Stem Alternations in the Passive in Sierra Miwok

Patrik Bye and Peter Svenonius

1. Stem forms

Central Sierra Miwok (CSM; Freeland 1951) is described as having root-and-template morphology (for a recent approach and further references, see Downing 2006). There are four stem forms, referred to by number, and identified by their place in the conjugational paradigms. The exact form of each stem depends on the phonological shape of the root, specifically whether it contains two or three consonants and whether it is vowel- or consonant-final. Examples in Table 1 and the remainder of the paper are from Freeland (1951) unless otherwise stated.[1]

	UR	First	Second	Third	Fourth	
$C_1VC_2VC_3$	√tuyaŋ	tuyáaŋ-	tuyáŋŋ-	túyyaŋ-	túyŋa-	‘jump’
	√huṯel	huṯéel-	huṯéll-	húṯṯel-	húṯle-	‘roll’
	√teley	teléey-	teléyy-	télley-	télye-	‘hear’
$C_1VC_2C_3V$	√čelku	čélku-	čelúkk-	čélluk-	čélku-	‘quit’
	√koypa	kóypa-	koyápp-	kóyyap-	kóypa-	‘suck’
	√wimki	wímki-	wimíkk-	wímmik-	wímki-	‘spear’
C_1VC_2V	√hame	hámme-	hamé??-	hámme?-	hám?e-	‘bury’
	√?upi	?úppi-	?upí??-	?úppi?-	?úp?i-	‘dive’
	√liwa	líwwa-	liwá??-	líwwa?-	líw?a-	‘speak’
C_1VC_2	√lot	lóot-	lótt-	lóttu?-	lót?u-	‘catch’
	√wek	wéek-	wékk-	wékki?-	wék?i-	‘dodge’
	√mɨn	mɨ́ɨn-	mɨ́nn-	mɨ́nni?-	mɨn?i-	‘swim’

Table 1: Root and Stem Types in Central Sierra Miwok

We analyze these alternations in terms of stem-forming affixes consisting of segmentally deficient moras, empty V and C root nodes, and prosodic prespecification, with the phonological component implementing the necessary metatheses and coalescences once morphemes have been combined. This paper develops our analysis of those stem-forming affixes as they relate to the formation of the passive. The passive has hitherto remained stubbornly resistant to the piece-based view. We take it as a last holdout of putative root-and-template morphology in Central Sierra Miwok, and here bring it into the fold of a more minimalist morphology, as pursued in Bye & Svenonius (2012).

*Patrik Bye, Nord University, patrik.bye@nord.no. Peter Svenonius, University of Tromsø – The Arctic University of Norway, peter.svenonius@uit.no.

[1]Our account shares some properties with Zimmermann’s (2017) treatment of Southern Sierra Miwok, but also includes some important differences. For example, we eschew subtraction, for which there is no empirical case in Central Sierra Miwok. We leave the issue of subtraction in Southern Sierra Miwok and other languages to future research.

 Proceedings of the 37th West Coast Conference on Formal Linguistics, ed. D. K. E. Reisinger and Marianne Huijsmans, 107-115. Somerville, MA: Cascadilla Proceedings Project.

2. Morphophonology of stem formation

The first stem is morphophonologically the most complex, for two reasons. First, C- and V-final roots seem to form their first stems in different ways, leading us to posit that lexically listed allomorphs are involved. C-final roots such as /tuyaŋ/ ‘jump’ and /lot/ ‘catch’ select a formative that lengthens the last vowel of the root. In line with Trommer & Zimmermann (2014) and others, we analyse the suffix as a segmentally deficient mora, which associates with the nearest vowel.

First stem formation is also complex in a second sense. V-final stems do not lengthen the last root vowel. Biconsonantal roots in this class, such as /hame/ ‘bury’, evince gemination of the medial consonant, which we analyse as affixation of a moraic consonant that is (i) featurally unspecified, and (ii) prosodically prespecified as associated to a word-initial syllable. In (1) to (3) we show what we take to be the underlying representations of the first, second and third stem formatives respectively. Example (1) shows the disjunction of first stem formatives. In the phonology, the moraic consonant selected by the postvocalic context coalesces with the consonant immediately following the first nucleus. We can assume the same happens in a triconsonantal root like /čelku/ ‘quit’. Here, the moraic consonant coalesces with the coda of the first syllable. Since the coda acquires a mora through Weight-by-Position (Hayes 1989), the result of affixation is not visible.

