

TEMPLATE VARIATION IN CHUKCHANSI YOKUTS

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1 Templatic Morphology in Chukchansi Yokuts

Templatic morphology in Chukchansi, as in other Yokuts languages, involves phonologically unpredictable root alternations that are associated with specific suffixes.¹² These root alternations involve inserting, deleting, shortening, lengthening, and altering the quality of vowels; they can also involve insertion of a glottal stop or glottalization. The alternations are phonologically unpredictable because they are not driven by syllable phonotactics, which drive other vowel alternations in Chukchansi. I follow the literature in calling such alternations “templatic” because roots with different shapes in other contexts have a single target shape in the context of specific suffixes. The target shape can be characterized in terms of either consonants and vowels—a CV-template (McCarthy 1979, Archangeli 1983)—or syllables—a prosodic template (McCarthy & Prince 1986, Archangeli 1991).

For example, in (1), the root /lihm/ ‘run’ has different forms in (1 a-b) and (2). With the RECENT PAST suffix /t^h/, the form of the root is [lih.m]; the high vowel [i] is inserted between the root and the suffix [t^h]. With the REMOTE PAST suffix /t^ha?/, the form of the root is [li.him], with [i] inserted inside the root. In both (1 a-b), the appearance of epenthetic [i] is predictable, based on the CV(X) syllable canon in Yokuts languages, which disallows consonant clusters within a syllable (Newman 1944, Hockett 1967, Kenstowicz and Kisseberth 1979).

¹ Chukchansi belongs to the Yokuts group of languages, indigenous to Central California. Previous studies of Chukchansi include Newman (1944), as part of his grammar of six varieties of Yokuts, and Collord’s (1968) *Chukchansi Grammar*. All word forms in this paper have been spoken by two native speakers of Chukchansi, Holly and Jane Wyatt, who are sisters raised by their Chukchansi-speaking grandmother. Chukchansi, like all indigenous Californian languages, is highly endangered; according to Holly and Jane, there are fewer than ten other native speakers of Chukchansi. Unless explicitly noted otherwise, the forms in this paper are from the author’s fieldwork, from Spring 2010 to the present.

² This paper was presented as a poster at the Symposium on American Indian Language (SAIL) 2018, at the University of Ottawa on April 14, 2018, where it benefitted from feedback by many scholars in attendance, especially Donna Gerds and Wilson de Lima Silva. My postdoctoral adviser, Joyce McDonough, also provided helpful feedback on this paper. Any errors in this paper are my own.

- (1) a. [lih.mit^h] *[lihmt^h]
 /lihm-t^h/
 run-RCT.PST³
 ‘ran’ (recent past)
- b. [li.him.t^haʔ] *[lihmt^haʔ]
 /lihm-t^haʔ/
 run-REM.PST
 ‘ran’ (remote past)

In (2), with the AGENTIVE nominalizer /tʃ^ʔ/, the form of the root is [le.he:.m]: a long mid vowel [e:] is inserted into the root, creating a light-heavy disyllable (henceforth “LH”). A high vowel [i] is also epenthesised, between the root and the suffix [tʃ^ʔ].

- (2) [le.he:.mitʃ^ʔ] *[lih.mitʃ^ʔ]
 /lihm-tʃ^ʔ/
 run-AGTV
 ‘one that runs’ (nom)

The appearance of the long vowel [e:] is not driven by phonotactics, since the other epenthetic vowel [i] suffices to syllabify all the consonants of the word. Rather, the goal is for the root to form an LH, or equivalently, that the word begins in LH. This is the sense in which Chukchansi has templatic morphology: roots take on a target shape, or template, in certain morphological contexts, and this shape is not determined by syllable phonotactics.

This paper follows Guekguezian’s (2017a,b) argument that LH is the basic template in Chukchansi, that is, the most common template form in terms of syllable structure. The paper goes beyond Guekguezian (2017a) in detailing the variety of templatic forms beyond the basic LH template. It also investigates the different influences on templatic words, that is, words with a root template. These influences include the specific roots and suffixes in templatic words; the classes of roots that behave the same way in their templatic words; and, the general syllable phonotactics and stress patterns of Chukchansi.

