Intensification via gemination: Support for indirect infixation

Introduction. Infixal gemination in Gujarati functions as a mechanism for the intensification of adjectives and adverbs (1) (Mistry 1997:664). Since discussion surrounding this mechanism is limited, we aim to draw attention to its distribution and pave the way for future crosslinguistic study. From a theoretical standpoint, we demonstrate that intensification-via-infixal-gemination is consistent with a certain order of operations at the morphosyntax-phonology interface (Kalin 2022). Working within Distributed Morphology, our analysis lends support to indirect infixation (i.e., infixes that begin as prefixes or suffixes) and cyclicity at the morphosyntax-phonology interface (Kalin 2022; Kalin & Rolle 2024).

Morphosyntax. Since the mechanism is restricted to adjectives and adverbs, we analyze the intensifier as a Deg(ree) head that takes *a*P as its complement (2) (Abney 1987). In languages where the mechanism is available with different categories (e.g., Choctaw—Ulrich 1994), we may assume that the intensifier merges as an adjunct to the root before a categorizing head such as *a* or *v* merges (Fábregas 2006).

Order of operations. Kalin 2022:39 outlines the following order of operations at the morphosyntax-phonology interface, which apply cyclically until no unexponed morphemes remain: *linear concatenation < exponent choice < infixation < morphophonology*. Following this account, we begin with linear concatenation in the first cycle (3). Since the structure contains only the root, concatenation is vacuous. *Nəvu* (1c) is inserted as the exponent. In this cycle, neither infixation nor morphophonology has a significant role given the size of the structure. Similarly, the second cycle (4) merges only the categorizing head *a*, with no overt realization. The third cycle (5) shows the results of infixation, where the intensifier is linearized with the rest of the structure. We hypothesize that the infix is an empty timing slot (X) with instructions for the (morpho)phonological component; the medial consonant functions as the pivot for X (Kalin & Rolle 2024).

Implications. An alternative, direct-infixation analysis would not provide a contentful explanation of the distribution of the intensifier. Our indirect analysis offers a principled account of the intensifier's distribution; analyzing the intensifier as Deg° that selects for *a*P explains why the mechanism is limited to adjectives and adverbs. The predictable change in meaning linked to this mechanism also suggests that it originates in the morphosyntax. Within a typical generative model of the grammar, we would not predict any impact on meaning if the mechanism were purely phonological.

Outlook. The mechanism is not available with comparatives and superlatives, which are formed using a periphrastic phrase (6); whether intensification-via-gemination is ruled out by syntactic competition or semantics remains an open question, but we reflect on each possibility. A larger question concerns the kinds of processes infixation may disrupt (Kalin 2022). Our data show that the distribution of this morpheme is limited in some contexts, such as when the underlying form contains a medial voiced stop (7). We suggest that such contexts fill two timing positions, which leaves no space for the morphosyntax to insert timing position X as an infix.

Examples

(1) a. kʰaʈ̪ũ 'sour'   kʰaʈ̪ʈ̪ũ   'very sour'
     b. satʃũ 'true'   sattʃũ   'completely true'
     c. nəvũ 'new'   nəvvũ   'quite new'
     d. pakũ 'ripe'   pakkũ   'extremely ripe'
     e. same 'in front'   samme 'just in font'

(2)
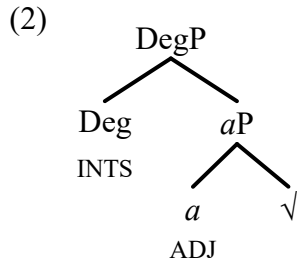
(3) *Cycle 1*
    a. Linear concatenation: —
    b. Exponent choice: √new → *nəvu*
    c. Exponent insertion: —
    d. Morphophonology: —

(4) *Cycle 2*
    a. Linear concatenation: ADJ-nəvu
    b. Exponent choice: ADJ- → Ø
    c. Exponent insertion: Ø-nəvu
    d. Morphophonology: —

(5) *Cycle 3*
    a. Linear concatenation: INTS-Ø-nəvu
    b. Exponent choice: INTS → X
    c. Exponent insertion: X's pivot = before medial consonant   Ø-nə<X>vu
    d. Morphophonology: Ø-nə<v>vu
     e. Surface phonology: *nəvvu*

(6) a. vadʰar-eː   sar-u
        increase-AGR   good-AGR
        'better'

    b. sau-thiː sar-u
        all-than   good-AGR
        'best'

(7) a. vidʰʋan   'wise'
    b. *vidʰːʋan   'very wise'
    c. bəuʰ vidʰʋan   'very wise'

Selected references. **Abney, S.P.** 1987. *The English noun phrase in its sentential aspect*. PhD diss., MIT. **Fábregas, A**. 2006. Infixes: right in the middle. *SKASE*. **Kalin, L**. 2022. Infixes really are (underlyingly) prefixes/suffixes. *Language*. **Kalin, L & N. Rolle**. 2024. Deconstructing subcategorization: Conditions on insertion versus conditions on position. *LI*. **Mistry**, **P.J**. 1997. Gujarati phonology. In *Phonologies of Asia and Africa 2*. Eisenbrauns. **Ulrich, C**. 1994. A unified account of Choctaw intensives. *Phonology*.