
word-suppletion (worse-est) is rare.
(20) Suppletive = different roots;
Irregular = same root + readjustment = morpholexical/minor phonological rules
(contrast: Natural Morphology, Wurzel 1985)
(21) Generalizations govern only suppletion (root selection):
Cl. Greek 'big' meg-as-al meizōn <meg-ión me-istos
Latin 'big' mag-n-us májor <mag-ios maximus
German 'high' hoh-hö-hör (am) hoch-sten
Russian 'high' vys-ok-ij vys-e
CMPR/SPRL built on root, not on positive adjective (little “a”)
(22) (Indo-European bias?) Appears to be real, not artefact of sample.
Appears to be about comparison, not suppletion.
(23) Relative Superlative: more X than all others
Absolute Superlative: very X
Italian: -issimo excluded
Russian: -či-ič

3.1 Nested Structure (I): against alternatives
(cf. Ultan 1972, Stateva 2002)
(c.f. Greenberg 1966, 40-1 markedness)
r3 α → C / [[ CMPR ] SUP ]
r2 α → B / [[ CMPR ] SUP ]
r1 α → A / <elsewhere>
Paninian / Elsewhere ensures rule ordering
(25) Possibilities: A – A – A r1 only
A = B – B r1, r2
A – B – C r1, r2, r3
* A – B – A unstable
(26) Additional assumptions: *r3r1 = *AAC (see §3.4 below)
*Duke of York (accidental homophony C=A)
(27) Distributed Morphology key features: realizational (vs. Lexicalism)
item-based (vs. Word-and-Paradigm)
Syntactic Representation [[ GOOD ] CMPR ] [[ GOOD ] (NOM) ]
(28) Vocabulary Insertion:

3.1 Nested Structure (I): against alternatives
(29) alternative approaches fail to exclude: *A-B-A
Comparative: [[ ADJ ]-er ] or [[ ADJ ] DEG:CMPR]
Superlative: [[ ADJ ]-est ] or [[ ADJ ] DEG:SUPR]
(30) a. GOOD → be(t)/- / -er Disjunctive Context
b. GOOD → be(t)/- / -DEG Shared Property: DEG
(31) Disjunction: Consider: GOOD be(t)/- / -er
GOOD good / elsewhere
Result: *good – better – goodness *A-B-A
(32) Shared property: DEG (cf. Peripherality Constraint, Carstains 1987)
Must allow: ABC bon-us mel-ior op-timus (*mel-issimus)
a. GOOD → mel-/ / -DEG:COMP !
b. GOOD → op-/ / -DEG:SUP
incorrectly allows *ABA (b rule only): bon-us – mel-ior – *bon-issimus
(33) cf. (some) Lexicalist Theories: *mel-ior [PRED: GOOD, DEG:COMP] (No word-internal structure)
(35) Vincent & Börjars 1996)
3.2 Nested Structure (II): confirming evidence

(34) Periphrasis: Modern Romance, Greek

\[
\text{Superlative} = \text{definite article} + \text{comparative} + \text{adjective}
\]

French: le + plus + beau

Estonian: superlative = all-gen + comparative köige parem

Arabic ‘elative’ morphology (comparative / superlative)

Tswana more ADJ, more-more ADJ (Ultan 1972, 140)

(35) Morphological Superlatives with transparent nested structure:

a. Slavic: -si naj-…-și

Latvian: -āk viš-…-āk

Hungarian: -bb lep-…-bb

Persian: -tar -tar-in

b. Gothic -iz-a

Latin -ior -ius

Sanskrit etc. -iṣ-yā -iṣ-ṭhas

Debrunner & Wackernagel (1930)

c. Proto-Indo-European *-jes/-jos

-SI -S-TOS (Seiler 1950, 6)

(36) What about when it’s not transparent?\( \text{CMPR} \rightarrow ^{\ast}\text{O}-/[\text{___ SUPER}]? \)

Cyclicity ensures that this will not bleed suppletion.

3.3 A different kind of poverty argument?

(37) The suppletive pattern is evident only by looking cross-linguistically. For individual languages, number of relevant items is too small to be significant

Q: why think there is a pattern to be explained by UG at all?