2 The Basic LH Template

Guekguezian (2017a,b) shows that the basic templatic form in Chukchansi is LH, an iambic disyllable. The LH template is found with most of the templatic suffixes (that is, suffixes that provide the context for templates (3)) and with most roots that occur in templatic words (that is, words whose roots are in templatic forms (4)).

³ Morpheme abbreviations in this paper are as follows: ACC ‘accusative’, ADJV ‘adjunctive’, AGTV ‘agentive’, CAUS ‘causative’, CAUS.INCH ‘causative-inchoative’, DISTR ‘distributive’, DUR ‘durative’, inCh ‘inchoative’, NOM ‘nominative’, N.PST ‘non-past’, REM.PST ‘remote past’, RCT.PST ‘recent past’. Nominative case is unmarked when the preceding morpheme ends in an obstruent.

(3) Different roots, same templatic suffix = LH template

- | | | | |
|----|--|------------------|--------------------------|
| a. | [<u>le.he:</u> mitʃʷ]
/lihm-tʃʷ/
run-AGTV
‘one that runs’ (NOM) | /lihm/ ‘run’ | CVCC (repeated from (2)) |
| b. | [<u>pe.we:</u> nitʃʷ]
/pe:wn-tʃʷ/
sew-AGTV
‘one that sews’ (NOM) | /pe:wn/ ‘sew’ | CV:CC |
| c. | [<u>xa.tʰa:</u> tʃʷi]
/xatʰ-tʃʷ-i/
eat-AGTV-ACC
‘one that eats’ (ACC) | /xatʰ/ ‘eat’ | CVC |
| d. | [<u>ma.xa:</u> tʃʷi]
/ma:x-tʃʷ-i/
collect-AGTV-ACC
‘one that collects’ (ACC) | /ma:x/ ‘collect’ | CV:C |

(4) Different suffixes, same root = LH template

- | | | | |
|----|--|-------------------|--|
| a. | [<u>le.he:</u> metʰ]
/lihm-e-tʰ/
run-CAUS-RCT.PST
‘made someone run’ (recent past) | /e/ CAUSATIVE | |
| b. | [<u>le.he:</u> manʷ]
/lihm-a-nʷ/
sew-DISTR-N.PST
‘runs all around’ | /a/ DISTRIBUTIVE | |
| c. | [<u>le.hemʷ</u> ?anʷ]
/lihm-ʔa-nʷ/
sew-DUR-N.PST
‘is running’ | /ʔa/ DURATIVE | |
| d. | [<u>le.hemʷ</u> .hijʷ]
/lihm-ʔhij-ʔ/
run-ADJV-NOM
‘running place’ (nom) | /ʔhij/ ADJUNCTIVE | |

However, in this paper, I describe templatic forms that are not captured by the basic LH template. This includes the vowel patterns of different classes of roots in their templatic forms based on their phonological properties; template shapes that are not LH; and, templatic forms that are exceptional, i.e., are not expected based on the phonological properties of the root or on the templatic suffix. I talk about this as template variation, depending on the root class, the individual

root or suffix, or even between different forms of a templatic word that has the same morphological and semantic content.

The question this paper poses is: What can template variation in Chukchansi Yokuts teach us in light of the basic template? The basic LH template is important for phenomena involving minimality. Since the basic template is disyllabic, only those roots with a single vowel need to be augmented to fill the template (Guekguezian 2017a,b). In fact, most roots involved in templatic words have a single underlying vowel, though there are exceptions to this (see Section 4.2). Moreover, the template can include the vowel-less UNACCUSATIVE suffix /-n-/ (Guekguezian 2017a:112-113; known as “base-faking” in Newman 1944:75-76, using the term “mediopassive”), and is blocked by reduplication, which provides a second vowel (Guekguezian 2017a:109-110). In this paper, I do not delve into the problems in Guekguezian (2017a) raised by Golston and Krämer (2018) about word minimality, Chukchansi stress, and the morphosyntax of suffixes.