(1) $\left\{ \begin{array}{ll} \mu \;/\; C\_\_\_\_ & (_{\omega}\ \sigma \\ & \quad | \\ & C_{\mu} \;/\; V\_\_\_\_ \end{array} \right\}$ (2) C_{μ} (3) $(_{\omega}\ \sigma$ | $C_{\mu}\ldots C$

The phonological derivation of the first stem forms is illustrated in Table 2, for each of the four root shapes. The length mark marks a moraic segment. Ident($_{\omega}$ σ requires that a mora prespecified as linked to a word-initial syllable actually surfaces in a word-initial syllable. It is relevant for V-final roots like /čelku/ and /hame/, which subcategorize for an allomorph consisting of a moraic consonant prespecified in this way. Linearity punishes metathesis, and can be assessed categorically as proposed by McCarthy (2003, 2008). An input /xyz/ specifies three linear precedence relations: x>y, y>z, and x>z. For each reversal in precedence in the output, Linearity assesses one mark.

$tu_1ya_2ŋ + \mu_3$	Ident($_{\omega}$ σ	Linearity
a. ☞ $tu_1ya_2{:}_3ŋ$		
b. $tu_1{:}_3ya_2ŋ$		*!

$(_{\omega}\ \sigma$ | $čel_1k_2u_3 + C_{\mu 4}$	Ident($_{\omega}$ σ	Linearity
a. $čel_1k_2u_3ʔ_4$	*!	
b. ☞ $čel_{1,4}k_2u_3$		**

$lo_1t + \mu_2$	Ident($_{\omega}$ σ	Linearity
a. ☞ $lo_1{:}_2t$		
b. $l{:}_2o_1t$		*!

$(_{\omega}\ \sigma$ | $ham_1e_2 + C_{\mu 3}$	Ident($_{\omega}$ σ	Linearity
a. $ham_1é_2ʔ_3$	*!	
b. ☞ $hám_{1,3}{:}e_2$		*

Table 2: Phonological adjustments in the first stem

Morphologically, forming the second stem is a simpler matter, and involves suffixing a moraic segmentally deficient consonant, as shown in (2). In Table 3 we illustrate the main outlines of the phonological response, abstracting away from certain details that would figure in a fuller analysis. We assume, for example, that highly ranked Max forces the affixal consonant to surface one way or another. We also assume the activity of a markedness constraint that disallows bare root nodes in the output. Since

deficient segments are literally uninterpretable at the Articulatory-Perceptual Interface, the constraint in question may be undominated in all languages. Within these parameters, one possible repair strategy is to realize the affixal consonant as a glottal stop, violating Dep[Laryngeal], and epenthesizing a vowel, violating Dep(V). (These distinct violations are merged in a single Dep column in the tableaux in Table 3.) This is not what happens in CSM, however. Instead, the consonantal root node acquires its featural content by coalescing with the final consonant of the root, in violation of Uniformity, which penalizes coalescence. Dep must therefore outrank Uniformity. For the second stem of triconsonantal V-final roots like /čelku/, Dep must additionally outrank Linearity, since the moraic consonant acquires its segmental content through metathesis: /čelku/→[čelúk:-]. The same repair strategy in the case of a biconsonantal V-stem like /hame/ to give ill-formed *[ha.em], however, would fall foul of Onset, which must accordingly rank above Dep.

μ | /tuyaŋ$_1$ + C$_2$/	Dep	Uniformity
a. tuyáŋ$_1$i$_\alpha$ʔ$_{\beta,2}$:	*!*	
b. ☞ tuyáŋ$_{1,2}$:		*

μ | čelk$_1$u$_2$ + C$_3$	Dep	Uniformity	Linearity
a. čelk$_1$ú$_2$ʔ$_{3,\alpha}$:	*!		
b. ☞ čelú$_2$k$_{1,3}$:		*	*

μ | /lot$_1$ + C$_2$/	Dep	Uniformity
a. lot$_1$i$_\alpha$ʔ$_{\beta,2}$:	*!*	
b. ☞ lot$_{1,2}$:		*

μ | ham$_1$e$_2$ + C$_3$	Onset	Dep	Uniformity	Linearity
a. ha.é$_2$m$_{1,3}$:	*!		*	*
b. ha.ʔ$_\alpha$é$_2$m$_{1,3}$:		*	*!	*
c. ☞ ham$_1$é$_2$ʔ$_{3,\alpha}$:		*		

Table 3: Phonological adjustments in the second stem

We propose that the third stem formative, given in (3), consists of two fragments: a moraic segmentally deficient consonant prespecified as linked to the first syllable of a word, like the first stem formative of a V-final root in (1), and a second (nonmoraic) segmentally deficient consonant.