A: the pattern is robust cross-linguistically, and the patterns is historically stable, even though the actual morphology is not stable.

(38) Structure common, but degree morphology not cognate, see (35)

(39) Structure common, but roots not cognate

a. ‘small’

Latin: parv- -us min-or min-imus /min-

OCS: mal- -i min-již

Gothic: leit-il min-im-iza min-im-ists

Danish: lille (sg) mind-re mind-st

Angl-Saxon: lýt-el lēss-a lēss-t

b. innovation of new suppletive patterns: ‘old’

Gothic: alp-izs alp-iza (regular)

Ang-Sax: cold ild-ra ild-est (reg. umlaut)

O. lcc.: gamall ell-re ell-ztr (suppletive)

c. ‘good, bad’ (Slavic, cf. Me' Ekeu 1994, 394)

‘good’ ‘better/best’ ‘bad’ ‘worse/-st’

OCS: bláž- / dobr- louč- / zú- poušt-

Polish: dobr- lep- zl- gor-

Ukrainian: dobr- krašč- pohan- hir-

Serbian: dobr- bol- zl-/rdav- gor-

Russian: xoror- luč- plöx- xuž- <yud-

(40) Nesting structure (transparent or not) in languages with no genetic relation (Basque, Finnish, Hungarian, Georgian) but note: areal phenomenon.

(41) Doubtful that “comparative” (let alone SPRL) is universal (Stassen 1995)


Early suppletive in Greek, Sanskrit, Latin (Germanic?) formed from comparative with suffix that also creates ordinals sept-i-mus ‘seven-th’

(42) Tentative conclusion:

UG must require that if a language has a (relative) superlative, then it must be formed on the comparative.

More specifically: UG provides a restricted inventory of functional morphemes.

Something meaning “than anything else” -t is among these.

There is no morpheme meaning “est” (qualified below)

3.4 Markedness: ABC vs. *AAB

(43) If either the comparative or superlative degree of an adjective is built on a suppletive root, then both are (though need not be the same root!)

(44) Proposal: \( [[[\text{ADJ}] \text{CMPR}] \text{SUP}] \)

\[
\begin{align*}
\text{r} & \rightarrow \text{A} \rightarrow \text{B} / [[[\text{CMPR}] \text{SUP}] \\
\text{r} & \rightarrow \text{A} \rightarrow \text{B} / [[[\text{CMPR}] \text{SUP}] \\
\text{r} & \rightarrow \text{A} \rightarrow \text{B} / [[[\text{CMPR}] \text{SUP}] \\
\text{r} & \rightarrow \text{A} \rightarrow \text{B} / [[[\text{CMPR}] \text{SUP}] \\
\end{align*}
\]

(45) As it stands, a language could have r3,r1 \( \rightarrow \text{AAB} \) (untested)

(46) if \( \text{a} \rightarrow \text{X} / \text{F} \) context-sensitive rule

then: \( \text{a} \rightarrow \text{Y} / \text{context-free rule} \)

Acquisition of Allomorphy: (cf. Noyer 1998, Cabalbrese 2005)

Set of contexts for a is partitioned into a marked [F] and an unmarked subset (lack [F])
(7) Markedness as nesting:             Positive < Comparative < Superlative  
(Greenberg 1966, 40-1, Canger 1966, Uhl 1972)  
superlative is a special case of comparative, comparative is a special case of adjective  

(8)                           
| r3   | α → C / ___ CMPR, spl.       |
| r2   | α → B / ___ CMPR             |
| r1   | α → A /                     |

(9) Local conditioning + transitivity (cf. Allen 1979, 155 Adjacency Condition).  
Probably too strong elsewhere; discussion in Handout 2. 

Excluded:   α → X / ___ (…) FEAT

3.5 Additional generalizations

#1 CSG holds only of suppletion, not of irregulars (21)  

(50) Distributed Morphology (realizational, item-based; others…)

| Syntactic Representation | [ [ GOOD ] CMPR ] | [ [ BIG ] CMPR ] |

Phonological Rules

Phonological Rules

(51) Vocabulary Insertion:   [ GOOD ] /mel/ | ___ CMPR ]word  
                                [ GOOD ] /bon/ | ___ CMPR ]word <else>  

Readjustment Rules:   g → j / ___ i + lexical conditions

(52) Problematic for: Word and Paradigm; Anderson 1992, Stump 2001 (I think), Natural Morphology Wurzel 1985; also Paradigm Uniformity.