On the other hand, the basic LH template has nothing to say about the quality of vowels in the template, the appearance of a glottal stop or glottalization in some templatic forms, optionality in templatic forms, and allomorphy involving templatic suffixes. There are also syllabic templates beside the LH template, including an LL (light-light) template with the DURATIVE [-ʔa-] and an H (heavy monosyllable) template with the DUBITATIVE AGENTIVE nominalizer (also [-ʔa-]). To generalize about template variation apart from the basic template requires dividing roots into phonological classes, such as those with two vs. three consonants (Section 3). Specific templatic suffixes lexically specify vowel quality or glottalization (Section 4.1). When multiple templatic forms are possible with a specific suffix, then specific roots can prefer to appear in one form or another (Section 4.2).

3 Phonological Root Classes

Templatic morphology distinguishes three main classes of roots based on their phonological structure, in terms of consonants and vowels. These classes are two-consonant roots with a single vowel quality (2C); three-consonant roots with a single vowel quality (3C); and, roots with multiple vowels (MV). 2C roots are either CVC or CV:C in shape, with the exception of four CVCV: roots: /p^hana:/ ‘arrive’, /xojo:/ ‘put down’, /hojo:/ ‘call’, and /tʃ^hojo:/ ‘urinate’. 3C roots include CVCC, CV:CC, and CVCV:C shapes. MV roots end in a short vowel or a consonant, and include shapes like CV:CV, CVCCV, CVCCVC, and CVCV:CV. 2C and 3C roots participate in templatic morphology, while MV roots mostly do not (though see section 4.2 for an exception).

3.1 Vowel Quality

The vowel quality patterns in templatic forms are sensitive to the number of root consonants, and shows the role that the two classes of 2C and 3C roots play in Chukchansi templates. 2C roots have a vowel quality pattern where the second vowel is always low and the first vowel is either high or low, never mid. I focus on the unrounded vowels [i e a], not the rounded vowels [u o], because of the complexities in forms with rounded vowels (they exhibit rounding harmony that is sensitive to height and/or morphological context, in which [o] can behave as either a mid or a low vowel; see e.g., Hockett 1967, Kuroda 1967, Blevins 2004).

When a 2C root's vowel is low /a/, both the first and second vowel in the templatic form are low [a]. For example, in (5), the root is /xat/ 'eat' with a low vowel, as shown in the atemplatic forms (5a-b). The templatic forms have two low vowels [a], like in (5c), shown with the CAUSATIVE templatic suffix [-la].

(5) Low Vowel 2C Roots

- a. [xa.t^hi^ht^h]
 /xat^h-t^h/
 'eat'-RCT.PST
 "ate" (recent past)
- b. [xat^h.t^haʔ]
 /xat^h-t^haʔ/
 'eat'-REM.PST
 "ate" (remote past)
- c. [xa.t^ha:lat^h]
 /xat^h-la-t^h/
 'eat'-CAUS-RCT.PST
 "made someone eat" (recent past)

In (5), the root is /tʰij/ 'cut', with a short high vowel, observable in the atemplatic forms in (6a-b). The templatic form in (6c) has a high vowel [i] followed by a low vowel [a:].

(6) Short High Vowel 2C Roots

- a. [tʰi.ʃit^h]
 /tʰiʃ-t^h/
 'cut'-RCT.PST
 "cut it" (recent past)
- b. [tʰiʃ.t^haʔ]
 /tʰiʃ-t^haʔ/
 'cut'-REM.PST
 "cut it" (remote past)
- c. [tʰi.ʃa:lat^h]
 /tʰiʃ-la-t^h/
 'cut'-CAUS-RCT.PST
 "made someone cut it" (recent past)

