Mobile Affixes Undergo Movement: An Argument from Extended Exponence

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iGRA INTERACTION OF GRAMMATICAL BUILDING BLOCKS

1. Introduction

- Affix mobility – i.e. prefix/suffix alternations – in (San Francisco del Mar) Huave has previously been analyzed as *phonologically motivated*, driven by the avoidance of consonant clusters and their epenthetic repairs (Kim 2008, 2010; Zukoff 2021).
- **While phonological effects on surface order remain uncontroversial, it remains largely undetermined whether mobile affixes are truly underspecified for the edge they attach to, or undergo true phonologically-conditioned movement from a different base position determined on purely morphological grounds.**
- THIS WORK: The surface position of mobile affixes is derived by phonological movement from the edge they are specified for and initially attach to. **Evidence** for this claim is provided by cases of partially superfluous extended exponence (Caballero & Harris 2012).

2. Huave Verb Morphology

- **The Phenomenon:** In Huave, certain verbal affixes vary between prefix and suffix
  - E.g., in **(1)**, the morphological exponent /t/ realizing completive aspect attaches either to the right (1a) or the left (1b) of the stem.
  - C(...)C and V(...)V bases capture the default tendency of mobile affixes to surface as suffixes.

(1) a. **t**-a-ʰʧ-jus
CP-TV-give-1
'I gave'

b. paʰk-a-**t**-u-**s**
face.up-V-CP-ITR-1
'I laid face up'

(2) a. ʃ-i-n-a-ʰʧ
1-FT-1SB-TV-give
'I will give'

b. ʃ-i-ʧut-u-n
1-FT-sit-V-1SB
'I will sit'

(3) a. i-m-e-**r**-u+c
FT-SB-2-2I-TV-eat
'You will eat'

b. i-m-e-wic-i-**r**
FT-SB-2-rise-V-2I
'You will get up'

- In **(2)**, 1st person argument is realized twice: once by the more general marker *s* [+1], and once by the more specific marker *n* [+1,+SB].
- Similarly, in **(3)** the 2nd person argument is marked twice: by the mobile affix *r* [+2, +intransitive] which always co-occurs with the immobile marker *e* [+2].

∗ **Relative affix order** (Kim 2008): PROG-(1)-FT-2-(CP/SB/1SB/ST/2I)-root-CAUS-(CP/SB/1SB/ST/2I)-ITR-(1)-RF-PASS-PL
∗ **Mobile affixes:** /t/ COMPLETIVE [CP], /m/ SUBORDINATE [SB], /n/ STATIVE [ST], /r/ 2ND PERSON INTRANSITIVE [2I], /n/ 1ST PERSON SUBORDINATE [1SB]; /s/ 1ST PERSON [1]

3. Previous Work

- All of the previous, phonologically oriented approaches actually do without genuine phonological displacement and rather assume variable positioning determined by phonology:
- See Kim (2010) for a cyclic, co-phonology account; Kim (2015) for a subcategorization-based approach; Zukoff (2021) for a fully parallel approach with a single ranking of indexed alignment constraints and *CC/DEP; also Noyer (1994) on San Mateo del Mar Huave and syllable structure constraints.
- Furthermore, a fully syntactic approach is offered by Koopman (2016) based on Universal 20 positing VP movement as opposed to affix mobility.

References

Kim, Yuni (2008): Topics in the Phonology and Morphology of San Francisco Del Mar Huave. PhD Dissertation, UC, Berkeley.•Müller, Gereon (2007): Extended Exponence by Enrichment. Argument Encoding in German, Archi, and Timucua. *Proceedings of the 30th Annual Penn Linguistics Colloquium*, UPenn, Philadelphia •Müller, Gereon (2020): Inflectional Morphology in Harmonic Serialism. Advances in Optimality Theory, Equinox, Sheffield.•Zukoff, Sam (2021): A Parallel Approach to Mobile Affixation in Huave. *Supplemental Proceedings of AMP 2020*, Washington, DC.

4. Extended Exponence

- **Extended or multiple exponence** (Matthews 1972) refers to cases where a certain feature or a bundle of features is realized by more than one exponent in a given word form.
- Caballero & Harris (2012) propose the taxonomy of extended in (4) based on typological evidence.

- **Observation**: Partially superfluous extended exponence (4.I) raises problems for restrictive theories of inflectional morphology:
- ⋆ Why does the availability (and presence) of a more specific exponent like /y/ ↔ [f_1,f_2] not block a more general exponent /x/ ← [f_1]?

(4) **Taxonomy of extended exponence**
I. *Partially superfluous extended exponence*:
The feature specifications associated with two exponents are in a proper subset relation.
a. /x/ ↔ [f_1] b. /y/ ↔ [f_1,f_2]
II. *Overlapping extended exponence*:
Two exponents share some morpho-syntactic feature, but their morpho-syntactic features are not in a subset relation.
a. /x/ ↔ [f_1,f_2] b. /y/ ↔ [f_1,f_3]
III. *Fully superfluous extended exponence*:
Two exponents have identical feature specifications.
a. /x/ ↔ [f_1,f_2] b. /y/ ↔ [f_1,f_2]

(5) **The Partially Superfluous Extended Exponence Generalization:**
If there are two exponents /x/ ↔ [f_1] and /y/ ↔ [f_1,f_2] in a word, /x/ is realized closer to the stem than /y/.

- **(5)** has been derived by Caballero & Inkelas 2013, Stiebels 2015, and Müller 2020 in different ways in optimality-theoretic approaches to morphology that are sensitive to derivational order. Furthermore, Stiebels (2015) offers empirical evidence for (5).

5. Evidence for Phonological Movement from Huave

- Given (5), Huave verb forms in (2) and (3) are unexpected:
  - The less specific exponent *s* [+1] in (2) is expected to be attached first and surface closer to the stem since the more specific exponent *n* [+1,+SB] would obviate the need for the realization of *s* [+1].
- **Solution:**
  - Exponent *s* [+1] is realized first, and then *n* [+1,+SB] is attached second in order to realize [+SB].
  - Both are realized in the suffix position, a default landing site for mobile affixes.
  - Consequently, phonotactic constraints cause phonological movement generating the surface affix order where less specific exponents are farther away from the stem.

6. Conclusion and Future Research...

- **Opaque surface affix order is derived when phonologically-driven movement generates unexpected surface patterns of partially superfluous extended exponence.**
- **FUTURE RESEARCH:** Note that **(5)** does not need OT approaches to be derived. Whereas some standard restrictions on contextual allomorphy in DM (cf. Embick 2010; Marvin 2002; Bermúdez-Otero 2011 on phases; Bobaljik 2000 on cyclic insertion) do in fact not have **(5)** as a consequence, it is shown in Grofulović & Müller (2021) that **(5)** follows without further ado from an approach that relies on local feature copying to bring about extended exponence (Müller 2007) in a cyclic, bottom-up approach to morphological realization.