Its phonological behaviour can be captured with the constraints and their rankings brought to bear till now, but with one exception involving biconsonantal C-final stems. Thus far we predict that both the moraic and the nonmoraic consonants of the suffix should be able to coalesce with the root-final consonant. The fact that only the first of the suffixal consonants does so, we ascribe to a limit on coalescence: an output segment cannot have more than two input correspondents. This restriction we interpret as an instance of local self-conjunction of Uniformity within the domain of the segment (Smolensky 1995). The phonological responses to formation of the third stem are shown in Table 4.

(ω σ | tuy$_1$a$_2$ŋ$_2$ + C$_{μ3}$…C$_4$	Dep	Uniformity
a. túy$_{1,3}$:a$_2$ŋ$_3$i̱$_α$ʔ$_{β,4}$	*!*	*
b. ☞ túy$_{1,3}$:a$_2$ŋ$_{3,4}$		**

(ω σ | čel$_1$k$_2$u$_3$ + C$_{μ4}$…C$_5$	Onset	Dep	Uniformity	Linearity
a. čel$_{1,4}$k$_2$u$_3$ʔ$_{α,5}$		*!	*	*
b. čél$_{1,4}$:u$_3$k$_2$u$_α$ʔ$_{β,5}$		**!	*	**
c. čel$_{1,4}$k$_2$u$_3$ʔ$_{α,5}$		*!		
d. ☞ čél$_{1,4}$:u$_3$k$_{2,5}$			**	*

(ω σ | lo$_1$t$_2$ + C$_{μ3}$…C$_4$	Uniformity$^2_{seg}$	Dep	Uniformity	Linearity
a. ☞ lo$_1$t$_{2,3}$:u$_α$ʔ$_{β,4}$		**	*	
b. lo$_1$ʔ$_α$:u$_{β,3}$t$_{2,4}$		**	*	*!
c. lo$_1$t$_{2,3,4}$:	*!		**	

(ω σ | ham$_1$e$_2$ + C$_{μ3}$…C$_4$	Onset	Dep	Uniformity	Linearity
a. hám$_{1,3}$:e$_2$i̱$_α$ʔ$_{β,4}$	*!	**		
b. hám$_{1,3}$:e$_2$ʔ$_α$i̱$_β$ʔ$_{γ,4}$		**!*		
c. háʔ$_{α,3}$:e$_2$m$_{1,4}$		*	*!	*
d. ☞ hám$_{1,3}$:e$_2$ʔ$_{α,4}$		*		

Table 4: Phonological adjustments in the third stem

Since the fourth stem is not involved in the passive, we will return to it in a fuller treatment. With the relevant morphophonology out of the way, we now move to a discussion of the nature of the first, second and third stem formatives.

3. Agreement series

Following Freeland (1951), Sierra Miwok shows three agreement series, one 'verbal,' one 'nominal,' (appearing in some contexts as object agreement) and one 'possessive.' Nominal and possessive agreement appear regularly on nominal forms, including participles, while verbal agreement can be compared to finite agreement in Indo-European (singular forms shown as a sample, setting aside allomorphy and dialectal variation and other complications).

(4)

	Pronoun	Verbal	Possessor	Nominal
1sg	kaan	-m	-nti, -t	-t̪e-
2sg	miʔ	-š	-ni̱i̱, -n	-ni-
3sg	ʔissaak	∅	-ši̱i̱, -š	∅

4. Tenses

Some of the most important tenses or TAM (Tense-Aspect-Modality) forms are shown in (5) (we will refer to the Passives as TAM forms as well). For each tense is given the stem, the shape of the suffix, and the agreement series. If there are multiple allomorphs, then conditions on allomorphs are in parentheses (allomorphs with no conditions can be assumed to be elsewhere cases). In two cases, there are two allomorphs each conditioning a different stem; e.g., the perfect passive has an allomorph *-ášii* which goes with the second stem, and an allomorph *-áani̱* conditioned by monosyllabic roots which goes with a weak form of the stem.[2]

[2]Abbreviations in the table: 0: a zero suffix; I, II, III: conjugation classes; 1, 2, 3: stem forms; wk: weak form of the stem; CVCV: root shape; 1σ: monosyllabic root (=CVC); cs: complex stem; ss: simple stem; VAgr, NAgr, PossAgr: verbal, nominal, possessive agreement.