2C roots with a long mid vowel, like /se:p^h/ 'tear' in (7), have an identical vowel pattern in templatic forms as roots with a short high vowel, like /tʰij/ in (6). In their atemplatic forms, roots like /se:p^h/ have mid vowels (7a-b); the long vowel in (7a) is predictably short in a closed syllable (7b) due to Chukchansi syllable phonotactics. In templatic forms, however, these roots have a short high vowel [i] followed by a low vowel [a:], like in (7c). This is the same vowel pattern as in (6c). The first vowel is short due to the basic LH template, not to syllable phonotactics, since it is in an open syllable. See Newman (1944) for alternations between short high vowels [i u] and long

mid vowels [e: o:]; these alternations are common in Yokuts, but their generality is debated (Archangeli 1988, Blevins 2004).

(7) Long Mid Vowel 2C Roots

- a. [se:p^hit^h]
/se:p^h-t^h/
'tear'-RCT.PST
"tore it" (recent past)
- b. [sep^h.t^haʔ]
/se:p^h-t^haʔ/
'tore'-REM.PST
"tore it" (remote past)
- c. [si:p^ha:lat^h]
/se:p^h-la-t^h/
tear-CAUS-RCT.PST
"made someone tear it"

3C roots have a different vowel quality pattern, where the vowels of the template are identical: either both mid or both low, but not high. For example, the low vowel 3C root /ʔaml/, with a low first vowel in the atemplatic forms (8a-b), has two low vowels in the templatic word (8c). The epenthetic high vowel [i] in (8b) is predictable based on syllable phonotactics. Unlike phonotactically-driven epenthetic vowels, which are always high, vowels inserted in templatic forms follow the vowel quality patterns here. Note also that 3C roots take a different allomorph of the CAUSATIVE templatic suffix: [-e] (8-10), not the allomorph [-la] that the 2C roots take (5-7).

(8) Low Vowel 2C Roots

- a. [ʔam.lit^h]
/ʔaml-t^h/
'help'-RCT.PST
'helped' (recent past)
- b. [ʔa.mil.t^haʔ]
/ʔaml-t^haʔ/
'help'-REM.PST
'helped' (remote past)
- c. [ʔa.ma:let^h]
/ʔaml-e-t^h/
help-CAUS-RCT.PST
'made someone help' (recent past)

In (9) and (10c), the short high vowel 3C root /lihm/ (see (1) for atemplatic forms) and the long mid vowel 3C root /pe:wɪn/ have two mid vowels [e] and [e:] in their templatic forms (9 and 10c). The short first vowel of (9) is mid [e], even though in atemplatic forms (1a-b) it is high [i] when

short. Note the alternations in the atemplatic forms of /pe:wn/, with shortening and [i]-epenthesis in (10a) and [i]-epenthesis inside the root in (10b); these are motivated by syllable phonotactics.

(9) Short High Vowel 3C Roots

[le.he:met^h]

/lihm-e-t^h/

run-CAUS-RCT.PST

‘made someone run’ (recent past)

(repeated from (4a))

(10) Long Mid Vowel 3C Roots

a. [pew.nit^h]

/pe:wn-t^h/

sew-RCT.PST

‘sewed it’ (recent past)

b. [pe:win.t^haʔ]

/pe:wn-t^haʔ/

sew-REM.PST

‘sewed’ (remote past)

c. [pe.we:net^h]

/pe:wn-e-t^h/

sew-AGTV

‘made someone sew’ (recent past)

Roots with low vowels always have two low vowels in templatic forms, whether 2C roots like /xat^h/ (5) or 3C roots like /ʔaml/ (8): [Ca.Ca(:)(C)]. On the other hand, 2C and 3C roots with short high or long mid vowels behave differently. 2C roots with a mid or high vowel like /tʃ^hij/ (6) and /se:p^h/ (7) have a high vowel followed by a low vowel in templatic words: [Ci.Ca(:)]. 3C roots with a mid or high vowel like /lihm/ (9) and /pe:wn/ (10) have two mid vowels: [Ce.Ce(:)C].

