Investigating suppletion with novel adjectives

Lyn Tieu (Western Sydney University), Nichola Shelton (University of Sydney)

English comparatives and superlatives are typically formed by adding *–er* and *–est* to adjectives, respectively (e.g., *tall-taller-tallest*). Yet there are exceptions involving suppletion (*good-better-best*). Surveying more than 300 languages, Bobaljik (2012) observes the 'Comparative-Superlative Generalization' (CSG): if the comparative degree is suppletive (*good-better*), the superlative is also suppletive (*best*), and if the superlative degree is suppletive, then so is the comparative; thus AAA and ABB are possible patterns, but *ABA and *AAB are not. According to Bobaljik, certain types of meaning, including the superlative, cannot be expressed monomorphemically. For this reason, the superlative structurally contains the comparative: [[[Adj]Comp]Sup]. Building on a poverty of the stimulus argument, Bobaljik proposes that the CSG is a linguistic universal. This leads us to predict that people may adhere to the CSG even for forms that they have not encountered before. Indeed, adults have been shown to follow the CSG when producing novel forms (Donegani 2016); but adults have learned suppletive patterns like *good-better-best*. We turn to children, who have considerably less experience with suppletion.

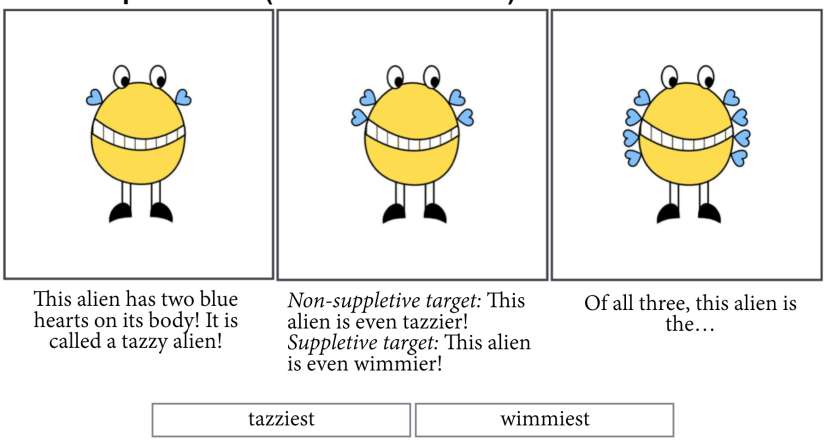
Exp.1 (Tested generalizations: AAA/ABB allowed, ABA disallowed): 48 adults and 21 children (*M*=4;04) were provided with an adjective (e.g., *tazzy*) describing a cartoon alien with a salient gradable property, and a comparative describing another alien with more of the same property (regular *tazzier* [AAX] or suppletive *wimmier* [ABX]); they then had to choose between two superlatives to describe a third alien (*the tazziest/wimmiest*) (Fig.1). Participants received 8 AAX targets and 8 suppletive ABX targets. Logistic regression models revealed **the comparative stem significantly predicted superlative stem choices** (adults: AAX: 99.7% 'A' choices, ABX: 93% 'B' choices; children: AAX: 68% 'A', ABX: 59% 'B').

Exp.2 (Comprehension of AAA/ABB): 48 adults and 22 children (*M*=4;03) saw an alien described with a novel adjective (e.g., *tazzy*); they were then presented with additional aliens that had more of the same property and had to choose the ones that matched the novel comparative and superlative (Fig.2). Participants received 8 comparative-first 'AdjCompSup' targets and 8 superlative-first 'AdjSupComp' targets; half were regular (*tazzy-tazzier-tazziest*) and half involved (potential) suppletion (*tazzy-wimmier-wimmiest*). For both groups, **the interpretation of the novel superlative matched the interpretation of the corresponding comparative, and vice versa**. Adults were at ceiling; logistic regression models on the children's data revealed comparative choices significantly predicted superlative choices (AdjCompSup: $\chi^2(1)=5.7$, $p<.05$) and vice versa (AdjSupComp: $\chi^2(1)=7.3$, $p<.01$).