(5)

	Active			Passive		
Present	1	0	VAgr	1	-ʔaa	NAgr
Perfect	1	-ak (I), -nak (II), -šak (III)	VAgr	2, wk	-ašii, -áanɨ (1σ)	NAgr
Volitional	1	-ee (I), -ni (II), 0 (III)	VAgr			
Continuative	1	-šaak	NAgr			
Andative	1	-yyii	NAgr			
Future	2	-ik	NAgr			
Recent past	2	-e, -šše (CVCV), -kke (cs)	NAgr	1	-kaa	NAgr
Revenitive	2	-t̲uu	NAgr			
Distant past	2, 1	-anɨɨ, -ššɨɨ (CVCV)	PossAgr	2	-šeššɨɨ	NAgr
Habituative	3	-ii (ss), -mee (cs)	NAgr	3	-naa	NAgr
Venitive	3	-ɨɨ	NAgr			
Negative	3	-waa	NAgr			

In general, the TAM forms in (5) do not combine with each other; there are other TAM forms which combine with these, not shown here. For example, there is a subjunctive series of tenses which are built on the present and volitional tense forms, which take possessive agreement instead of verbal agreement, and there are nominal past and future forms which can be added to the forms which take nominal agreement.

5. The personal Passive

Just five tenses in (5) have a 'personal' Passive form—personal in the sense that an agent is implied, and can be expressed by a possessive suffix (there is also a productive impersonal passive, not treated here). Thus the Passive cross-cuts the classes of tenses as defined by the agreement series, but all five Passive forms take the nominal agreement to cross-reference their derived subject, as seen in the righthand column of (6) (constructed examples).

(6)

	Active	Passive
a. Present:	nánnɨ -m	nánnɨ **-ʔa** -t̲e
	V.1.Present -1sg.VAgr	V.1 **-Pass.Pres** -1sg.NomAgr
	'I find'	'I am being found'
b. Perfect:	nánn **-ak**	naníʔʔ **-aši** -t̲e
	V.1 **-Perf**.1sg.VAgr	V.2 **-Pass.Perf** -1sg.NomAgr
	'I found'	'I was found'
c. Distant Past:	nánnɨ **-ššii** -nti	naní **-šše** -ššii -t̲e
	V.1 **-DistPast** -1sg.PossAgr	V.2 **-Pass** -DstPast -1sg.NomAgr
	'I found (long ago)'	'I was found (long ago)'
d. Recent Past:	naní **-šše** -t̲e	nánnɨ **-ka** -t̲e
	V.2 **-Rct.Past** -1sg.NomAgr	V.1 **-Pass.Rct.Past** -1sg.NomAgr
	'I just found'	'I was just found'
e. Habitual:	nánniʔ **-ii** -t̲e	nánniʔ **-na** -t̲e
	V.3 **-Hab** -1sg.NomAgr	V.3 **-Pass.Hab** -1sg.NomAgr
	'I find (habitually)'	'I am found (habitually)'

In the remainder of the paper we set out to explain the distribution of stem forms across these ten Voice-Tense combinations (TAM suffixes).

First, we observe that the verbal agreement series is restricted to stem 1, which is also the only place we see allomorphy sensitive to conjugation class. We posit an Asp head in all forms which take the nominal agreement series, likening those TAM forms, including the Passives, to participial constructions, where the nominal agreement is like an auxiliary. We also posit an Asp head in the Distant past.

We conjecture that the Passive Voice head introduces a pronominal element corresponding to the external argument which requires some kind of binding. This element intervenes between the internal argument of the verb and VP-external positions and licensers. It can be overtly bound by a possessive suffix, or can be covertly, contextually bound. We speculate that the Asp head which induces nominal agreement somehow neutralizes the external argument as an intervener, perhaps by binding it and/or by case-licensing it.

6. Morphomes

At a general level, the stem form is predictable from the inflection of the verb, but as can be seen in (5) there are some cases of phonologically conditioned allomorphy where each of two allomorphs governs a different stem form. There does not seem to be a phonological generalization about which suffixes govern which stem forms.