#2 (Root) suppletion only in morphological comparatives

(53) Root suppletion: change of root, plus (regular) affix:  

- change of root, plus (regular) affix:  
  better, mel-ior

Word suppletion: (synchronously) unsegmentable:  

- worse [for bad-er]

(54) There are no attested cases of root suppletion in periphrastic comparatives!

Morphological               Periphrastic
Wd-Sup:   bad worse bon meilleur   *bade-er                    * plus bon
Rt-Sup:   good better bon [jus] mel-ior  good * more but bon * plus mel

(55) Seems problematic for unification-based accounts of blocking, (see §6)

4. THE COMPARATIVE-CHANGE-OF-STATE GENERALIZATION

(56) The Comparative-Change-of-State Generalization:

If the comparative degree of an adjective is suppletive, then the basic corresponding
change-of-state verb (inchoative or causative) is also suppletive.

(57) bad – worse – worsen  *to bad (den)  A-B-B / *A-B-A

(58) No restriction in periphrastic constructions:

- become bad   become big
- become worse   become bigger

(59) Syntactically, become, make can embed either a comparative AP or a simple (positive) AP  
(regular vs. suppletive is irrelevant)

(60) CSG =   *[[ [ADJ ] BECOME ]_root (contra Dowty 1979)]

only  [[[ [ADJ ] –ER ] BECOME ]]  

- No language can have a simple (non-compound) verb meaning “become good”

Aside 1: Causative / Inchoative distinction not relevant

(61) Inchoative  = become A-er  
Causative  = make something A-er

(62) (Dowty 1979) Inchoative basic, causative:  

[CAUS [BECOME [ ADJ ]]]

- Anti-causative languages:  
  Inchoative derived from causative  
  V + SE

  - krep-k-ij  u-krep-it
  - u-krep-it ‘sja
  - Russian
  - strong-A-INF
  - CAUS-strong-INF
  - CAUS-strong-INF-SE
  - ‘strong’
  - ‘strengthen’ (trans)
  - ‘become strong(er)’

  V_s  = change of state

(63) Conclusion:  [[[ [ADJ ] –ER ] V_s ]]

Logic as above, alternatives do not exclude (largely) unattested ABA

(64) Morphologically transparent (%) in:  
  German, Dutch, (Late) Latin, Italian, Czech, Polish, Georgian

(65) German:  
  ver-[bess-er]-n ‘to improve’  < bess-er ‘better’  
  Suppletive
  ver-[läng-er]-n ‘to lengthen’  < läng-er ‘longer’  
  regular

(66) Others:  
  -ER  → [ ___ V ]

   (cf. 36)

Cyclic vocabulary insertion ensures (as in part 3) that (66) will not bleed root allomorphy. Comparative allomorph must be selected.
Aside 2: What about ABC and AAB?

- Unlike superlatives, verb-formation is only partially productive
  - big – bigger – Ø * to big(gen)  
  pace Simpkin’s embiggen
- Overlap in meaning is frequent
  - enlarge, increase, grow, … + periph: make, get, become big(gen)
- When verb is not the same as either positive or comparative, can’t rule out gaps (A-B-Ø) + overlap in meaning, therefore can’t tell if AAB/ABC exist.
  - Since ABC not at issue, also possible: 
    [ [ ADJ ] – ER, V₂ ]
    [ [ ADJ ] become more ]

Where more in become more is trigger for comparative allomorph

Today

1. Establish validity of generalization (apparent counter-exx.)
2. Suggest (co-opt) a plausible semantics

4.1 Semantics: From cooler to cool

(67) Received Wisdom in Semantics: Deadjectival verbs (English ambiguous):

(68) a. The soup cooled. cool₁:  [BECOME [cool]]
    cool₂:  [BECOME [ER, cool]] (Abusch 1986)

b. The soup has cooled, please warm it up.  cool
   The soup has cooled, but it’s still too hot to eat.  cooler, not cool

(69) a. Kim is lengthening the rope. ⇒ MAKE LONG-ER
   Kim has lengthened the rope.

b. Kim is straightening the rope. ≠ MAKE STRAIGHT
   Kim has straightened the rope.

