

Jonathan David Bobaljik, *Universals in comparative morphology: Suppletion, superlatives and the structure of words* (Current Studies in Linguistics 50). Cambridge, MA: MIT Press, 2012. xiii + 313 pages; hardcover ISBN 978-0-262-01759-6, USD 42; eBook ISBN 978-0-262-30643-0, USD 30.

Reviewed by **Frans Plank**, Somerville College, University of Oxford, Oxford OX2 6HD, England; E-mail: frans.plank@ling-phil.ox.ac.uk

1 Introduction

The book under review won its author the Leonard Bloomfield Award of the Linguistic Society of America for 2014. Come to think of it, although the LSA's citation doesn't directly praise it as exemplary typology (it does mention impressive sampling),¹ would *Universals in comparative morphology: Suppletion, superlatives, and the structure of words* also be in contention if the Association for Linguistic Typology had a book award to confer?² My conjecture is it would deservedly have its supporters, at least among those ALT jurors who are not conscientious universals-deniers. The odds would certainly be far shorter on Bobaljik's book (henceforth UCM) than on other titles in the same series ringing with alliteration, such as *Principles and parameters in comparative grammar* or *The boundaries of Babel: The brain and the enigma of impossible languages*. A lifelong advocate of universals myself, I still have reservations, though; perhaps ironically, my verdict on UCM is: fine typology, but theorywise dubious.

UCM is about adjectives, and also adverbs and quantifiers, in constructions for comparison, with other comparison (nominal, verbal) largely neglected; and its focus is on morphology, with the syntax of comparison as such largely neglected. UCM tells two stories about its topic, one about patterns of suppletion of adjectives, adverbs, and quantifiers in expressing comparative contrasts, the other about the morphological constituency of these

¹ <http://www.linguisticsociety.org/news/2013/12/03/2014-bloomfield-book-award-announced>

² Actually, ALT has its Joseph Greenberg Award, although the understanding continually appears to be that the Greenberg is meant as recognition and encouragement for junior academics.

words implicated in comparison. And UCM suggests the two stories (more intricately intertwined in UCM’s telling than it will come across in my critical narrative) are interconnected, with the second explaining the first. The first story is a gem, but I prefer to reserve judgement on the second and I have doubts about the wisdom of their coupling, preferring a rather different explanatory angle. I am going to such lengths in my review, because I think there is a general lesson here about the relationship between typology and diachrony (and “theory”).

2 Patterns of suppletion: *AAB, *ABA

If a particular language uses marking, bound or periphrastic, on adjectives, adverbs, or quantifiers to express paradigmatic contrasts in comparative constructions such as that between a basic form (often called, not very felicitously, POSITIVE), a COMPARATIVE, and a SUPERLATIVE, most adjectives, adverbs, and quantifiers will follow general marking patterns, but some of them, typically from among the most commonly used ones, may be maximally irregular and show suppletion. Given a three-way contrast – and for present purposes neglecting smaller or larger systems, e.g., ones with no morphological distinction between COMPARATIVE and SUPERLATIVE, or ones with an additional EQUATIVE in comparisons of equality (‘Father is as old as Mother’), or with an ELATIVE or EXCESSIVE (‘Father is super-old/an oldster’) as genuinely part of the same morphological system – suppletive stems can be paradigmatically distributed as follows:³

POS	A	A	A	A	A
CMPR	A	A	B	B	B
SPRL	A	B	B	A	C

Three of the logically possible patterns are found attested: AAA (i.e., no suppletion: English *hard*, *hard-er*, *hard-est* – which is the rule everywhere, sometimes without exception); ABB (e.g., English *bad*, *worse*, *wor-st*; English quantifier *many/much*, *mo-re*, *mo-st*; German adverb *gern*, *lieb-er*, *lieb-st* ‘willingly’, with the same CMPR and SPRL suffixes as on

³ Or roots, or words – whatever the basic units are in the language concerned. For UCM it is “roots” throughout, a term dictated by the framework, Distributed Morphology.

adjectives); ABC (e.g., Latin *bon-us*, *mel-ior*, *opt-imus* ‘good, better, best NOM.SG.MASC’);⁴ but the remaining two are not: *AAB, *ABA. These two universal implications are proposed to account for the two gaps (a single two-way implication would have done, too):

- (U1) If the comparative degree of an adjective/adverb/quantifier is suppletive, then the superlative is also suppletive. (Which outlaws *ABA.)
- (U2) If the superlative degree of an adjective/adverb/quantifier is suppletive, then the comparative is also suppletive. (Which outlaws *AAB.)

A few subsidiary, but intensely discussed universals are taking care of asymmetries between morphological and periphrastic marking in this mode of expressing comparison:⁵

- (U3) No language has morphological superlatives, but only periphrastic comparatives.
- (U4) Root suppletion is limited to morphological comparatives.
- (U5) No language has a morphological comparative of inferiority.
(Compare: *Mother is young-er than Father* – *Mother is less old than Father*;
the observation is credited to Cuzzolin & Lehmann 2004, and it is confirmed by UCM
on a much wider empirical basis.)

⁴ UCM tends to give examples in conventional orthography and as citation forms with only partial morphological analysis: both decisions can be problematic. For example, there is no regular suffixation for SPRL in *worst* (**/wɔːsɪst/*, like *hoars-est*), and one wonders whether it can be taken for granted that */wɔːs/* and */wɔː/* are morphologically “the same”. (On p106 UCM segments *wors-t*, implausibly shifting the irregularity onto the suffix.) Minimally, there would seem to be a special SPRL stem allomorph */wɔː/*, or even a separate SPRL stem (admittedly far more similar to the CMPR stem */wɔːs/*, itself unsuffixed by */ər/*, than the POS stem */ɡʊd/*, but not derivable from it by any general rule of English), making this an instance of ABC. Whatever the analysis, there is an AAB pattern here insofar as POS and CMPR stems lack morphological marking, while SPRL receives the regular suffix. When you run through the examples on pp106–107 of UCM, this in fact emerges as a generalisation: Regular morphological marking on a suppletive stem for CMPR implies regular morphological marking also on the suppletive stem for SPRL, but not vice versa.

⁵ Relegated to a footnote (p68), a further universal, earlier proposed by Bhatt & Takahashi (2011), is confirmed, namely that no language uses distinct degree markers on adjectives (such as English *-er*, *more*, suppletion) for phrasal and clausal comparatives (*Father is old-er than [Mother]*, *Father is old-er than [Mother is old]*).

The dividing line may sometimes be hard to discern, especially from the bird's eye view of the typological surveyor, but UCM leaves little doubt that bound morphology does differ from periphrasis rather significantly. There is no way you will find a comparative like *more bett* to a basic adjective *good* (U4), for example.

This was, in a nutshell, the first story in UCM: it is well told, and I am convinced it will stand and (U1)–(U5) can safely be entered in the UNIVERSALS ARCHIVE (<http://typo.uni-konstanz.de/archive/intro/>).⁶ It is quite original, too: surprisingly, only Ultan (1972) seems to be on record with the same basic observation about the comparative-superlative partnership in suppletion, and on much thinner ground, only examining some twenty languages.

It is of course not quite as simple as that.

To get started, one should be able to reliably identify the crucial morphological forms of adjectives, adverbs, quantifiers, namely POSITIVE, COMPARATIVE, SUPERLATIVE, or also a nondistinct COMPARATIVE-SUPERLATIVE, with such categorisations corresponding across languages. Further categories related to comparison, such as EQUATIVE, ELATIVE or EXCESSIVE (sometimes also referred to as “absolute” SUPERLATIVE), or SUPERLATIVE-of-inferiority, also want to be reliably and comparably identified, even when they eventually turn out, like ELATIVES/EXCESSIVES/absolute SUPERLATIVES do according to UCM, not to be implicated in crosslinguistic generalisations. Whoever is following debates about “descriptive categories” vs. “comparative concepts” (as in the last issue of this journal) will nowadays embark on any typological project with the greatest trepidation; Bobaljik, however, appears not to have encountered serious obstacles finding what he wanted to compare in the languages where he was looking. Questions do crop up every now and then in UCM whether something is a “true” comparative structure when it does not include marking of the adjective or when it includes adjectival marking that also has (or had) other functions, or whether some construction is “grammatically” or only “functionally” a superlative (*John is taller than everyone else*, “grammatically” a comparative); but an in-depth clarifying discussion of *tertia comparationis* was not felt to be imperative.