The lack of a clear pattern of stem selection might suggest that stem forms are morphomic, in the sense of Aronoff (1994), in other words the stem features are meaningless and arbitrary, with apparent patterns being attributed to historical residue. In that case we could formally treat Miwok stems in a DM-style framework as a set of exponents of a low head v which bears a morphophonemic stem feature that can be selected by different affixes. However, we will pursue the more challenging and potentially rewarding hypothesis that the stem formatives are morphemes whose distribution is governed by morphosyntactic features.

7. Aspect

In Bye & Svenonius (2010), we posit for Miwok a perfective feature [Pfiv] which is semantically interpreted as a bounded subevent which does not overlap with a reference event, and which we suggest is a semantic feature of the Future, the Recent past, and the Distant past, all of which take stem 2. We also identify an imperfective feature [Impf] which is semantically interpreted as a subevent which does overlap with a reference event, manifested in the Habituative and the Negative, and which we associate with stem 3. If those features are borne by an Asp head, and Asp is associated with nominal agreement, then there is an indirect connection between stems 2 and 3 and nominal agreement.

In the tenses which take verbal agreement (the Present, the Perfect, and the Volitional), there is no reference event, so no feature [Pfiv] or [Impf]; in the active Voice, either Asp is absent or it is not specified for those features. In the active Voice, those tenses take stem 1, which we take to be an exponent of v. Since the stem formatives are in complementary distribution, we assume that the stem 2 and 3 formatives also spell out v, in addition to spelling out (or being conditioned by) [Pfiv] and [Impf] respectively.

In this context, consider the Venitive ‘coming to do’ and the Revenitive ‘coming back from doing’, illustrated in (7). The Venitive is semantically imperfective in our terms, because the event of coming and the event described by the verb root may overlap. This is consistent with it taking stem 3. The Revenitive, on the other hand, is semantically perfective, because the event described by the verb root does not overlap with the event of coming.

(7) a. šíyyeŋ-ii-ṭ
see.3-VEN-1SG
‘I come to see’

b. šiyéŋ-ṭuu-ṭ
see.2-REVEN-1SG
‘I come from seeing’

c. wéeli-yyi-ṭ
get.1-AND-1SG
‘I go to get [it]’

The Andative, ‘going to do’, takes stem 1, as seen in (7c). On our account, since it takes nominal agreement it has the Asp head, and then it should either have [Pfiv] or [Impf]—presumably [Pfiv] if the

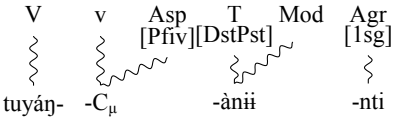
going must precede the doing, but possibly [Impf] if the going is considered a preparatory phase for the doing (as in the English *going to* future). We account for this instance of stem 1 in our analysis in §8.

8. Deriving the forms

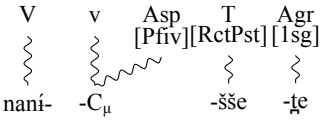
First stem, neutral aspect. The derivation of the active present and the active perfect is straightforward: both have neutral aspect, and both take the first stem. The first stem exponent spells out v, and the tense suffix spells out T and whatever heads lie between T and v (active Voice, perhaps a neutral Aspect head); or else those are null. Conjugation class allomorphy is possible (e.g., the perfect is *-nak* with conjugation class II roots), because the tense exponent is adjacent to the right edge of the root exponent, the stem 1 exponent having infixed. No forms with neutral aspect appear with any other stem than the first.

Second stem, perfective aspect. Stem 2 either spells out [Pfiv] or is conditioned by it. This is illustrated in (8) for the active Distant past and the active Recent past, where exponence is indicated by squiggly lines. We will discuss below the alternative possibility that the stem 2 exponent is an allomorph of v conditioned by [Pfiv] rather than being an exponent of it. The Mod node in the active Distant past is responsible for possessive agreement, but there is no space to discuss it.