(70) An alternative proposal: Hay, Kennedy & Levin 1999 (but see Kearns 2005)

-ER/43 (V) = increase

\[
\text{[ [ INCREASE (p) (x) (d) (e) ] ] = 1 \text{ if } p(x,SPO(e)) = \text{not } p(x,EPO(e))} \\
\text{INCREASE (p) (x) (d) is true of an event e just in case the individual x increases in}
\]
\[\text{p-ness (the gradable property denoted by the adjective) by degree d (the}
\]
\[\text{difference value), SPO} / \text{EPO} = \text{start/end point of event} \]

(71) No ambiguity.

Semantics of change-of-state is always comparative (INCREASE)

-ER/43 (V) = increase

\[
\text{[ [ INCREASE (p) (x) (d) (e) ] ] = 1 \text{ if } p(x,SPO(e)) = \text{not } p(x,EPO(e))} \\
\text{INCREASE (p) (x) (d) is true of an event e just in case the individual x increases in}
\]
\[\text{p-ness (the gradable property denoted by the adjective) by degree d (the}
\]
\[\text{difference value), SPO} / \text{EPO} = \text{start/end point of event} \]

(72) “increase” = become/make [ greater than ]

\[\text{[ [ ADJ ] - ER, V₂ ] } \]

(73) If semantics required [BECOME [ADJ ] ] (non-comparative), I’d be in trouble. HKL
have shown that apparent non-comparative readings can arise from a comparative semantics, via conversational implicature (boundedness). [On (69), see Handout 3]

(74) Falsifiability: a (true) counter-example would be: a gradable adjective, for which the corresponding derived verb was exclusively non-comparative: “become good"

4.1.1 Section appendix: An outline of what a semantics needs to do

(75) -ER, core meaning is “>”

\[\text{d > d} \]

Leo is taller than Harry

-ER (d,l)

TALL (d,l) standard = indiv

& d > d

Leo is taller than he was.

-ER (d,l, t)

TALL (d,l, t) standard = time

& d > d

(76) Comparison (a)voids “threshold” effect – positive = d is significant / sufficient

Leo is taller than Harry ≠ Leo is tall.

(77) -EST:

\[\text{… than every other x} \]

(78) -V₂ :

\[\text{… than at time t \ t immediately before e} \]

(79) + HKL: comparative semantics

+ sometimes masked by pragmatics

4.2 The generalization: empirical considerations

(80) Excluded: Other de-adjectival verbs (these do not involve - V₂ : no expectations.)

a. static:  Russian  bel- ‘white’;  bel-et ‘to whiten’
   also: ‘to gleam white’

b. attributional: English  belitie  ‘cause to appear small’
   Russian:  mal-yj ‘small’  menj-še ‘smaller
   ul-maj-it  ul-menj-še
   ‘to belittle’  ‘to shrink’

c. other  OE, Russ, Basque.  to good = ‘to fertilize with manure’ [1]
   Czech, Bulg.  <good = ‘to conciliate, make up’
   Russian:  xorol-ij ‘good’, xorol-et ‘become pretty’
   also:  denotial change of state verbs:  ‘to age’, ‘to length-en’ etc…
4.3 Some apparent counter-examples:

**English**

(81) “to badden” (Google)

Or is it, as we suspect, part of a new programme to badden up the image of the perennial good guy?

(82) "bad – badder – baddest (i.e., for ‘bad’ with meaning of ‘cool’).