Comparability would seem to require that the morphological categories concerned come from the same compartment of morphology. This could be a problem for the domain of

⁶ For what it is worth, the UNIVERSALS ARCHIVE is actually brimming with universals about morphology (with admittedly only some ten about suppletion, but the Archive hasn't been updated for quite some time), so don't be misled by the rhetorical hyperbole of UCM's very first sentence, “Morphology is sometimes characterized as the domain of the lawless”.

comparison, which has sometimes been argued to be language-particularly either inflection or derivation or something in between. This issue is not highlighted in UCM, which on my reading proceeds as if at least POSITIVE, COMPARATIVE, SUPERLATIVE form everywhere (in the relevant languages) an inflectional paradigm. The consistent lack of overt marking of the so-called POSITIVE is not perceived as an irritation. Such systematically zero-marked categories (SG for number, NOM or ABSOLUTE for case, 3rd for person, PRESENT for tense, etc.) are not so common in flexive-style inflection, but they are one of the hallmarks of agglutinative-style inflection, where they have been argued strictly speaking not to be members of the respective inflectional paradigms. There is, thus, a close resemblance to derivational morphology, where bases are there for something to be done with them, with derivatives being created from them through some formal operation, rather than themselves receiving marking as bases. Whether or not the ever-unmarked POSITIVE is to be included in a paradigm, it stands firmly apart from any other categories involved in morphological (or also periphrastic) systems of comparison. In UCM's framework this is in a way recognised insofar as there is no morpheme POS (with zero realisation); but it is seen as part of a paradigmatic system on a par with CMPR and SPRL when the suppletion patterns are set out (AAA, ABB, etc.). Also, in Chapter 7 (on which see below), deadjectival inchoative and causative verbs, clear cases of derivation, are treated on a par with comparative and superlative formation.

And, crucially, you do not want to make mistakes about suppletion. Clearly, English *hard*, *hard-er*, *hard-est* is not suppletive, because the stem is phonologically always exactly the same, /hɑ:d/. Clearly, *good* (or adverb *well*), *bett-er*, *be-st* is suppletive, because /ɡʊd/ or /wɛl/ and /bet/ are quite different phonologically and no plausible rules of English phonology, however morpheme-specific, can relate the two, despite their shared CVC structure. But are *good/well* only two-way suppletive? Does *best* contain the same stem as *better*, /bet/? Is *best*, morphologically, /bet/-/ɪst/? (It was, historically.) But then it should come out like *hottest* with the suffix vowel undeleted. Or does /bet/ have an allomorph /be/, with the coda consonant deleted just in the superlative? Whatever the considerable similarity between /bet/ and /be/, there is no general rule accounting for it (well, there is *last*, alongside *latest*, for basic *late*) and the pair CMPR /bet/ and SPRL /be/ has to be learned by a speaker of English just like a fictitious wholly distinct pair CMPR *bett-er*, SPRL *topp-est* would have to be memorised individually. Same for *bad*, *worse*, *wor-st* in my Footnote 2, and so many others. UCM would prefer to forestall any such problems by conceiving of suppletion as categorical rather than as a “cline of irregularity”, with morpheme-specific readjustment rules taking care of

“weak” suppletion and rules of exponence for “strong”, real suppletion. I continue to fail to see (how language acquirers are supposed to see) where to draw the line. By measuring phonological difference? By enquiring about the history of suspected cases of suppletion? The trouble is you get strong(-ish) suppletion where stems that are linked in one paradigm were historically distinct (e.g., French *all-*, *v-*, *i-* ‘go’; English *Liverpool*, *Scous-er* ‘someone from Liverpool [eating *Labskaus*]’), but also where single stems were phonologically increasingly differentiated, regularly or analogically (e.g., Greek *énas*, *éna*, *mía* ‘one MASC, NEUT, FEM’, from original single stem **sem-*; Latin (*fer-*,) *tul-*, *lat-* ‘carry PRES, PERF, SUPINE’, with the latter from *tu-lá:t-*; English *Shrewsbury*, *Salop-ian* ‘someone from Shrewsbury or Shropshire as a whole’, from earlier stem *Scirop-*); and you get weak(-ish) suppletion where stem differentiation is due to phonology (e.g., English *say* /seɪ/ vs. *say-s*, *sai-d* /sɛ/ before consonantal inflectional suffixes, a highest-frequency verb), but also when distinct stems were combined in a paradigm (e.g., German *geh-*, *gVng-* ‘go PRES, PRET/PARTICIPLE’). Unless an arbitrarily restrictive angle is taken, as in UCM, this is quicksand for a sampling typologist, because in-depth (morpho-)phonological expertise for particular languages and their history is required to appreciate the nature of overt alternations of stem shapes in morphological environments.

Still, my impression is that Bobaljik has not gone detrimentally astray in netting his catch of what he considers “real” suppletions. The reason is that on the evidence, taken at face value, in UCM and of other sources such as Osthoff (1899/1900), Wurzel (1987), or the Surrey Suppletion Database (Brown et al. 2003), it seems that adjective, adverb, and quantifier comparison is a domain where suppletion is peculiarly homogeneous in comparison with my random sample of inflectional and derivational examples above, insofar as origins are overwhelmingly combinatory rather than phonologically-differentiating. Next to singulars and “plurals” of personal pronouns, it seems that comparison of adjectives, adverbs, and quantifiers in the relevant languages, invariably converging on the same smallish group of common lexemes, is a principal hub for distinct lexemes joining forces. And the way they cooperate, as UCM establishes beyond doubt, is very systematic, with one partner as the principal (basic form, “POSITIVE”) and the other or others taking care of comparison of inequality (COMPARATIVE, SUPERLATIVE).

For typologists, with the preliminaries out of the way and their up-to-date analytic toolkit at the ready, sampling is the next challenge. Actually, the problem for UCM was sort of inverse. Previous typological research has established that marking on adjectives, adverbs,

and quantifiers (and, although apparently not in many languages, also nouns, as schematically in ‘Edward was king-SPRL, = more of a king, than Richard’), morphologically bound or periphrastic, is rather rare when languages express comparisons of inequality. Other strategies getting across the same message differently are far more frequent and genealogically and areally far more widespread, such as, to again illustrate schematically, ‘Father is old, (but) Mother is young’, ‘Father is old, (but) mother is not old’, ‘Mother is old, but Father is very/rather old’, ‘of Father and Mother, Father is old’, ‘from/next to Mother, Father is old’, ‘Father trumps mother in age’ – all translation-equivalents of English *Father is old-er than Mother*, with several semantic and formal variations of marking the standard of comparison elsewhere where this minority strategy is in use.⁷ The generalisations in UCM are based on a “broad sample” of 148 languages, of which more than half have STANDARD comparison, as opposed to CONJOINED comparison and EXCEED comparison, as their only or one of their grammaticalised strategies. To get into UCM’s STANDARD group, it was sufficient that a language – presupposing it has a distinct word class of adjectives – marks the standard of comparison in one way or another, regardless of whether or not adjectives or other lexemes themselves, designating the parameter of comparison, are also marked for this particular purpose. Now, such adjective-marking, and in particular morphologically bound rather than periphrastic adjective-marking (‘Father is more decrepit than Mother’) and SUPERLATIVE plus COMPARATIVE marking, is found to be very rare by UCM, as in all other surveys – a peculiarity in fact of what is here called “a Greater European Sprachbund”. But how can you hope to seriously do typology on such a basis? Well, Bobaljik assembled a different, “focused sample” of 174 languages (with only an overlap of 20 languages with the broad sample, and over 300 languages overall) where the phenomena of interest were more frequent: about two-thirds here had morphological comparatives (of superlatives there were fewer), and of these over half (some 70) had adjectives, adverbs, and quantifiers with

⁷ In UCM, Section 1.4 and the Appendices survey the overall typological landscape, informed by Ultan (1972), Andersen (1983), Stassen (1985, 2013), Dixon (2008) and adding a few elaborations. There are more such surveys that could have been consulted, such as Ziemer (1884), Jensen (1934), and Herbermann/Xerberman (1998, 1999), which are partly at odds with the others, though all are agreed in recognising ‘Father is old-er than/from/next-to Mother’ as the clear minority option.

comparative and possibly superlative suppletion in their repertoires for expressing comparison.⁸

These suppletive adjectives and their like (with adverbs and quantifiers not dramatically different in word class in the languages concerned) are not really plentiful, either, and they tend to be the same across languages of the same families, with ‘good’ and ‘bad’ contributing the lion’s share. Having all Germanic languages in your focused sample (UCM has 15, for English and Icelandic including both Old and Modern stages⁹), because they are adjective-marking and reliably known not to be without (strong(-ish)) suppletion, you will find that all of them show the same pattern as English as far as one of the rare suppletive adjectives/adverbs goes, *good/well, bett-er, be(t)-st*, providing massive support for ABB (and thereby against AAB and ABA). In sampling typology, you want your datapoints to be more independent than that! This is an objection UCM can counter: what is counted are not individual lexemes and individual languages, but TRIPLES (or pairs) OF COGNATES. Thus, the 15 Germanic *good/better/best*’s only count once (actually, while staying within the pattern, some Germanic languages replace one or the other stem of the triple, thereby adding to the count; cf. Swedish and Norwegian POS *bra* alongside *god*), and so on for all suppletive adjectives, adverbs, quantifiers in the focused sample, yielding a total of a little over a hundred distinct cognate triples from which suppletion patterns are gleaned.

