Prefixes, Infixes, and Two Layers to Allomorph Selection in Budai Rukai

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Overview

- The goal is to account for an alternation between prefixal and infixal allomorphs of the realis morpheme in Budai Rukai (Austronesian). This morpheme is used to mark actualized events, for present and past. Formosan languages (Austronesian; Taiwan) are mood-prominent languages with a dichotomy between realis and irrealis (Zeitoun 2024, Zeitoun et al. 1996).

  (1) a. **wa-**sénay ‘sing’ b. ki**<a>**lálra ‘hear’ c. **am-**íya ‘say’

- **Major claims**:
  - There are two systems that condition the form of the AV realis allomorphy: the phonological properties of verbal roots and the item-specific requirements of higher verbal prefixes.
  - The prefixal and infixal forms, (1a-b), are phonological variants of a single allomorph that contains a floating segment which can only be realized when infixation fails.
  - Differences in the interaction between allomorph selection and two types of verbal prefixes provide evidence for cyclic phonological spell-out (see Kalin 2022).

(Morpho-)Phonological conditioning by verbal roots

➢ **When the realis morpheme attaches directly to verbal roots, the patterns of allomorph selection are primarily conditioned by their phonological shapes (with some lexical exceptions).**

- The irregular verb takes **the prefix *am-***.

  (2) a. **am-**íya
  REAL-say

- Non-stress-initial verbs take **the infix <*a*>**. The infix is aligned to the left edge of the word as in OT (Prince and Smolensky 1993), as it is inserted right after the first syllable.

  (3) a. ki**<a>**lálra b. si**<a>**lrǐbu c. ki**<a>**samúla
  <REAL>hear **<REAL>**hull.millet **<REAL>**work.hard

- When the most left-aligned position contains /a/, the infix shifts one syllable to the right to avoid violations of an OCP constraint.

  (4) a. taru**<a>**máru b. tharu**<a>**takánga c. marasi**<a>**kái
  <REAL>receive **<REAL>**lie.down **<REAL>**responsible

- Stress-initial verbs take **the prefix *wa-***. This fact reveals that the infix cannot be inserted into a metrical foot bearing primary stress.

  (5) a. **wa-**(sénay) b. **wa-**(pána) c. **wa-**(úma)
  REAL-sing **REAL-**hunt **REAL-**kiss

- These two constraints interact in three-syllable words whose initial syllables contain the vowel /a/. The infix avoids the first syllable due to OCP and avoids the latter positions due to the metrical foot. Instead, the prefix *wa-* is used as the last resort.

  (6) a. **wa-**sa(bálri) b. **wa-**sa(ládha) c. **wa-**lra(pésay)
  REAL-smell **REAL-**chase **REAL-**overflow

➢ **The prefix *wa-* is the default with verbal roots, surfacing (i) when the infix cannot be used and (ii) in loanwords.**

- Lexicalized reduplicated verbs take **the prefix *wa-***.

  (7) a. **wa-**bangébange b. **wa-**gemégeme c. **wa-**kirǐkiri d. **wa-**pungúpungu
  REAL-knock **REAL-**grasp **REAL-**stir.fry **REAL-**bump

- Japanese loanword verbs take **the prefix *wa-***.

  (8) a. **wa-**múlri b. **wa-**tigámi
  REAL-force **REAL-**write(letter)

Structural conditioning by verbal prefixes

➢ **AV realis allomorphy is structurally conditioned by verbal prefixes.**

- Following Cinque 1999, the functional clausal structure is assumed for Budai Rukai, where modals and tenses are higher than (ir)realis. The clausal structure captures the two types of interaction between realis allomorphy and verbal prefixes.

  (9) … > $Mod_{epistemic}$ > T_{past} > T_{future} > $Mood_{(ir)realis}$ > … > Voice (Cinque 1999:76)

- The Infl-related prefixes, such as modal and tense, do not influence the observed realis allomorphy conditioned by verbal roots, as *wa-*, *<a>*, and *am-*.

  (10) a. **wa-**sénay b. ki**<a>**lálra c. **am-**íya
  REAL-sing **<REAL>**hear **REAL-**say

  (11) a. na-**wa-**sénay b. na-ki**<a>**lálra c. na-**am-**íya
  PAST-**REAL-**sing PAST-**<REAL>**hear PAST-**REAL-**say
  ‘sang’ ‘heard’ ‘said’

  (12) a. law-**wa-**sénay b. law-ki**<a>**lálra c. law-**am-**íya
  POSS-**REAL-**sing POSS-**<REAL>**hear POSS-**REAL-**say
  ‘may sing’ ‘may hear’ ‘may say’

- The *v*-related prefixes, such as causative and passive-like, influence the realis allomorphy and change it uniformly into the infix *<a>*.