And he’s bad, bad Leroy Brown

The baddest man in the whole damned town

Badder than a-old King Kong

And meaner than a junkyard dog. (J. Croce)

**Colloquial Russian:** (G. Corbett, A. Krasovitsky)

(83) “bad” plox-obj ‘worse’ xuđ-e (’xud-’) ‘to worsen’ u-xud-ś-at

(84) a. mme plox-o

me.DAT bad-ADV

‘I’m sick’ / ‘I don’t feel good.’

b. mme po-plox-e-ś-o

me.DAT PFX-bad-PAST-NEUT

‘I suddenly didn’t feel good.’

(85) inceptive po-

po-beža-t’ ‘to start to run’ < beža-t’ ‘run’

stative de-adjectival verbs: bele-t’ ‘to whiten, or to gleam white’

po- [BE] [ADJ] = “to start to be X” ≠ ‘to (make) / become X’

(86) Can aspectual / prefix choice considerations help with Serbo-Croatian?

**Hungarian** *(also Finnish monin-kertaistaa ‘multiply’)*

(87) ‘many’ sok – tő-bb – leg-tő-bb

V: ‘to multiply’ sokszorosít, sokasodik, (NB, also: szoroz)

(88) sok = adjective, noun, **numeral**

ót = 5 ótő-dik = 5th

sok = many soka-dik = ‘umpteenth’ sok-szorosít = ‘multiply’

(89) -as(-)odik -as =N Adj sok-as-odik

-asodik =Adj V

cf. good – better – best; but: good-ly – goodlier - goodliest

Still Outstanding:

(90) Old English: ‘to good’ (OED)

some uses denominal: ‘to enrich’, e.g., ‘to grant goods to’

cf. Dutch (and German), vergoden ‘pay back for s.th. in money or goods’

but there’s a residue of meanings that seem de-adjectival:

esp. 3e mawen muchel [burh] ham been i-goded, and i-wursed on oðer halve. (1225 Ancr. R. 428, given in OED)

(91) Old Church Slavonic (irregular? - no evidence); Polish / SC inchoatives…

(92) Ci. Greek.

5. INTERIM CONCLUSION

- Comparative Superlative Generalization:

  - Extremely Robust, but only significant cross-linguistically
  - Requires:

    - Nested Structure [[ADJ] –ER ] –EST ]

    - Suppletion as contextual (root) allomorphy

  - Implications:

    - Morphology: Realization + Item-based

    - Semantics: EST built on comparative (cf. Stateva)

- Comparative Change-of-State Generalization

  - Surprisingly Robust, though apparent exceptions

  - Requires:


    - Suppletion as contextual (root) allomorphy

  - Implications:

    - Morphology: Realization + Item-based

    - Semantics: Vx built on comparative (cf. HKL)

Still to come…

Blocking and related issues

*ABA elsewhere: Wiese’s results (German verb stem alternations)

(∗)AAC Possible nature of difference (I): nesting vs. flat

   incl. domains? – hint for return

   (II): allomorphy vs. readjustment
6. BLOCKING AND RELATED ISSUES

- No root allomorphy in periphrasis
- Poser blocking (word-phrase interaction); smarter vs. more intelligent
- Ordering and bracketing paradoxes: the diacritic nature of +M

6.1 The Synthetic Suppletive Generalization

(93) The Synthetic-Suppletive Generalization

Root suppletion never occurs in analytic comparatives/superlatives.

(94) root regular suppletive
      opaque transparent
      A       A-er  B
      A       more A  B-er
      B       B-er  more B

Suppletion does occur in languages where the regular comparative is analytic:

(95) gloss positive comparative English
      a. ‘small’ small small-er (transparent, root suppletion)
      b. ‘good’ good better (opaque, whole word suppletion)
      c. ‘bad’ bad worse

(96) gloss positive comparative French
      a. ‘small’ petit plus petit plus ‘more’
      b. ‘good’ bon meilleur / *plus bon (opaque)

(97) Account of *(96b): Locality Condition on Allomorphy (implicit in DM)
      \[ α \rightarrow β / [x \und{CMPR}] \]
      \[ X \equiv \text{“word”} (X^*) \]

(98) a. [\[x \und{CMPR} [\[x \und{Y}]] \]
      X may not condition Y
      b. [\[x \und{Y}]]
      X may condition Y

(99) Excludes, e.g., an allomorphy analysis of NPI: [x, INDEF] \iff any/ governed by Neg
      some / elsewhere

- How does meilleur ‘block’ plus bon *(96b)?