Sampling purists may wince, and even libertines may think twice before buying universals of Language inferred from the morphology of two handfuls of words in as few as nine families plus one isolate (Basque, missing from Appendix B.1) of Eurasia, ignoring the matter of comparable time-depths. However, I do not see the force of any such methodological objections. Sample as you like and you will get the same result: suppletion in adjectival/adverbial/quantificational comparison patterns as UCM says it does, with the asterisks somewhat downtoned – AAA, ABB, ABC, *AAB, *ABA. It is not UCM’s fault that not more languages have the ingredients to form any such patterns. One might suspect that history – common origin and continuity and/or diffusion – had a hand in it if something is genealogically and areally so narrowly circumscribed; but diachrony as such is not a priority for UCM.

⁸ I would have expected the focused sample to include ONLY languages with the requisite properties. For really general generalisations there was the broad sample, anyhow.

⁹ Low German is missing, despite an excellent source: Beckmann (2002). And there would have been a rare thematic family survey to consult: Koneckaja (1973).

The poverty of relevant data, positive or negative, rather occasions an intriguing thought in UCM: this is a poverty-of-the-stimulus situation. It is really only the typologist who is able to recognise that *AAB and *ABA are impermissible, when searching relevant languages and not finding these patterns in any. Acquirers of particular languages can count themselves lucky if they ever face a handful of lexemes that supplete in comparison, requiring full memorisation; they won't come in an *AAB or *ABA pattern – but this patchy evidence is too insubstantial to suggest to them that these patterns are in fact prohibited. Not learnable from individual experience, and not derivable from general cognitive principles either (in Bobaljik's opinion), the constraint(s) against *AAB and *ABA must therefore come with UG. This is why UCM has a second story to tell, to which I will turn presently.

Apparently UG's constraints have got to be categorical rather than (dis-)preferential; hence even a single counterexample would be fatal. UCM conscientiously deals with any suspects encountered, which are not many.

Among adjectives, only one serious problem case is recognised (Section 4.1.2): Basque POS *on*, CMPR *hobe(-ago)*, SPRL *hobe-(r)en/on-en* 'good', with the triple containing *on-en* (with *-en* the regular SPRL suffix) preferred in Southern varieties of Basque, representing an ABA pattern. UCM points to the Baskological literature where an affinity between SPRL *-(r)en* and the genitive or attributive suffix *-(r)en* has been noted, and plays around with syntactic constructions containing genitives that are translation-equivalent to constructions with superlative adjectives in languages like English, such as 'the good of the good', translating as 'the best'. It is speculated that "a genitive- or possessive-marked adjective [has] become conventionalized as a superlative" in Basque, without containing a comparative which would be required (by UCM theory) to condition suppletion (p114). To my mind this does not alter the fact that the pattern is ABA – unless UCM's claim is that Basque does not have a genuine superlative at all. Since morphological forms in general typically have been something else before they were reanalysed as what they currently are, this after all does raise the question of category identifications and their comparability across languages: Is a genitive-derived SUPERLATIVE in one language the same as, say, an intensifier-derived SUPERLATIVE in another? At what point does it become a SUPERLATIVE to begin with, from having been something else with conventionalised superlative force?

On the face of it the quantifier 'many, more, most' misbehaves more frequently: e.g., Karelian POS *äijä*, CMPR *enä-mpi*, SPRL *äij-in*; Armenian POS *šat*, CMPR *aveli*, SPRL *amena-šat*; Bulgarian POS *mnogo*, CMPR *po-veče*, SPRL *naj-mnogo* – all ABA (Section 4.3.1).

UCM's line of attack here (successful, I think) is to argue that, hidden by conventional orthography, the apparent offences are caused by periphrastic clitic rather than bound affixal marking, and this is not what universals (U1) and (U2) legislate against.

All I can contribute in addition are cases like *nah*, *näh-er*, *näch-st* 'near' in (New High) German: weak suppletion and almost seeming regular, and diachronically clearly due to phonological differentiation rather than lexeme-combining; UCM would deny suppletionhood and invoke readjustment (p143, only mentioning *hoch/hoh*, though, which is indisputably AAA). What is really regular are adjectives like *roh*, *roh-er*, *roh-(e)st* 'raw, rough' and *flach*, *flach-er*, *flach-(*)st* 'flat', with only one stem allomorph each, /ro:/ and /flax/. Slightly more complex is *hoch/hoh*, *höh-er*, *höch-(*)st* 'high': there are two allomorphs, /ho:x/ and /ho:/ (plus Umlaut for each); they are in phonological distribution (/ho:/ before vowel, /ho:x/ elsewhere) and this distribution is the same in POS, CMPR, SPRL. Yet more complex, there are also two allomorphs (or two stems?) /nɛ:ç/ and /na:/ (the latter also umlautable); but crucially, /nɛ:ç/ is limited to SPRL and /na:/ to POS and CMPR – forming an AAB pattern. Equally AAB is the English counterpart *nigh* (as in *The end is nigh*), *nigh-er* (*The end is nigher than you think*, but who would really inflect *nigh*?), *next* /nek/-/st/; more natural, but with the basic stem altered even more conspicuously, is *near*, *near-er*, *next*;¹⁰ in both cases there are also regular SPRL's, *nigh-est* and *near-est*. And also with SPRL doublets, *late*, *lat-er/latt-er*, *la-st*, alongside *lat-est*, is AAB, too. So, again from German, but with synchronic paradigmatic unity more dubious, is *eh(e)* /e:ə/ 'before' (only used as a subordinating conjunction), *eh-er* /e:ɐ/ 'sooner, rather' (an adverb), *er-st* /e:ɐst/ 'at first; only' (an adverb and a modal particle), but also used as the ordinal numeral 'first' corresponding to cardinal *ein(s)* (with the /ɐ/ a reflex of a following rhotic, *eh-er-st* ADJ-CMPR-SPRL), alongside a phonologically and semantically regular SPRL *eh-est* /e:əst/ (with plain schwa in the suffix).¹¹ Some of the examples in UCM itself where readjustment phonology is blamed are ABA: Ancient Greek *meg-as*, *meiz-ōn*, *meg-ist-os* 'big'; *tach-us*, *thass-ōn*, *tach-ist-os* 'swift' (p141); so, anything goes here. But all of this is (or would be) dismissed, because "in theory, there is a sharp division of labor between rules of exponence and readjustment rules" (p140). Except "of course, there is a difficult grey area for the analyst in establishing just where the boundary lies" (p140) – not to forget the language learner.

¹⁰ Historically, *near* is itself the CMPR of *nigh*.

¹¹ Analogously, English ordinal *first* is the SPRL of *fore*, 'foremost' (cf. German *Fürst* 'prince'), supplanting an earlier SPRL *forma*; but this is ancient history.

Still, all things considered, if (U1) and (U2) were role models, universals would not be an endangered species. But, considering all things, they will have to be admitted to be non-categorical – unless a way were found to after all filter out instances like these AAB’s and ABA’s. I see no way of doing this synchronically, in terms of exponence vs. readjustment; it can only be done in terms of the history of suppletions. A diachronic scenario for relativising suppletion universals through reading them diachronically will be outlined below.

3 Superlative must contain comparative: *[[ADJ] SPRL]

When comparative and superlative are marked on adjectives, adverbs, or quantifiers through regular morphology, there would seem to be two options for the superlative: the SPRL marker is added to a form already marked for CMPR, and never closer to the stem than that CMPR, or the SPRL marker is added directly to the simple stem, with the CMPR marker only present for the comparative itself. Even closely related languages can differ on this parameter; thus, compare Standard German with Cimbrio, an endangered variety of Upper High German spoken in the mountains of Northern Italy and having for some 800 years developed largely independently from German as spoken in Germany, Switzerland, and Austria, and strongly influenced by regional Italian:

Cimbrio *alt*, *ält-ar*, *ält-ar-st*

German *alt*, *ält-er*, *ält-est* (like English *old*, *old-er*, *old-est*)

The point of the second story in UCM is that this difference is only apparent and that all relevant languages are like Cimbrio, with CMPR obligatorily contained within SPRL:

[[[ADJ] CMPR] SPRL], *[[ADJ] SPRL]

The only difference accordingly is that languages like German and English have no overt realisation of CMPR when contained within SPRL, with zero as an allomorph of the non-zero exponent of CMPR when on its own.