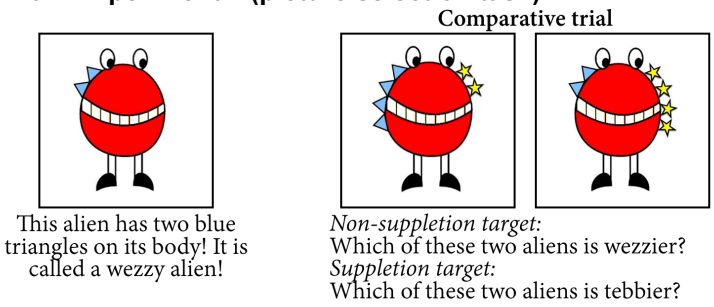
Exp.3 (Tested generalization: AAB disallowed): Exp.3 tested whether participants would allow a suppletive superlative following a non-suppletive comparative. The task and materials were the same as in Exp.2 except that participants were provided with adjective-comparative pairs and only had to choose the alien matching the superlative (or were given the adjective-superlative pairs and only had to choose the alien matching the comparative). On AAA and suppletive ABB controls, the 24 adults and 21 children (*M*=4;08) stuck with the original adjectival property; on AAB targets, they switched away from the original property to the second pictured property for the 'B' superlative, **reflecting the unavailability of a suppletive AAB pattern** (Condition was significant for both AdjCompSup ($\chi^2(1)=33$, $p<.001$) and AdjSupComp ($\chi^2(1)=41$, $p<.001$), though the difference was bigger for adults (significant interactions, $p<.01$)).

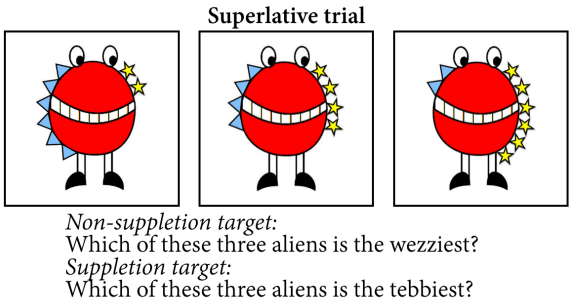
The experiments reveal that 4-year-olds, despite having less experience with suppletive forms than adults, are similarly sensitive to the CSG in their production and comprehension of novel comparatives and superlatives – providing additional support for a universal morphological constraint (Bobaljik 2012).

Example stimulus from Experiment 1 (forced choice task)

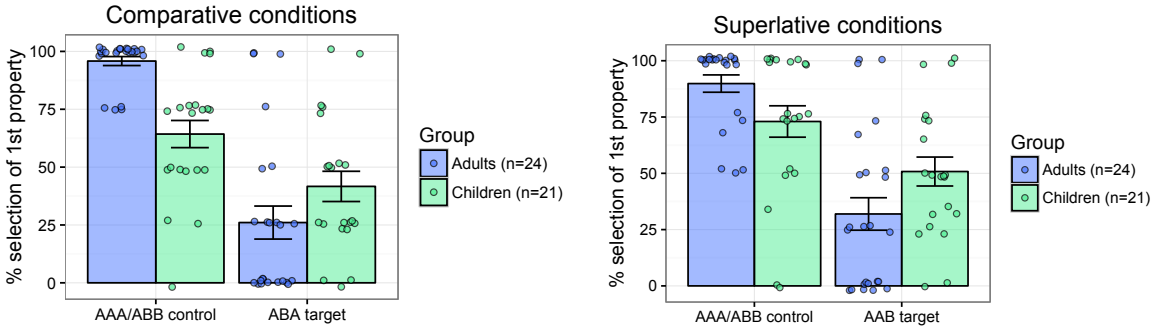


Example stimulus from Experiment 2 (picture selection task)





Experiment 3 results (left: AdjCompSup conditions; right: AdjSupComp conditions)



References

Bobaljik, Jonathan David. (2012). *Universals in Comparative Morphology: Suppletion, Superlatives, and the Structure of Words.* Cambridge, MA: The MIT Press.

Donegani, Josh. (2016). In support of the comparative-superlative generalisation: Experimental evidence from an artificial grammar experiment. Manuscript, University College London.