6.2 Poser Blocking


Blocking (intuition 1): A listed word blocks a productively formed word. (Aronoff 1976)

(100) a. curious – curiosity
      b. glorious - *gloriosity
      Why *-ity? “blocked” by listed form: ‘glory’
      c. prince – princess

(101) a. big – bigger
      b. bad – *badder \rightarrow worse
      “listed”
      a. [BIG, >]
      b. [BAD, >] \rightarrow worse

(102) a. grog – plus gros
      b. bon – *plus bon \rightarrow meilleur
      “listed” (Vincent & Börjars 1996, LFG)
      a. DegP
      b. DegP \rightarrow meilleur

Word-phrase interaction is not about listedness (Poser 1992):

(103) a. intelligent – more intelligent
      b. smart – *more smart \rightarrow smart-er

Two choices / “competitions”:

(104) phrase word
      regular listed
      SSG: Allomorphy \in Synthetic (Word)

(105) Phrase-word alternations: went vs. did go; played vs. did play etc.

Syntax (head movement)
Morphology: Morphological Merger (Marantz 1984, 1988)

(106) a. [\[x \und{CMPR} [\[x \und{ADJ}]]
      b. Merger: [\[x \und{B} [\[x \und{A}]] \rightarrow [x \und{B} [A]]
      Conditions: root + merger
      c. DegP
      DEG \rightarrow AP \rightarrow [x \und{ADJ}, DEG]

(107) Allomorphy: Blocking via elsewhere ordering:

a. X \rightarrow Y / Context
   Subcase (suppletion): listed blocks regular
   X \rightarrow Z / <elsewhere>

Suppletion
b. GOOD \(\rightarrow\) bett- / [ ___ CMPR]  
GOOD \(\rightarrow\) gud /  
<elsewhere>  
c. GOOD \(\rightarrow\) meill(-eur)- / [ ___ CMPR]  
(Affix –eur, or –ør)  
GOOD \(\rightarrow\) bon /  
<elsewhere>  
(cf. worse-ør)

(108) From (97), it follows that “listedness” competition will be a subset of merger contexts.

English: +Merger  
{SMART, TALL, GOOD, BAD, etc…}  
French: +Merger  
{GOOD, BAD;}

- It is (synchronically) an accident that the set of roots in French that are subject to allomorphy is the entire set \(n = 2\) of roots that are marked to undergo Merger. English shows this is not UG.
- Word-phrase alternations: Merger
- Regular vs. Listed alternations: Contextual Allomorphy

6.3 An Apparent Ordering Paradox

(109) a. Suppletion as Root Allomorphy: surface form of root is Post-Merger  
GOOD \(\rightarrow\) bett / [ ___ CMPR]  
must follow merger, to meet locality cond’n
b. Merger conditioned by root phonology?  
Adj\(^+\)er  
where Adj is “of the right phonological type”
monosyllables, di-syllables (especially in -øy), etc…
If Merger needs to see the phonological shape of the root, this must be known earlier, so vocabulary insertion (root) must precede Merger.

(110) Synchronically, (109b) is incorrect. Distribution is not strictly phonological.
Diachronic / inflection class (+Merger):  
Some degree of phonological redundancy in class membership \(\sigma \geq 3 \rightarrow \) [-Mg]
But also synchronic arbitrariness: *ill-er, *apt-er, etc.

(111) Frequency effects (Graziano-King 1999)  
% preferring suffixed form, relative judgment task (control for gradability)

<table>
<thead>
<tr>
<th></th>
<th>HF</th>
<th>LF</th>
<th>representative items</th>
</tr>
</thead>
<tbody>
<tr>
<td>monosyllabic</td>
<td>99.2</td>
<td>15.3</td>
<td>HF: old, long; LF: lax, gaunt</td>
</tr>
<tr>
<td>di-syllabic –le</td>
<td>84.7</td>
<td>16.9</td>
<td>HF: little, simple; LF: brittle, feeble</td>
</tr>
<tr>
<td>di-syllabic –y</td>
<td>96.0</td>
<td>73.4</td>
<td>HF: happy; LF: dainty</td>
</tr>
<tr>
<td>di-syllabic –some</td>
<td>21.0</td>
<td>3.2</td>
<td>HF: handsome; LF: tolerable</td>
</tr>
</tbody>
</table>

G-K concludes that comparatives are listed, but results from nonce word tests undermine that conclusion.