In addition to the suppletion universals above, UCM thus posits a further universal, the “Containment Hypothesis”:

- (U6) The representation of the superlative properly contains that of the comparative.
 No language has a true superlative morpheme that attaches to adjectival roots directly.

Naturally, this universal is rather more difficult to appraise than the suppletive ones. Even the most comprehensive in-depth descriptive grammars of well-described critical languages such as English and German probably will not segment and gloss *oldest* and *ältest* as *old-Ø-est*, *ält-Ø-est* old-CMPR-SPRL for you. Even if, in the case of German, they alerted you to a subtle difference of the SPRL suffix from an otherwise homophonous verbal suffix *-st* for 2SG.PRES.IND, insofar as the former is adding a schwa in some phonological environments where its homophone remains non-syllabic (compare /flaxst/ *flach-st* ‘flattest’, /laxst/ *lach-st* ‘(thou) laughest’, but /‘eltəst/ *ält-est* ‘oldest’, /heltst/ *hält-st* ‘(thou) holdest’), you would have to capitalise on your historical expertise rather boldly to interpret this occasional schwa as a faint trace of an erstwhile CMPR *-er* (and go wrong as far as earliest Old High German goes, where CMPR and SPRL are not in fact neatly segmentable). And perhaps wisely, no crosslinguistic empirical effort is made in UCM to infer or verify (U6). No systematic information is even provided for the languages in the two samples as to whether they are like Cimbri or like German, for the benefit of anybody keen on searching for evidence for zeros in the latter group. What is shown and copiously illustrated (Chapter 3), and what has often been said before (including in the typological survey of Ultan (1972)) is that superlative constructions are frequently derived from, or rather built on, comparative constructions, often adding definiteness markers, universal quantifiers, or intensifiers, but never the other way round. But in and of itself this is no argument for zero CMPR allomorphs when regular bound morphology for CMPR and SPRL are mutually exclusive, as in German and English.¹² What arguments there are for silent CMPR’s contained inside SPRL’s, they do not rest on evidence, but appeal to plausibility. And to “theory”.

How does the Containment Hypothesis fare vis-à-vis semantics? Morphological zeroes after all had better be meaningful. So, what do CMPR, SPRL, and CMPR-SPRL mean?

¹² Especially when superlatives not built on overt comparatives add things that are rather foreign to comparatives. For example, in predicative position, superlatives in German add either the definite article (fine, this is what is done often elsewhere, too) or *am*, a dative-governing local preposition ‘at’ insolubly fused with the definite article: *Opa ist der ält-est-e* ‘Grandad is the old-est’, *Opa ist am ält-est-en* ‘Grandad is at the old-est’ (**an dem*). I am not aware of a plausible account of this second construction, but interpolating a silent CMPR would seem to make it even less transparent.

This has been a hot topic in formal semantics for decades. Alas, the literature survey in UCM (Section 3.5) concludes somewhat inconclusively:¹³ “although the idea of embedding the comparative in the superlative is currently a minority view [...], and while there are hurdles to implementing this idea technically, at the current level of understanding the project is by no means a lost cause” (p103). Though not a formal semanticist, this project has my fullest sympathy. Informally and not very technically, CMPR for me – and also for speakers of Cimbri in Luserna where I have done fieldwork, the last village where Cimbri is still acquired as a native language – means that a *primum* and a *secundum comparationis* (subject and standard of comparison) are pairwise matched against one another on a parameter designated by the adjective (or adverb or quantifier) and the value of the *primum* is asserted to be higher than that of the *secundum*. (And I remain agnostic about all kinds of issues, such as whether either of the comparees needs to be old when I state that Father is older than Mother.) Gradable adjectives always compare, asserting that the subject exceeds some contextual norm; but comparative morphology compositionally specifies that there is a standard of comparison, named or contextually understood. (Which may cause worries, as when I improbably state that this mayfly is older than Father: the age-norm for mayflies is rather different from that of the standard of comparison named. But which explains why an older lady can be younger than an old lady: although the superlative is here absolute, it still specifies a standard of comparison, to be understood contextually – perhaps as other people present, who may be younger than what is the age-norm for ladies.) Informally and non-technically, SPRL for me, a speaker of German and also proficient in English, means that I am compositionally specifying that the *primum comparationis* comes out the winner on ALL pairwise comparisons among comparees understood from context to be relevant, not just on one.¹⁴ (When stating that Grandad is oldest my pairwise comparisons won’t normally include

¹³ It sadly neglects Bierwisch (1987), the semantics chapter in the same massive tome that also has Wurzel’s account of adjective suppletion, incorporating this particular semantic analysis.

¹⁴ In post-match statements, José Mourinho, currently with Manchester United, has often been heard to apologetically claim: *We were the best team, but the ref etc. lost us the match*. I don’t think the Special One is semantically confused here or confuses football with, say, track and field relay where more than two teams are competing. Or maybe at ManU they do this sort of three or four-sides-at-the-same-time thing in training, to no evident avail. More likely he is influenced by his native Portuguese, which lacks a morphological superlative and uses the comparative plus the definite article for the purpose (*bom, melhor, o melhor*, with suppletion, ABB, and equally without: *alto, mais alto, o mais alto* ‘tall, taller, tallest’).

ones with mayflies, but will most likely be confined to family members.) The meaning of my SPRL thus subsumes the meaning of my CMPR; to what is shared between them, to do with the pairwise comparing of the subject against a specified standard, SPRL adds universal quantification. For speakers of Cimbri SPRL appears to mean the same, but they redundantly express the bit about the pairwise comparing against a standard twice. Or perhaps their SPRL is slightly less comprehensive than mine and more specifically only adds to the meaning of CMPR that this pairwise comparing is done for all relevant pairs. I should have asked, but I did not feel it mattered, because my interest was in morphology, and we had established that all morphological parts did have meaning.

Determining how morphological pieces correspond to semantic components is a different matter. The matching may be transparently biunique, but it doesn't have to. In particular, lexical as well as grammatical morphemes can be cumulative: the monomorphemic English verbs *slap*, *smack*, *spank*, *box*, *kick*, *butt*, *nudge* cumulate what the verb *hit* means with body part meanings (forming a lexical field); the monomorphemic English verbal suffix *-s* cumulates person, number, mood, and tense meanings (3SG.IND.PRES), the monomorphemic Latin suffix *-mini* similarly cumulates person, number, tense, and voice meanings (2PL.nonPERF.PASS, same for all moods). And meanings can be "extended" over several morphological component parts: to give a standard example of extended exponence, in the Latin verb *rexisti* 'you ruled', *re:k-si-s-ti:*, perfect tense/aspect is expressed thrice, through *-si* as well as the person and number suffixes *-s* and *-ti:* specific to the perfect. Accordingly, what would be wrong on principled grounds with [[ADJ] SPRL], German/English-style, on the assumption that SPRL *-(e)st* means what CMPR and SPRL together mean in languages like Cimbri, and SPRL *-(e)st* in German/English shares a meaning component with mutually exclusive CMPR *-er*? (Or, for that matter, what would be wrong with analysing [[[ADJ] CMPR] SPRL] in Cimbri as redundantly extending the more general part of the comparative meaning over CMPR *-ar* and SPRL *-st*?)

This is not an analysis UCM is at all happy with: it insists on [[[ADJ] CMPR] SPRL] as the only universally legitimate MORPHOLOGICAL representation of superlatives, banning [[ADJ] SPRL] as a MORPHOLOGICAL representation. So, what have zero allomorphs for CMPR, with zeros normally requiring special justification, to so strongly recommend themselves over cumulative exponents for SPRL, with cumulation an everyday sort of phenomenon – at least in languages with non-agglutinative morphology, and often the outcome of a history of

phonological fusions of frequently co-occurring morphemes?¹⁵ (Without wishing to make a causal connection, it is precisely in this morphological milieu, of which one geographical hotbed is Greater Europe, that adjectivally-marked comparison is thriving.) First, theory: “Distributed Morphology has the right general architecture to support the assumptions needed to derive these generalizations” (p7 *passim*). Second, a hunch: “certain types of meaning – such as SUPERLATIVE: ‘more than all others’ – are too complex to be expressed monomorphemically”, at least as far as grammatical or functional morphemes go (p5 *passim*).

Convinced?

Not really. But I for one will keep an open mind concerning complexity, because limits on what can be expressed through the atoms of language ARE a fascinating question, if only because this defines the basic remit for the grammar of construction. UCM’s speculations (Chapter 7) range over several subtle gaps and asymmetries and their theoretical reconstruction, including the non-existence of a morphological comparative of inferiority (‘Mother is less-old than Father’, unless ‘Mother is young-er than Father’, with the marked antonym, IS one). It is difficult to see, however, how a general complexity constraint on the number of interpretable syntactic features permitted per grammatical morpheme (maximum 1), translated into whichever framework, is supposed to prevent superlatives from bundling ‘more X’ and ‘than all others’. Also, I would want to see diachrony brought into the picture: as forms and constructions are being reanalysed over generations of acquirers, can anything be reanalysed as anything else? A morpheme like Latin *-mini*, for example, seems to me rather complex and unusual in what it bundles – 2nd person (a marked value for this category), plural (a marked number), non-perfect tense/aspect, and passive (marked voice); but there must have been circumstances which recommended and permitted such a conglomeration (of how many “interpretable syntactic features”?) to be entered into an inflectional paradigm where form-meaning matchings were otherwise somewhat more transparent, if not biunique.