3.2 Second Syllable of Template

There are other differences besides vowel quality between templatic forms with 2C and 3C roots. As already seen, 2C roots appear with the [-la] allomorph of the CAUSATIVE templatic suffix, while 3C roots appear with the [-e] allomorph when they have a templatic form (without a template, 3C roots appears with the [-la] allomorph in a causative verb; see Section 4.2). Additionally, with the durative templatic suffix [-ʔa], the second vowel is always short. Thus, 2C roots have an LL template (11a), while 3C roots have an LH template because their third consonant closes the second syllable ((11b), also (4c)).⁴

⁴ Newman (1944:49-50) gives an LH template for durative forms of 2C roots in Chukchansi, such as the form [li.p^ha.ʔanʔ] ‘is watching’ from the 2C root /lip^h/ ‘watch’ (1944:101; IPA form given in place of Newman’s transcription). Broadbent’s (1958) ‘Chukchansi Vocabulary’ also gives an LH template for the durative of 2C roots in Chukchansi. Collord (1968), on the other hand, gives an LL template for durative forms of 2C roots, such as [xa.t^ha.ʔanʔ] ‘[be] eating now’ (1968:47) for the 2C root /xat^h/ ‘eat’, identical to (11a) below.

(11) 2C vs. 3C durative form

- a. [xa.t^ha.ʔanʔ] [CV.Ca.-ʔa-nʔ]
 /xat^h-ʔa-nʔ/
 eat-DUR-N.PST
 ‘is eating’
- b. [ʔa.malʔ.ʔanʔ] [CV.CVCʔ.-ʔanʔ]
 /ʔaml-ʔa-nʔ/
 help-DUR-N.PST
 ‘is helping’

The third consonant of 3C roots gets glottalized if it is a sonorant with the durative, like [lʔ] in (11b). This glottalization also occurs in 3C roots with the adjunctive templatic suffix, which has the allomorph [-hij] (12b). For 2C roots with the adjunctive, the allomorph is [-ʔhij], so the second syllable is closed by [ʔ].

(12) 2C vs. 3C adjunctive forms

- a. [xa.t^haʔ.hijʔ] [CV.Ca-ʔ.hijʔ]
 /xat^h-ʔhij-ʔ/
 eat-ADJV-NOM
 ‘eating place’ (NOM)
- b. [ʔa.malʔ.hijʔ] [CV.CVCʔ.-hijʔ]
 /ʔaml-ʔhij-ʔ/
 help-ADJV-NOM
 ‘helping place’ (NOM)

Table 1 shows templatic forms of the 2C roots /xat^h/, /tʃ^hiʃ/, and /se:p^h/ (from 5-7) and the 3C roots /ʔaml/, /lihm/, and /pe:wn/ (from 8-10), with four different templatic suffixes: agentive /tʃ/ (with the accusative /-i/ for 2C but not 3C roots), causative /la/ with 2C and /e/ with 3C roots, durative /-ʔa/, and adjunctive /-ʔhij/. Table 1 illustrates the different vowel quality patterns of 2C and 3C roots, as well as other differences between these two phonologically-determined root classes.