(112) Nonce-words (Graziano-King 1999; see also Dalalakis 1994)  
% preferring suffixed form, relative judgment task (control for gradability)

<table>
<thead>
<tr>
<th></th>
<th>test items</th>
</tr>
</thead>
<tbody>
<tr>
<td>monosyllabic</td>
<td>30.0</td>
</tr>
<tr>
<td>di-syllabic –le</td>
<td>46.7</td>
</tr>
<tr>
<td>di-syllabic –y</td>
<td>70.9</td>
</tr>
<tr>
<td>di-syllabic –some</td>
<td>35.5</td>
</tr>
</tbody>
</table>

(113) Monosyllables “exactly at chance” (p.66)
Significantly more likely to prefer –er form with novel adjective over –ør with low frequency real adjective.
If the comparative form were truly “listed”, novel forms should approach zero.
Behavour mimics diacritics / inflection classes (some phonological redundancy)
What has to be learned is the property of the root that it is or is not [+M]
Redundancy rules (understanding of distributional patterns in existing lexicon) bias likelihood for novel forms.
Phonology is (potentially) relevant in the formulation of these redundancy rules, but only indirectly affects affixation.
German: nouns in –er highly likely to be feminine
Russian: [-Fem], Cil \(\rightarrow\) indeclinable (e.g., family names, foreign names)

(114) If the diacritic is a part of the (abstract) ROOT, that information is present prior to vocabulary insertion: \(\wedge\)SMART[\(\wedge\)M]; \(\wedge\)GOOD[\(\wedge\)M] (contra Bohaljik 2000, though innocuous).
No paradox.
NB: Early insertion of root identifiers (but not root vocabulary items), contra Marantz 1994.

6.4 Bracketing Paradoxes: Unhappier, Unrulier

(115) The apparent paradox (Pesetsky 1985 etc….)

Semantics: \([\text{un } \wedge \text{ happy }] \wedge \text{ER}\)  
Phonology: \([\text{un} \wedge \text{happy } + \text{er}]\)

The key to the paradox is (as above) the assumption that the “phonological conditions” on –er attachment are just that, “phonological conditions on –er attachment”. But they aren’t. It’s a diacritic (see above).
A strikingly general property of Germanic morphology is that prefixes (as opposed to suffixes) are invisible for the percolation of idiosyncratic features (diacritics: grammatical gender, inflection class, etc), cf. Williams’s Right-Hand Head Rule.
7. ABLAUT: WIESE’S GENERALIZATION (AND ACCOUNT)

Wiese: Distribution of ablaut in German follows *ABA \rightarrow feature subset relations but unlike CCG, for ablaut, AAC is attested

7.1 *ABA: principle parts of the German verb (Wiese 2004, 2005)

(118)  

1SG PRES  PAST (3SG)  PARTICIPLE

a. ‘speak’ e-a-o  sprech-e  sprech-43  ge-sprech-en
b. ‘water’ ie-o-e  gieß-e  gieß-43  ge-gieß-en

c. ‘give’ e-a-e  geb-e  geb-43  ge-geb-en

d. unattested: present and past identical, participle distinct.

(119) approx. 40 distinct ablaut patterns, for stem vowel quality

(aditional changes umlaut, e/i, in 2,3 SG. PRES and past subjunctive < PAST)

a. Distinct for all three principal parts.
b. Past and past participle identical, present distinct.
c. Present and past participle identical, simple past distinct.
d. unattested: present and past identical, participle distinct.

(120) Same may hold for English: Curt Rice, Klaus Abels (p.c.)

a. 3 diff  sing  sang  sung
b. past = ppl  ride  rode  ridden (-n)
c. pres = ppl  come  came  come

missing: present and past identical, participle distinct (shear?)