4 Suppletion explained through Containment

Complexity, of some kind, is supposed to be the ultimate *explanans*; but the actual constraining work is done by “theory”. The descriptive framework favoured in UCM is

¹⁵ Not always, though: think of person and number, inveterate and perhaps born cumulators, and yet separate categories.

Distributed Morphology (DM), but as far as the suppletion patterns are concerned, the critical assumptions would probably be shared by most other approaches to morphology. One of them is that, when there are alternative morphological or allomorphic realisations, options limited to specified circumstances take precedence over DEFAULTS, applying elsewhere. The other is that, given linear and/or hierarchical structures of complex words, morphological influences among word constituents, on allomorphic alternations or the selection among suppletive stems, are normally LOCAL rather than distant.¹⁶

Now, given the default logic and a strict locality requirement as parts of UG, *ABA and *AAB are out of bounds for any relevant language – on the further condition of Containment, *[[ADJ] SPRL]. On the basis of [[[ADJ] CMPR] SPRL], as imposed by (U6) on all languages that have such adjectivally-marked comparison, AAA (schematically, *good*, *good-er*, *good-Ø-est*) is of course licit, and the most economic option, doing with only one “root”. If there are two roots and one is specified for CMPR (say, *bett*), the resulting pattern can only be ABB: if there is no further morpheme added to ADJ, the default root is selected (POS); CMPR is adjacent to ADJ and can therefore select the specified root over the default; when SPRL is added last and there is no specified root, nothing changes (*good*, *bett-er*, *bett-Ø-est*), because SPRL contains CMPR and CMPR’s selected root is *bett* (hence *ABA, **good*, *bett-er*, *good-Ø-est*). Having a root specified for SPRL (say, *bett*) will not work out, because SPRL is not adjacent to ADJ and therefore cannot govern root selection across intervening CMPR, hence *AAB (**good*, *good-er*, *bett-Ø-est*). If, with increasingly exuberant root vocabulary, of two non-default roots one is specified for both CMPR and SPRL (say, *opt*) and the other only for CMPR (*bett*), the most specific is selected first, being adjacent to ADJ through its CMPR part; then non-composite CMPR selects its root, with the default remaining for POS (ABC, *good*, *bett-er*, *opt-Ø-est*).

This was the gist of UCM’s explanation for (U1) and (U2): suppletion patterns ABA and AAB cannot be stated in the “theory”, owing to DM applying the default logic and subscribing to strict locality. UCM goes into great detail examining numerous empirical wrinkles in many languages and weighing ingenious technical solutions to account for them. How to appropriately define locality – over hierarchical, nested or flatter, linear structures ([[[ADJ] CMPR] SPRL] vs. [ADJ CMPR SPRL] or [ADJ][CMPR SPRL]) – is only one of the more

¹⁶ Not a Distributed Morphologist, I am all for locality myself, though less categorically than I was 30 years ago (Plank 1985, 1992).

obvious and generally accessible issues.¹⁷ But what readers interested in suppletion and comparatives and superlatives and not (wishing to make themselves) at home in the world of DM will certainly take home as their thickly underlined take-home message is that default, locality, and the entire DM architecture will ONLY do their intended job on a further assumption – namely that superlative forms of adjectives, adverbs, and quantifiers universally have CMPR, often realised by zero, contained within SPRL, as per (U6). If this is all this further assumption of Containment is buying them, they might find it gratuitous, especially since the complexity assumption in which it is supposedly grounded, banning monomorphemic ‘more than’ + ‘all others’, is as grand as uncertain.

Understandably, therefore, UCM seeks support for this crucial assumption elsewhere, which, in Chapter 6, takes the form of a defense of a further universal:

- (U7) If the comparative degree of an adjective is suppletive, then the corresponding change-of-state verb is also suppletive (relative to the positive of the adjective).

That is, the derivation if inchoative and causative verbs is supposed to follow AAA or ABB patterns, but not ABA (nor AAB) – and for the same reason: change-of-state verbs are assumed to always be derived from [[ADJ] CMPR], and locality foils any effort on the part of an outer INCHOATIVE or CAUSATIVE marker (overtly possibly zero) to select a suppletive ADJ root across an intervening CMPR, while if CMPR itself has selected a suppletive root, it will hang on in verbal derivation. Accordingly, this is the expected outcome:

	POS	CMPR	INCH/CAUS		
AAA	<i>hard</i>	<i>hard-er</i>	<i>to hard-en</i>		
ABB	<i>good</i>	<i>bett-er</i>	<i>to bett-er</i>	<i>*to good</i>	(*ABA)
	<i>bad</i>	<i>worse</i>	<i>to wors-en</i>	<i>*to badd-en</i>	(*ABA)

Many adjectives or quantifiers lack INCH/CAUS derivatives, and one might consider ersatz verbs as fillers of such gaps, thereby forming a (permissible) ABC pattern. But this situation

¹⁷ There are also further testable adjacency questions: Can SPRL only select a root of its own only when no CMPR suffix intervenes? Thus, Latin *bon-*, *mel-ior-*, *opt-im-*, with root and CMPR as a portmanteau; but would **opt-ior-im-* be ruled out by the theory?

equally obtains without a suppletive CMPR, in which case the pattern would be AAB, impermissible under UCM's assumptions:

ABC	<i>many</i>	<i>more</i>	<i>*to more(-en) / to multiply</i>
AAB	<i>big</i>	<i>bigg-er</i>	<i>*to bigg(-er)(-en) / to increase</i>
	<i>old</i>	<i>old-er</i>	<i>*to old(-er)(-en) / to age</i>

UCM goes to great lengths skillfully defending a semantic analysis of all inchoatives and causatives as involving comparison, regardless of whether or not the respective derivational base contains an overt CMPR: in *to hard-en*, *to slow*, or *to leng-th-en* it doesn't, while in *to low-er* it does (exceptionally in English), but the meaning always is '(to cause) to become harder/slower/longer/lower', rather than '(to cause) to change into the state of being hard/slow/long/low from the state of not being hard/slow/long/low'. UCM has convinced me, although again I do not see why semantic composition has perforce to translate biuniquely into morphological constituency, necessitating the massive use of zero allomorphs for CMPR in inchoatives and causatives. These zeroes for omnipresent CMPR are to some extent random and language-specific (compare English *to broad-en*, *to thin* with *ver-breit-er-n*, *ver-dünn(-er)-en* in German, which is relatively speaking CMPR-favouring, or also gaps against non-gaps as with **to more*, **to old(-er)* vs. *mehr-en*, *alt-er-n*), but next to many historical idiosyncrasies and phonological interferences (*leng-th-en*, *heigh-ten* and such) there would also seem to be residual or latent patterns, with certain subtle semantic differences among adjectives and quantifiers inclining them to prefer or disprefer an overt SPRL when derived to a change-of-state verb. For instance, fixed-upper-bound adjectives would never seem to have overt CMPR (*to straight(*-er)-en*; similarly numeral-derived German *ein(*-er)-en* 'to unify', *ent-zwei(*-er)-en* 'to sunder').

This may seem like hand waving when your own inclinations are deterministic, but perhaps what is going on when change-of-state verbs are derived from adjectives or quantifiers is that base forms are chosen which are (i) semantically the most felicitous (or least infelicitous), with SPRL added only in such cases where open-ended gradability is really salient, as well as (ii) formally the least unobjectionable, with morphologically simple bases usually more flexible in derivation. The few common-use suppletives may just happen to be among those adjectives and quantifiers where overt comparatives are the most fitting.

But I will not pursue the verb-derivational component of UCM's explanatory approach further, because there is a wholly different explanation suggesting itself for the suppletion patterns in comparison that had got us started.¹⁸

5 And now for something completely different

In this alternative scenario, the mutual dependency of comparative and superlative in suppletion is explained through PARADIGMATIC rather than syntagmatic structure and through constraints which are DIACHRONIC rather than timeless. The very familiarity of the general plot line perhaps explains why this alternative story, as only sketched in the remainder of this review, has not been told about suppletion in adjectival comparison more frequently.

The general plot goes like this. Much of it is outside the scope of UCM's theory, while there is also a theory-internal limitation insofar as paradigms are not exactly prominent in DM.