Table 1. 2C vs. 3C Templatic Forms

Root Class	2C			3C		
	Low	Short High	Long Mid	Low	Short High	Long Mid
Root	/xat ^h /	/tʃ ^h iʃ/	/se:p ^h /	/ʔaml/	/lihm/	/pe:wn/
Vowel Pattern	Ca.Ca(:)	Ci.Ca(:)		Ca.Ca(:)C	Ce.Ce(:)C	
Agentive	xa.t ^h a:-tʃ ^ʔ -i	tʃ ^h i.ʃa:-tʃ ^ʔ -i	si.p ^h a:-tʃ ^ʔ -i	ʔa.ma:.l-itʃ ^ʔ	le.he:.m-itʃ ^ʔ	pe.we:.n-itʃ ^ʔ
Causative	xa.t ^h a:- la -t ^h	tʃ ^h i.ʃa:- la -t ^h	si.p ^h a:- la -t ^h	ʔa.ma:.l- e -t ^h	le.he:.m- e -t ^h	pe.we:.n- e -t ^h
Durative	xa.t ^h a -ʔa-nʔ	tʃ ^h i.ʃ a -ʔa-nʔ	si.p ^h a -ʔa-nʔ	ʔa.m al ʔ-ʔa-nʔ	le.h em ʔ-ʔa-nʔ	pe.w en ʔ-ʔa-nʔ
Adjunctive	xa.t ^h a -ʔ.hijʔ	tʃ ^h i.ʃ a -ʔ.hijʔ	si.p ^h a -ʔ.hijʔ	ʔa.m al ʔ-hijʔ	le.h em ʔ-hijʔ	pe.w en ʔ-hijʔ

4 Lexical Specification

This section looks at template variation that is lexically specified by a particular root or suffix. Several templatic suffixes occur with templatic forms that are different either in shape from the LH basic template, or in vowel quality from the patterns in Section 3. For example, the durative templatic suffix [-ʔa] in Section 3 occur with an LL template for 2C roots (11a, Table 1).

4.1 Suffix-Based Specification

The vowel quality of templatic forms is different from the pattern in Section 3 and Table 1 with the following templatic suffixes: the distributive [-e-] or [-a-], the inchoative [-a-], and the causative-inchoative [-ta-]. With these suffixes, the second vowel is always mid [e] or [e:], never low [a(:)], even when the root vowel is low. Note the distributive form in (13a), with [ʔ] inserted between the vowel [e:] of the template and the vowel [a] of the suffix, and the [-xo] allomorph of the durative, which occurs instead of [-ʔa] when the durative does not immediately follow a templatic root.

(13) Distributive Templates with Mid Vowel [e:]

- a. [xa.t^he:.ʔa.xonʔ] [CV.Ce:.ʔ]
 /xat^h-a-xo-nʔ/
 eat-DISTR-DUR-N.PST
 ‘eating all over the place’
- b. [ʔa.me:.lanʔ] [CV.Ce:.C]
 /ʔaml-a-nʔ/
 help-DISTR-N.PST
 ‘helps lots of people’

The difference in template vowel length between the inchoative form with [e:] in (14a) and the causative-inchoative form with [e] in (14b) is predictable from the absence and presence, respectively of a coda in the second syllable. Note that if the causative-inchoative were an atemplatic suffix, the second vowel would be high [i], since phonotactically-driven epenthetic vowels in Chukchansi and Yokuts in general are always high (Hockett 1967, Kuroda 1967, Archangeli 1988, Guekguezian 2011).

(14) Inchoatives with Mid Vowel [e:]

- a. [ka.je:.sa.t^haʔ] [CV.Ce:.C]
 /kajs-a-t^haʔʔ/
 good-INCH-REM.PST
 ‘got better’ (remote past)
- b. [ka.jes.t^ha.t^haʔ] [CV.CeC]
 /kajs-t^ha-t^haʔʔ/
 good-CAUS.INCH-REM.PST
 ‘made someone better’ (remote past)

These suffixes lexically specify the quality of the preceding vowel. One way to account for this behavior, following Zoll's (1996) analysis of similar phenomena in Yawelmani Yokuts, is to posit an autosegment [-low] as part of these suffixes. This autosegment appears on the root, not the suffix (see Tranel 1995 for similar behavior of affixal tone in Mixteco).

4.2 Root-Based Specification

While the variation in Section 4.1 is due to the templatic suffix, other template variation may be due, at least in part, to the root. The causative suffixes [la] and [e] can occur with different templatic forms; they can also occur without a template. Instead of a long vowel in the second syllable of the basic LH template, causative forms can have an [ʔ] in the coda of this syllable. Roots of the form /CVCV:/, like /p^hana:/ 'arrive', have monosyllabic templates with the causative, where the second, long vowel that normally appears with the root is deleted. Causative verbs also occur without templatic forms, where the shape of the root is determined by syllable phonotactics. In atemplatic causatives, only the allomorph [-la] occurs, even with 3C roots, which take the [-e] allomorph when in a templatic form. Table 2 shows different variants of causative verbs that have been elicited from our Chukchansi consultant.