(121) a. present < participle < past

(Wiese 2005, p.29)

b. i. [past] “present”
ii. [past, finite] “non-finite past = “participle”
iii. “finite past tense” (NB: not attested in all dialects)

(122) present  participle  past

contexts  examples

A  A  A  (i)  (weak verb)
A  B  C  (i, ii, iii)  (119a)
A  B  B  (i, ii)  (119b)
A  A  C  (i, iii)  (119c)
A  B  A  n/a  unattested

Conclusion I: It is correct to separate the account of *ABA from *AAC
(See also Caha 2006 on Czech Case inflection: nom < acc < instr)

Why the difference in *ABA vs. *AAC (CSG)?

7.2 AAC (Ablaut) vs. *AAC (CSG)

(123) Markedness as nesting: Positive < Comparative < Superlative

[ | [ ADJ ] CMPR ] SUP ]

(124) r3  a \rightarrow C / __ CMPR / SEMPL
r2  a \rightarrow B / __ CMPR
r1  a \rightarrow A / __


Excluded:  a \rightarrow X / __  (...)  FEAT

(126) if  a \rightarrow X / [F]  context-sensitive rule
then:  a \rightarrow Y /  context-free rule (cf. Noyer 1998, Calabrese 2005)

(127) Acquisition of paradigmatic contrasts: (cf. Pinker 1984)

Adj \rightarrow Adj  

Adj  

Suppletion

Adj  

Adj  

Adj  

Sempl

Cmpr
Two options:

Option 1: Feature Sets versus Nesting:

Feature logic requires only: \[ A \in B \in C \]
\[ \text{ADJ} \in [\text{ADJ CMPR}] \in [\text{ADJ CMPR SPRL}] \]

Nested structure invoked additional evidence: Handout 1 §2.2

(128) a. Superlatives       c. Simple Past

\[ \text{ADJ} \quad \text{CMPR} \quad \text{SPRL} \quad V \quad [\text{PST, FIN}] \]

(129) b. Comparatives       d. Participle

\[ \text{ADJ} \quad \text{CMPR} \quad V \quad [\text{PST}] \]

Subset-Superset relations parallel, but no evidence [?] for nesting in verbs.

- Think cycle (phase?): CMPR, SPRL on different cycles, PST, FIN on same cycle.

Could (126) be modified to allow the absence of internal structure at T to permit [r3] without [r2]?

Alternatively, (126) as stated, but some feature-gerrymandering (independent motivation??):

(130) \[
\begin{align*}
\text{r3} & \quad a \rightarrow C / \{ \text{F1}_1 \} \quad \text{simple past} = [\text{PAST, F1}] \\
\text{r2} & \quad a \rightarrow B / \{ \text{PAST} \} \quad \text{participle} = [\text{PAST}] \\
\text{r1} & \quad a \rightarrow A / \langle \text{elsewhere} \rangle \quad \text{present} = [\_]
\end{align*}
\]

Option 2: Allomorphy versus Readjustment

Handout 1, (12) and §2.5: Suppletion (allomorphy) – CSG holds
Irregulars (readjustment) – CSG does not hold

(131) positive comparative superlative
Cl. Greek ‘big’ meg-as/-al- meizón meg-ístos
Latin ‘big’ mag-n-us màjor maximus
German ‘high’ hoch höh-er (am) höch-sten
\[
\begin{align*}
\text{[hox]} & \quad \text{[hu.ér]} & \quad \text{[haç-sten]}
\end{align*}
\]

(132) Logic of (126) governs acquisition of vocabulary items: allomorphy (always a default).

\[
\begin{align*}
\text{GOOD} \otimes /gʊd/ & \quad \text{good, good-er, good-est, BIG} \otimes /bɪg/ \quad \text{etc.} \\
\text{GOOD} \otimes /gʊd/ & \quad \text{GOOD} \otimes /bɪt/ / \{ \_ \} \text{CMP} \\
\text{GOOD} \otimes /gʊd/ & \quad \text{GOOD} \otimes /gʊd/
\end{align*}
\]

Is there any reason to think this logic applies to (readjustment, cf. phonological) rules?