When distinct stems (or roots or words, depending on what are the basic units in the language concerned) exceptionally come to be yoked together to share in the labour of expressing certain inflectional or derivational contrasts, perhaps undergoing formal adaptations according to live (morpho-)phonological rules of grammar, such combinatory suppletion tends to respect paradigmatic structures. Suppletive stems do duty for subsets of categories which can be grouped together as natural classes within their paradigmatic system.

For example, when two stems are combined for purposes of number and case inflection of a noun, one is likely to take care of all cases of one number (or subset of numbers) and the other of all cases (or subset of cases) of the other number(s). Or they will be distributed by case, with one stem taking care of all numbers of one case (or subset of cases) and the other of all numbers of the other (subsets of) cases. Here is a real example, the noun for 'man, person' in Slovene, where the two stems are distributed by number (SG vs. DU and PL), but which also shows that complications can arise through sporadic redistributions of stems (with the PL stem invading some of the DU cases, encouraged by independent considerations of homonymy;¹⁹ Plank 1994):

¹⁸ For an update on UCM, with explorations of possible extensions, see Bobaljik (2015).

¹⁹ Slovene also permits *člověkov* and *člověkih* as GEN.DU and LOC.DU alternatives, with the PL stem more orderly circumscribed.

	SG	DU	PL
NOM	<i>človek</i>	<i>človek-a</i>	<i>ljud-ê</i>
ACC	<i>človek-a</i>	<i>človek-a</i>	<i>ljud-î</i>
GEN	<i>človek-a</i>	<i>ljud-í</i>	<i>ljud-í</i>
LOC	<i>človek-u</i>	<i>ljud-êh</i>	<i>ljud-êh</i>
DAT	<i>človek-u</i>	<i>človek-oma</i>	<i>ljud-ễm</i>
INS	<i>človek-om</i>	<i>človek-oma</i>	<i>ljud-mí</i>

Here it is primarily a distinction between categories (essentially number, paradigmatically dominant over case in Slovene) which is determining a suppletive distribution. As to the subsets of the terms of the category, number, which defines the distribution of the two stems, Slovene evidently groups DUAL with PLURAL (‘more than 1’ and ‘more than 1, specifically 2’, as opposed to SG ‘1’), except for exceptional GEN and LOC. Paradigmatic dominance among categories as well as subgrouping among terms can vary across languages, perhaps within limits. Thus, case can also be dominant over number; or a dual can also be grouped with singular instead, for all kinds of morphological purposes, on the strength of conceptualisations of DU as aligned with SG in a ‘minimal’ vs. ‘augmented’ paradigmatic contrast.²⁰ For case, subsets frequently seen to be relevant for suppletive distributions are grammatical vs. semantic and direct vs. oblique cases.

The relations holding within paradigmatic systems may be complex and non-uniform,²¹ but suppletive stems originating from distinct lexemes will never be randomly distributed over paradigms. However, the constraint that they must respect paradigmatic structures and only cover natural subgroupings is a DIACHRONIC one, because it only applies when lexeme combination is the relevant step in creating suppletion. When phonological differentiation of single stems is the mechanism of change leading to suppletion, paradigmatic structures do NOT rein in the resultant patterns, except perhaps coincidentally, if reflected in phonological patterns.²²

²⁰ See Plank (1989, 1996) for number, but crosslinguistic variation in the paradigmatic organisation of the “same” categories and terms is too large a topic to be (re-)addressed here.

²¹ Needless to add, subgroupings within paradigmatic systems have been looked at differently in different frameworks – for instance in terms of features and feature hierarchies or of geometric arrangements (which is my own preference at least for inflection: Plank 1991).

²² I elaborate on this theme of the nature of universals elsewhere (e.g., with particular reference to suppletion, Plank 2011, 2016a), concluding that there are both, constraints on states and constraints on transitions.

Defective paradigms have sometimes been invoked as the catalysts of combinatory suppletion, and the resulting suppletive distributions would then be expected to be as orderly or random as the original gaps were. Now, paradigms can be defective because of phonotactic conflicts arising in combinations of morphological material are unresolvable or because of other phonological inadequacies (such as insufficient prosodic weight of inflected or derived words), and it would then be a coincidence if they followed morphological patterns. Or particular morphological categories (often paradigmatically exposed ones such as participles in verb inflection) of particular words can be affected for no apparent reasons at all. But the reasons for gaps can also be transparently semantic, as with *pluralia/singularia tantum* nouns or 3rd-person-only impersonal verbs.²³ While morphological randomness is unlikely to be prevalent where gaps have invited suppletive filling, in many instances where the gestation and birth of a suppletion can be ascertained, there was no initial gap which another lexeme would have been called upon to fill, but the complementary distribution of suppletive stems over the paradigmatic system, through dropping one stem where the other was retained and vice versa, was only negotiated subsequently. (Hence Osthoff's term "*Ergänzungswesen*" vis-à-vis "*Defectivwesen*" as suggested by Gabelentz (1891) for what eventually became known as suppletion.) Overall, regardless of prior states of affairs, when origins of suppletion are combinatory, paradigmatic structures will rarely be found to be wholly neglected.

Once suppletion through stem combination has been established for a lexeme, paradigmatic distributions are often diachronically remarkably stable (especially when a lexeme continues to be frequent). If one of the suppletive stems is subsequently replaced by another (as in the case of Scandinavian Germanic *bra* for *good*), paradigmatic patterns usually remain unaltered. However, redistributions over paradigmatic systems do occur, especially as a concomitant of a return to morphological regularity by levelling out a paradigm; some degree of interim randomness here should not be wholly unexpected.²⁴

The genesis of suppletion is more mysterious than its demise. Which suppletive lexemes are prone to be regularised and why is obvious: ones not occurring very frequently. Low-frequency lexemes give learners fewer chances of even discovering that they are suppletive, and they will be regularised should they ever be used later in life. Frequency as such is unlikely to SPAWN suppletion, however, and the best predictor here seems to be

²³ See Baerman, Corbett & Brown (2010) for a recent overview.

²⁴ See Plank (2016b) for a case study of verbal suppletive inflection.

meaning: being in common everyday use and designating something that is perceptually, cognitively, or culturally salient will increase the chances of (or threat for) lexemes to be harnessed together for expressing certain paradigmatic contrasts.²⁵ Such lexemes will not be much handicapped by random paradigmatic gaps. And such central lexical fields will be densely populated with synonyms and near-synonyms lending themselves to distinguishing the finest semantic nuances if needed or desired – or eventually also to being combined with one another in one suppletive team.²⁶

Finally, which environments are either conducive or inimical to suppletion has been a subject for some speculation, too. The following are some suggested preferences among conditioning factors: flexive/fusional > agglutinative morphology; derivation > inflection; pronouns > verbs > adjectives > nouns; comparison > agreement in the case of adjectives; inherent > contextual, semantic > morphosyntactic inflectional categories.

Passing on to the particular part of this alternative explanatory attempt, a first prediction is confirmed by UCM's findings: all adjectives, adverbs, and quantifiers figuring in UCM's samples are on the shortlist of suppletion candidates owing to their commonplace meaning and the corresponding abundance of near-synonyms.

Second, adjectives and their ilk are not excluded from the set of word classes accommodating suppletion.

Third, categories to do with comparison, be they inflectional or derivational, are possible and indeed likely conditioners of suppletion.

// Figure 1 about here //

These categories of adjectival comparison form a hierarchical paradigmatic system as sketched in Figure 1, with EQUATIVES rarely and SUPER-EQUATIVES as well as INFERIORATIVES and SUPER-INFERIORATIVES (if you permit a few terminological innovations) apparently, on the evidence of UCM, never realised morphologically. CMPR and SPRL could not be closer together, and POS will remain on a separate hierarchical level even when the contrast of

²⁵ Not much of an improvement on Osthoff (1899), Wurzel (1987), or Börjars & Vincent (2011), I'm afraid – but this is where we stand. Try to reconcile *bič'ni* SG, *boždo* PL 'corner of a sack' in Archi (the Daghestanian language monumentally described by Aleksandr E. Kibrik) with any such characterisation.

²⁶ Börjars & Vincent (2011) require more specifically that one such near-synonym must act as the "dominant" and the other as the "recessive" partner for suppletion to be accomplished.

comparison of inequality and equality, only rarely recognised morphologically, is removed. Whatever the details of preferred semantic analyses, the affinity of CMPR and SPRL is hard to deny. For example, Wurzel (1987: 486), inspired by the semantics as worked out by Bierwisch (1987), emphasises the contrast between compositional and contextual specification of the standard of comparison which sets apart CMPR and SPRL from POS. For Herbermann (1998), like Wurzel (1987) but without the explicit formal semantics, SPRL is but a special case of CMPR, adding the quantificational aspect of bilateral comparisons among all relevant comparees.