Table 2. Root-sensitive Variation in Causative Verbs

Root	/xat ^h / 'eat'	/waʃ/ 'tell a story'	/p ^h ana:/ 'arrive'	/ha:t ^h m/ 'sing'
Basic LH Template	[<u>xa.t^ha:</u> .la.t ^h aʔ]	[<u>wa.ʃa:</u> .lat ^h aʔ]		[<u>ha.t^ha:</u> .me.t ^h aʔ]
[ʔ] Coda		[<u>wa.ʃaʔ</u> .lat ^h aʔ]		[<u>ha.t^haʔ</u> .me.t ^h aʔ]
1σ Template			[<u>p^han</u> .la.t ^h aʔ]	
Atemplatic	[<u>xat^h</u> .la.t ^h aʔ]			[<u>ha:t^him</u> .la.t ^h aʔ]

One way to look at this is that the possible variations (basic LH template, [ʔ] coda template, monosyllabic template, and lack of template) are all associated with the causative suffix, while different roots prefer specific variations. For example, the root /xat/ 'eat' is typically given by our Chukchansi consultant with the atemplatic form [xat^h.la.taʔ].

The agentive templatic suffix also displays sensitivity to roots. In the Chukchansi data of Collord's (1968) grammar, the agentive forms of CVCV:C roots have monosyllabic templates. For example, the CVCV:C root /hewe:t^h/ 'walk' has the monosyllabic form [hiw.t^h] in Collord (1968), as seen in (15c). Compare the form of the root [he.we:t^h] with the causative templatic suffix [-e] in (15d), where the root has the basic LH template; note that while this causative form is indistinguishable from the atemplatic form of CVCV:C roots (15a), the causative allomorph is [-e], which only appears with 3C roots in templatic forms.

(15) CVCV:C roots and monosyllabic agentive templates

- a. [he.we:t^hit^h]
/hewe:t^h-t^h/
walk-RCT.PST
'walked' (recent past)

- b. [he.wet^h.t^haʔ]
/hewe:t^h-t^haʔ/
walk-REM.PST
'walked' (remote past)
- c. [hiw.t^hitʔ̚] Collord (1968:68)
/hewe:t^h-tʃ̚/
walk-AGTV
'one that walks' (nom) "walker" in Collord
- d. [he.we:.t^het^h]
/hewe:t^h-e-t^h/
walk-CAUS-RCT.PST
'made someone walk' (recent past)

In our consultant's speech, the agentive form does not have the monosyllabic template, but is LH instead: [he.we:.t^hitʔ̚] 'one who walks'.

The agentive templatic suffix also occurs with lengthened final root vowels of some multi-vowel (MV) roots. As noted at the beginning of section 3, templatic morphology is typically restricted to roots with one vowel (or CVCV:(C) roots, which pattern with one-vowel roots in Yokuts; Newman 1944, Gamble 1978). Multi-vowel (MV) roots for the most part do not undergo templatic alternations; that is, their forms are determined by the general phonological processes of Chukchansi. In the context of templatic suffixes, therefore, MV roots do not have templatic forms. Compare the atemplatic causative form of the MV root /tʃ̚etma/ 'think' in (15c) with templatic causative forms of 2C and 3C roots in (5c, 6c, 7c, 8c, 9, 10c) above.