  (13) a. **wa-**sénay b. ki**<a>**lálra c. **am-**íya
  REAL-sing **<REAL>**hear **REAL-**say

  (14) a. pa**<a>**sénay b. pa-ki**<a>**lálra c. pa**<a>**íya
  CAUS**<REAL>**sing CAUS-**<REAL>**hear CAUS**<REAL>**say
  ‘make sing’ ‘make hear’ ‘make say’

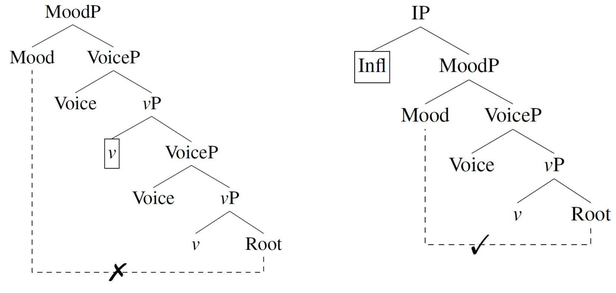
  (15) a. ki**<a>**sénay b. ki**<a>**kilálra c. ki**<a>**íya
  PASS**<REAL>**sing PASS**<REAL>**hear PASS**<REAL>**say
  ‘is sung’ ‘is heard’ ‘is said’

- The two patterns are not phonologically determined: Although the causative and the past tense morphemes are phonologically similar, ending with an /a/, they give rise to different patterns.

  (16) a. na-**am-**íya b. pa**<a>**íya
  PAST-**REAL-**say CAUS**<REAL>**say
  ‘say’ ‘make say’

- The two patterns are structurally determined: The *v*-related prefixes are merged before realis and thus block the lexical context of the root, whereas the Infl-related prefixes are merged after realis and do not change root-sensitive allomorphy (see Embick 2010).

  (17) a. *v*-related prefix b. Infl-related prefix



➢ **The infix *<a>* is the default with verbal prefixes, surfacing when an intervening prefix between realis and verbal roots is introduced.**

➢ **Structural height determines the ways that these prefixes interact with allomorph selection.**

Cyclic Phonology and Allomorph Selection

➢ **Proposal: The two surface default allomorphs derive from a single VI, that is, the default VI in morphology is realized with a default form in phonology.**

- In morphology, there are two Vocabulary Items for Budai Rukai AV realis, where the allomorph *[w]a-*, with an initial floating segment of [w], is the default, as decided by the blocking effect with *v*-related prefixes.

  (18) a. [REAL] ↔ am- / íya ‘say’
  b. [REAL] ↔ [w]a-

- The structure-based concatenation is important for Vocabulary Insertion, although the linear positions are blurred by infixation.

  (19) a. na- **am-** **íya** → na- **am-** íya
  PAST- **REAL-** **say** → PAST- **REAL** say

  (20) a. **[w]a-** **pa-** íya → pa- **<a>** íya (*pa-**am-**íya)
  REAL- **CAUS-** say → CAUS- **<REAL>** say

- In phonology, the default allomorph *[w]a-* can have two surface realizations, where the realization as a prefix *wa-* is the default, as decided by the fact that infixation fails.

- The floating segment is lost when the VI undergoes infixation, whereas it is retained when the VI fails to undergo infixation and surfaces as a prefix. The floating segment helps separate this VI from other *a*-prefixes in the language.

  (21) a. [w]a- → <a> when infixation can take place
  b. [w]a- → wa- when infixation fails

- The outward cyclic phonological spell-out is important for infixation, as the infixation can only target the sub-word inwardly but is not evaluated by the whole word.

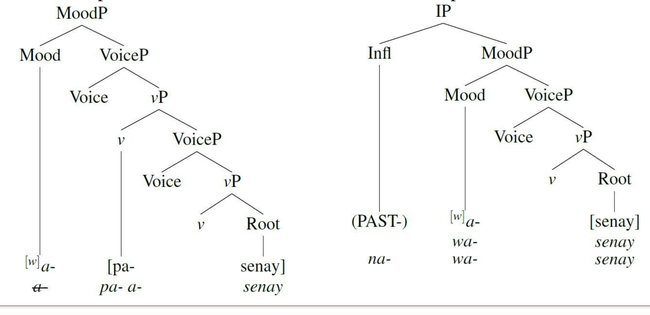
  (22) **[w]a-** [pa- sénay] → pa- **<a>** sénay
  REAL- [CAUS- sing] → CAUS- **<REAL>** sing

  (23) **[w]a-** [sénay] → **wa-** sénay → na- **wa-** sénay (*na-**<a>**sénay)
  REAL- [sing] → **REAL-** sing → PAST- **REAL-** sing

➢ This provides evidence for the role of **structural hierarchy for blocking** and the **outward cyclic phonological spell-out**, lined with the derivational timing by Kalin 2022.

(24) Realization (repeat the cycle for each unexponed morpheme)
concatenation → exponent choice → exponent insertion (including infixation)

(25) a. *v*-related prefix b. Infl-related prefix



Selected references

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