Fourth prediction, therefore: When suppletions in comparison originate through lexeme combination, they will form ABB or ABC patterns; *AAB and *ABA would be grouping categories – CMPR and POS, to the exclusion of SPRL; POS and SPRL, to the exclusion of CMPR – which form no natural pairs in the paradigmatic system. (EQUATIVE going with POSITIVE in Welsh is consistent with the contrastive hierarchy of Figure 1, where no other category paradigmatically separates them. Still, perhaps the hierarchy can be modified, with all comparisons of inequality, whether they specify the standard of comparison or leave it implicit, forming one block, set against comparison of equality, where standards are always specified.²⁷) When suppletions come about through phonological differentiation of single lexemes, *post factum* not a synchronically recognisable difference, any morphological pattern may be the result, including AAB and ABA. The universals in UCM, coming from UG, are envisaged as being timeless constraints on grammatical states; but what is required here instead are constraints on changes of grammatical states, so that only certain kinds of transitions can be prohibited, while others are allowed to go through, even though leading to the the very same kind of resultant state, suppletion.

To continue, not with a further prediction, but with an attempt to understand why and how comparison – typologically rather unusually – came to be expressed on adjectives themselves, and sometimes through suppletion on top of it, in genealogically and areally so narrowly circumscribed circumstances. Above, the full range of ways and means of dealing with comparison across languages was briefly alluded to (also recounted in UMC), and we should add now that typological concurrence has variously been projected onto diachronic succession. For Indo-European, a commonly assumed, if not point-by-point reconstructed grammaticalisation scenario posits adversative or negative paratactic constructions, as

²⁷ If SIMILATIVES (‘Granny sings like a nightingale’) were to be added, they would be next-of-kin of equatives.

exceedingly common almost everywhere else, as a point of departure, developing into (rare) monoclausal comparative constructions (e.g., Small 1923, 1929; Seuren 1984; Breivik 1994). Beginning with something like ‘Mother is old/not old, but Father is very/rather old’, a comparative marker associated with adjectives would have been recruited from intensifying modifiers, and various possibilities would have been explored of integrating the standard of comparison in a monoclausal comparative construction, yielding something like ‘Father is very/rather-old from/next to/... Mother’. Intensity thus was the uniform difference for all the parameters of comparison expressed by adjectives (and adverbs and quantifiers), and certain lexical domains, fundamental for everyday communication, would have provided a wealth of near-synonyms suitable for intensity-grading. And in such newly grammaticalised comparative constructions, or already in their ancestral paratactic clause combinations, it would not have been a big deal to match, for example; ‘old’ with more intense as well as more colourful ‘aged, ancient, grey, rusty, decrepit, infirm, (time-)worn, seasoned, third-age, senile, passé, past-one’s-prime’ or, deploying productive word-formation patterns à la German, ‘ur-alt, stein-alt’ – rendering intensifying modifiers about to be grammaticalised as regular adjectival morphology redundant. Keeping such lexical gradations, once monoclausal comparison has become entrenched, amounts to suppletion.

Paradigmatic gaps may here and there have played a role, but were hardly instrumental in launching a larger-scale suppletive programme. For example, for Germanic **gōda-* the original meaning appears to have been ‘fitting, suitable’ and the form has been assumed to be a participle or deverbal adjective from a verb ‘bring together, unite’; hence, since participles are uncomfortable with CMPR morphology, an inherently more intensive near-synonymous lexeme would have had to step in (Common Germanic **batiz-ōn*, **batist-a*, of unclear origin, perhaps ‘happy, pleasant’?, and itself with a basic POS form, **bat-*, which was eventually discontinued, quite late in fact in German, where an adverb *bass* is only becoming obsolete now). Even where deficient paradigms were an impetus for suppletions, their distributions appear to always have observed the paradigmatic bifurcation of POS vs. CMPR/SPRL.

Diachronically, at least in Indo-European, the superlative was a subsequent addition, a semantic specialisation of the comparative. Here history again helps to understand, or indeed to predict, synchronic patterns: the morphological or periphrastic marking of SPRL typically builds on CMPR structures so as best to reflect its universal-quantifying semantics, recruiting definites, universal quantifiers, intensive or excessive markers, or existing bound morphology

of comparable meaning for the purpose. In terms of constituency, CMPR marking will typically be “inner” and SPRL marking “outer”, because the latter is younger morphology, and morphology created by univerbation is added at word edges, not in their interior. (There may also be a timeless word-internal scope law for arranging pieces of morphology by generality (inner) and specificity (outer); its effect would in this case be the same.)

The paradigmatic divide between POS and CMPR/SPRL appears to be an especially robust one, because in the case of suppletions stems were not subsequently redistributed over paradigms so as to stray from the ABB and ABC patterns dictated by their origin.

Finally, again not a prediction because here almost anything goes, there is the matter of diachronic vacillations between the bi- and monomorphemic expression of comparative and superlative meanings. When created in a separate step of univerbation, SPRL will nonetheless imply CMPR, and if their exponents end up as morphological neighbours, there is a probability that their fate will be that of gradual phonological fusion, eventually leading to cumulation. Probably flat morphological structures, [ADJ-CMPR-SPRL], are more conducive to fusion than hierarchical ones, [[[ADJ]-CMPR]-SPRL]; but perhaps the difference should not be exaggerated. More importantly, fusion is not perforce a one-way street: for example, relative to their joint source, Old High German (*alt-*, *alt-ir-*, *alt-ist-*), Cimbri has de-fused CMPR and SPRL through analogically extending the independent CMPR suffix (*alt-*, *ält-ar-*, *ält-ar-st-*), while others retained the status quo (SPRL *ält-est-*) – not a big deal of huge theoretical significance, and none at all in overall semantics, but still altering morphological structure.

This is it: not enough for an entry for a book award,²⁸ but it is all I can do by way of sketching an explanation. The explanation on which my money is comes with free advice, though. One, never forget there could be diachrony behind typology (as well as the other way round)! Two, on theory keep your mind open! Basic theory is likely to be too basic, and non-basic theories sometimes lose sight of the basics. ALT is the word, Advanced Linguistic Theory: Advance it!

²⁸ An Edward Sapir Award perhaps, to commemorate *Grading: A study in semantics* (1944).

Acknowledgements: Many thanks to old friends for comparative, indeed superlative, (defective) paradigmatic, and suppletive inspiration over the years: Grev Corbett, Sasha Kibrik, Christian Lehmann, Leon Stassen, Nigel Vincent, and Gustav Wurzel in particular come to mind. Thanks to Larry Hyman and Steven Kaye for a critical reading and hearing. Nonetheless, you have only myself to blame.

References

- Andersen, Paul K. 1983. *Word order typology and comparative constructions*. Amsterdam: Benjamins.
- Baerman, Matthew, Greville G. Corbett, & Dunstan Brown (eds.). 2010. *Defective paradigms: Missing forms and what they tell us*. Oxford: Oxford University Press.
- Beckmann, Werner. 2002. *Suppletion im Niederdeutschen*. Köln: Böhlau.
- Bhatt, Rajesh & Shoichi Takahashi. 2011. Reduced and unreduced phrasal comparatives. *Natural Language & Linguistic Theory* 29. 581–630.
- Bierwisch, Manfred. 1987. Semantik der Graduierung. In Bierwisch & Heidolph (eds.) 1987, 91–286.
- Bierwisch, Manfred & Ewald Lang (eds.). 1987. *Grammatische und konzeptuelle Aspekte von Dimensionsadjektiven* (studia grammatica 26/27). Berlin: Akademie-Verlag.
- Bobaljik, Jonathan David. 2015. Suppletion: Some theoretical implications. *Annual Review of Linguistics* 1. 1–18.
- Börjars, Kersti & Nigel Vincent. 2011. The pre-conditions for suppletion. In George Tsoulas, Alex Galani, & Glyn Hicks (eds.), *Morphology and its interfaces*, 239–265. Amsterdam: Benjamins.
- Breivik, Leiv E. 1994. On comparatives in English and other languages. In Toril Swan, Endre Mørck, & Olaf Jansen Westvik (eds.), *Language change and language structure: Older Germanic languages in a comparative perspective*, 51–73. Berlin: Mouton de Gruyter.
- Brown, Dunstan, Marina Chumakina, Greville G. Corbett, & Andrew Hippisley. 2003. The Surrey Suppletion Database, <http://www.smg.surrey.ac.uk/Suppletion/index.aspx>
- Cuzzolin, Pierluigi & Christian Lehmann. 2004. Comparison and gradation. In Geert Booij,