(16) MV Roots are atemplatic

- a. [tʃ̚et.mat^h]
/tʃ̚et.ma-t^h/
think-RCT.PST
'thought' (recent past)
- b. [tʃ̚et.ma.t^haʔ]
/tʃ̚et.ma-t^haʔ/
think-REM.PST
'thought' (remote past)
- c. [tʃ̚et.ma.lat^h]
/tʃ̚et.ma-la-t^h/
think-CAUS-RCT.PST
'made someone think' (recent past)

However, certain MV roots have lengthened final vowels with the agentive templatic suffix. This final root vowel lengthening is illustrated in (17c) by the MV root /tukma/ 'bruise', where the root has the form [tuk.ma:] in the agentive; note also the epenthetic glottal stop [ʔ] in this form.

(17) MV Roots with vowel lengthened in Agentive forms

- a. [tuk.mat^h]
/tukma-t^h/
bruise-RCT.PST
'bruised' (recent past)
- b. [tuk.ma.t^haʔ]
/tukma-t^haʔ/
bruise-REM.PST
'bruised' (remote past)
- c. [tuk.ma:ʔitʃ̣]
/tukma-tʃ̣/
bruise-AGTV
'one that bruises' (nom)

It is not clear whether there is any pattern—phonological, semantic, or otherwise—to determine when an MV roots has a lengthened vowel in the agentive, or whether this is lexically specified by individual roots.

5 Summary

This paper has given a short description of templatic morphology in Chukchansi Yokuts, illustrating both the basic templatic LH shape and variation between templatic forms. Some of the variation, especially in vowel quality of templatic forms, depends on phonological classes of roots, based on the number of root consonants. Other variation is associated with specific suffixes. The data of template variation in this paper suggest that templatic morphology in Chukchansi Yokuts is sensitive to phonological information in roots, lexical specification by suffix, and general syllable phonotactics in Chukchansi, over and beyond the basic LH template.

References

- Archangeli, Diana. 1983. The root CV-template as a property of the affix: evidence from Yawelmani. *NLLT* 1, 347-384.
- Archangeli, Diana. 1988. Aspects of underspecification theory. *Phonology* 5.2: 183-207.
- Archangeli, Diana. 1991. Syllabification and prosodic templates in Yawelmani. *NLLT* 9, 231-283.
- Blevins, Juliette. 2004. A reconsideration of Yokuts vowels. *IJAL* 70, 33-51.
- Broadbent, Sylvia. 1958. *Chukchansi vocabulary*. Ms., UC Berkeley.
- Collord, Thomas. 1968. *Yokuts Grammar: Chukchansi*. PhD Dissertation, UC Berkeley.
- Gamble, Geoffrey. 1978. *Wikchamni Grammar*. University of California Press.
- Golston, Chris and Martin Krämer. 2018. Yokuts templates are not emergent. Poster presented at *Annual Meeting in Phonology (AMP) 2018*. October 5-7.
- Guekguezian, Peter. 2011. Topics in Chukchansi Yokuts Phonology and Morphology. MA Thesis, California State University, Fresno.

- Guekguezian, Peter. 2017a. Templates as the interaction of recursive word structure and prosodic well-formedness. *Phonology* 34.1, 81-120.
- Guekguezian, Peter. 2017b. *Prosodic Recursion and Syntactic Cyclicality inside the Word*. PhD Dissertation, USC.
- Hockett, Charles. 1967. The Yawelmani basic verb. *Language* 43, 208-222.
- Kenstowicz, Michael and Charles Kisseberth. 1979. *Generative Phonology*. New York: Academic Press.
- Kuroda, S-Y. 1967. *Yawelmani Phonology*. PhD Dissertation, MIT.
- McCarthy, John J. 1979. *Formal Problems in Semitic Phonology and Morphology*. PhD Dissertation. MIT.
- McCarthy, John J. and Alan Prince. 1986. *Prosodic Morphology*. Ms., University of Massachusetts, Amherst and Brandeis University.
- Newman, Stanley. 1944. *Yokuts Language of California*. New York: Viking.
- Tranel, Bernard. 1995. Rules vs. constraints: a case study. *Rutgers Optimality Archive* 72.
- Zoll, Cheryl. 1996. *Parsing below the Segment in a Constraint-based Framework*. PhD Dissertation, UC Berkeley.