A Minimalist View of Root-and-template Morphology in Sierra Miwok

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Background. Minimalism (Chomsky, 1995) encourages a radical rethinking of the interaction between morphology and phonology with syntax. In this paper, we provide a thorough and original reanalysis of a putative case of root-and-template morphology along minimalist lines, verb stems in Central Sierra Miwok (CSM; Yok-Utian; California; Freeland 1951). Our treatment bears on some central issues in the interface between (morpho)phonology and (morpho)syntax.

In terms of the classical dichotomy between lists and rules, a rule component of a language can be simplified if listed items interact with UG in a way that obviates any language-specific rule. The Borer-Chomsky Conjecture (BCC, Borer 1984) holds that cross-linguistic variation is limited to featural (lexical) properties of functional heads. Extending the general strategy of the BCC to morphophonology, language-specific morphological rules, such as templates, can be eliminated by shifting the burden to the way in which the phonological component integrates the lexical entries of stems and functional morphemes into expressions that are fully interpretable at the sensory-motor interface.

Stems. Each simple verb in CSM may surface in one of four stem shapes, governed by voice, aspectual, tense, mood and polarity suffixes. Examples:

	UR	(1) 1st	(2) 2nd	(3) 3rd	(4) 4th
'roll'	/hutel/	a. hutéel	a. hutéll	a. húttel	a. hútle
'catch up'	/nakpa/	b. nákpa	b. nakápp	b. nákkap	b. nákpa
'bury'	/hame/	c. hámme	c. hamé??	c. hámmeʔ	c. hámʔe
'catch'	/lot/	d. lóot	d. lótt	d. lóttuʔ	d. lótʔu

The spell-out procedure. Syntax combines the relevant syntactic heads, including those responsible for stem formation, and identifies word boundaries. Spell-out targets spans rather than heads (Bye and Svenonius, 2012), and selects exponents from a list. The affixes used in stem formation are featurally deficient V and C nodes, usually projecting a mora (important references on prespecified prosody include Inkelas 1989; Inkelas and Cho 1993; for featural deficiency, see Bye and Svenonius 2012; Zimmermann (2017)).

Nonconcatenative morphology is epiphenomenal. The exponent assembly is fed into the phonological computation to get the surface output. The non-concatenative features of the system emerge from the way the phonology integrates these featurally deficient affixes with the segmental material making up the verb root. Our analysis requires no recourse to class features, templates or other specifically morphological mechanisms. The result is a fully minimalist and clean spell-out interface, eliminating any role for autonomous morphology.

Functional exponents and integration with stems. The 1st stem formatives are exponents of v, with limited phonologically conditioned allomorphs (vocalic mora with C-final roots (1a,d), an antitropal consonantal mora with V-final roots (1b,c)). [For antitropal affixes, which are oriented to the edge opposite of that specified by the syntax, see Bye and Svenonius (2012).]

The 2nd and 3rd stem formatives are portmanteau exponents of v and an Asp head. The 2nd stem formative is a featurally unspecified consonant projecting a mora. In the phonology, this affixal consonant coalesces with the root-final consonant if there is one, resulting in gemination ((2a,d)); if the root is V-final, the affixal consonant gains its featural content through metathesis and coalescence ((2b)) where possible, else a glottal stop is epenthesized ((2c)).

The third stem is formed by adding a moraic consonant to the first syllable of the root and a bare C suffix (with no mora), which coalesces with a root-final consonant if there is one ((3a); (3b) with metathesis), otherwise through epenthesis of a glottal stop ((3c); and (3d) with epenthesis of [u] for syllabic well-formedness). The bare C suffix lacks a mora on the evidence that, unlike the second stem, the final consonant of the third stem does not geminate.

We argue that the 4th stem is a nominalization, syntactically and morphologically derived from the 3rd stem by the affixation of an empty V root node. The phonological response is metathesis of the last vowel of the 3rd stem form, which coalesces with the empty affixal V.

Consequences. On our analysis, the morphology of CSM is less exotic than it looks. In contrast to previous approaches, including ones that share a commitment to eliminating templates, such as Zimmermann's (2017) analysis of a different language in the Miwok group, we rely on relatively complex lexical entries in order to keep the phonological constraints and their interaction maximally simple, much in the spirit of what the BCC does for syntax.

References

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