- Christian Lehmann, Joachim Mugdan, & Stavros Skopeteas (eds.), *Morphology: An international handbook on inflection and word-formation*, vol. 2, 1212–1220. Berlin: Walter de Gruyter.
- Dixon, R. M. W. 2008. Comparative constructions: A cross-linguistic typology. *Studies in Language* 32. 787–817.
- Gabelentz, Georg von der. 1891. *Die Sprachwissenschaft, ihre Aufgaben, Methoden und bisherigen Ergebnisse*. Leipzig: Tauchnitz.
- Herbermann, Clemens-Peter. 1998. Die Etymologie – ihre Stellung in der Sprachwissenschaft und ihr Verhältnis zur Grammatik: Eine Betrachtung am Beispiel einer Typologie der Komparativkonstruktionen. In Werner Zillig (ed.), *Über Jost Trier*, 54–128. Münster: Aa Verlag.
- Jensen, Hans. 1934. Der steigernde Vergleich und sein sprachlicher Ausdruck. *Indogermanische Forschungen* 52. 108–130.
- Koneckaja, Vera P. 1973. *Suppletivizm v germanskix jazykax*. Moskva: Nauka.
- Osthoff, Hermann. 1899. *Vom Suppletivwesen der indogermanischen Sprachen: Akademische Rede zur Feier des Geburtsfestes des höchstseligen Grossherzogs Karl Friedrich am 22. November 1899 bei dem Vortrag des Jahresberichts und der Verkündigung der akademischen Preise gehalten*. Heidelberg: Universitätsbuchdruckerei von J. Hörning. (Erweiterte akademische Rede. Heidelberg: Kommissionsverlag von Alfred Wolf, 1900.)
- Plank, Frans. 1985. How disgrace-ful. *Acta Linguistica Hafniensia* 19(2). 64–80.
- Plank, Frans. 1989. On Humboldt on the dual. In Roberta Corrigan, Fred Eckman, & Michael Noonan (eds.), *Linguistic categorization*, 293–333. Amsterdam: Benjamins.
- Plank, Frans. 1991. Rasmus Rask's dilemma. In Frans Plank (ed.), *Paradigms: The economy of inflection*, 161–196. Berlin: Mouton de Gruyter.
- Plank, Frans. 1992. Adjacency. In William Bright (ed.), *International encyclopedia of linguistics*, vol. 1, 25–26. New York: Oxford University Press.
- Plank, Frans. 1994. Homonymy vs. suppletion: A riddle (and how it happens to be solved in ...). In: *Agreement gender number genitive & (EUROTYP Working Papers VII/23)*, 81–86.
- Plank, Frans. 1996. Domains of the dual, in Maltese and in general. In Albert Borg & Frans Plank (eds.), *The Maltese noun phrase meets typology (Rivista di Linguistica 8(1))*, 123–140. Pisa: Pacini.
- Plank, Frans. 2011. Patterns of suppletion and the temporal nature of constraints on linguistic

- diversity. Paper at ALT 9, Hong Kong.
- Plank, Frans. 2016a. Vom Suppletiv(un)wesen, in Beziehung zur Paradigmenstruktur und in besonderer Rücksicht der historischen Natur beschränkter Möglichkeiten. In Andreas Bittner & Klaus-Michael Köpcke (eds.), *Regularität und Irregularität in Phonologie und Morphologie: Diachron, kontrastiv, typologisch*, 1–28. Berlin: Walter de Gruyter.
- Plank, Frans. 2016b. Redistributions of suppletive stems over inflectional paradigms. Under review.
- Sapir, Edward. 1944. Grading: A study in semantics. *Philosophy of Science* 11. 93–116.
Reprinted in David G. Mandelbaum (ed.), *Selected writings of Edward Sapir in language, culture and personality*, 122–149. Berkeley: University of California Press.
- Seuren, Pieter A. M. 1984. The comparative revisited. *Journal of Semantics* 3. 109–141.
- Small, George W. 1923. *The comparison of inequality: The semantics and syntax of the comparative particle in English*. Baltimore: Johns Hopkins University Press.
- Small, George W. 1929. *The Germanic case of comparison, with a special study of English* (Language Monographs 4). Philadelphia: Linguistic Society of America.
- Stassen, Leon. 1985. *Comparison and universal grammar*. Oxford: Blackwell.
- Stassen, Leon. 2013. Comparative constructions. In Matthew S. Dryer & Martin Haspelmath (eds.), *The world atlas of language structures online*. Leipzig: Max Planck Institute for Evolutionary Anthropology. <http://wals.info>
- Ulan, Russell. 1972. Some features of basic comparative constructions. *Working Papers on Language Universals* 9. 117–162.
- Wurzel, Wolfgang U. 1987. Zur Morphologie der Dimensionsadjektive. In Bierwisch & Heidolph (eds.) 1987, 459–516.
- Xerberman, K.-P. 1999. Komparativnye konstrukcii v sravnenii: K voprosu ob otnošenii grammatiki k ètimologii i jazykovej tipologii. *Voprosy jazykoznanija* 1999 (2). 92–107.
- Ziemer, Hermann. 1884. *Vergleichende Syntax der indogermanischen Comparison, insbesondere der Comparationscasus der indogermanischen Sprachen und sein Ersatz*. Berlin: Dümmler.

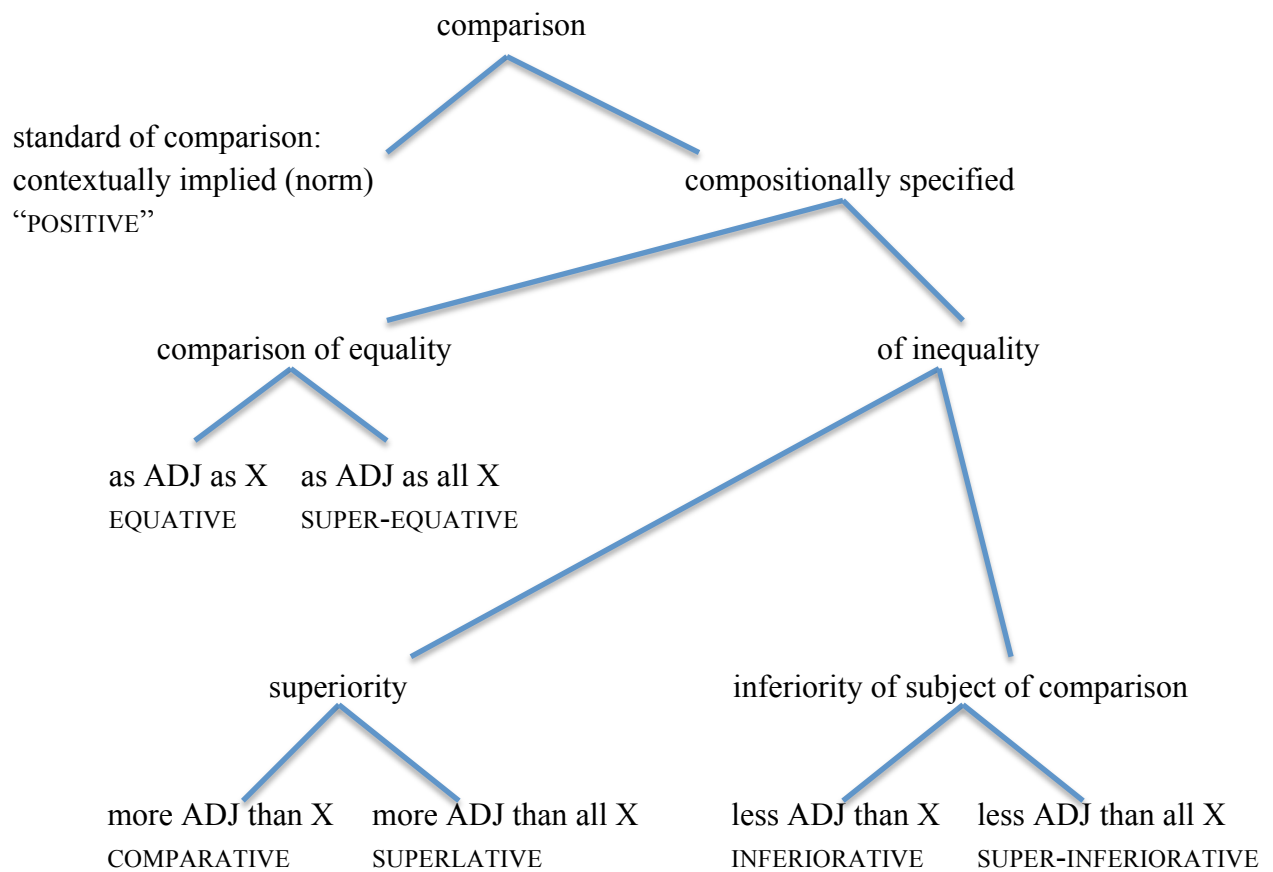


Figure 1: Paradigmatic system of adjectival comparison