(8) Active Distant Past: V-2-DstPst-PossAgr

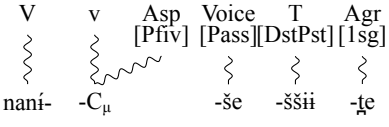


Active Recent Past: V-2-RctPast-NomAgr

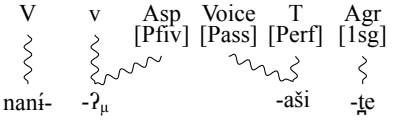


Second stem, passive. Passives take nominal agreement, and we assume that this means they project Asp with an aspectual feature: [Impf] if the TAM governs [Impf], and [Pfiv] otherwise. But now there is a contiguity issue regarding Asp and Voice. The exponents of Passive are all outside the stem formative, so if the stem formative spells out [Pfiv], then [Pfiv] must be lower than Voice. This is displayed in (9). Call this the "low [Pfiv] hypothesis": that [Pfiv] in Miwok is expressed on some head no higher than Voice, and stem 2 is a portmanteau for v and that head. The low [Pfiv] hypothesis is consistent with that head being Voice, and with [Pfiv] having been copied there from somewhere else, and various other possibilities. We will provide support for the low [Pfiv] hypothesis below, but without evidence bearing on the categorial identity of the head bearing [Pfiv], which is labeled Asp in (9).

(9) Passive Distant past: V-2-Pass-DstPst-NomAgr



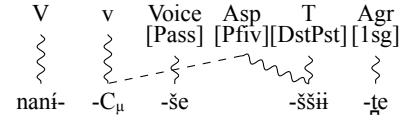
Passive Perfect: V-2-Perf-NomAgr



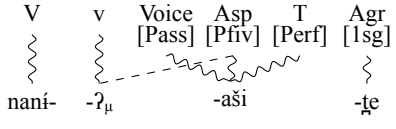
The usual assumption, however, is that Voice, which introduces an external argument, is closer to the stem than Aspect, which relates temporal properties of events. In that case, the stem formative is separated from Asp by Voice, and so the stem 2 formative must be an allomorph of v conditioned by [Pfiv], rather than being a portmanteau spelling it out (because conditioning of allomorphs does not require adjacency, following Merchant 2015).

In (10), the conditioning feature is linked to the allomorph it conditions by a dashed line. Call this the "high [Pfiv] hypothesis": that [Pfiv] is expressed only on a head higher than Voice, and that stem 2 is an allomorph of v conditioned by [Pfiv] (we will shortly provide evidence bearing against this hypothesis).

(10) Passive Distant past: V-2-Pass-DstPst-NomAgr

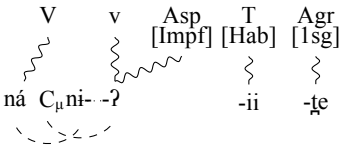


Passive Perfect: V-2-Perf-NomAgr

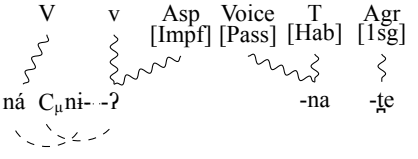


Third stem, imperfective aspect. The third stem exponent, which happens to be bifurcate, spells out or is conditioned by [Impf]. The only stem 3 forms we will discuss here are the active Habituative and the Habituative Passive (but the analysis will also apply to the Venitive and the Negative). Here we have the same issue as with the Passive stem 2 forms: if stem 3 is a portmanteau for v and [Impf], and *-na* is portmanteau for passive Voice and Habituative tense, then [Impf] is lower than Voice. Otherwise, one or the other of the exponents is an allomorph conditioned by a nonadjacent feature. Here we depict the "low [Impf] hypothesis". Each dashed arc connects discontinuous fragments of a single lexical item.

(11) Active Habitual: V-3-Hab-NomAgr



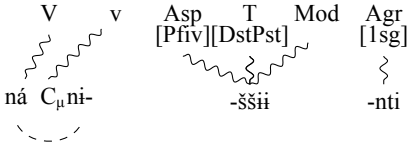
Passive Habitual: V-3-Pass-Hab-NomAgr



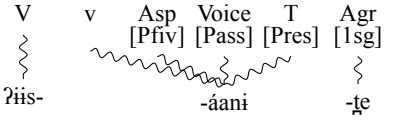
First stem, despite the feature Pfiv. We have now accounted for all the examples in (6) except those in which the first stem surfaces despite the (postulated) presence of [Pfiv]. There are four such cases (plus the andative exemplified in (7c); and the continuative noted in (5) would be expected to be imperfective given its semantics but is stem 1 rather than 3).

In two of the examples, a conditioned allomorph is involved: the active Distant past has an allomorph *-šši* for CVCV roots which takes stem 1, and the Perfect Passive has an allomorph *-áani* which appears with a bare root, with no stem formative, illustrating here with *ʔiisáanit̪e* 'I have been kissed'. The example assumes low [Pfiv], though the portmanteaux would work the same either way.

(12) Active Distant Past with CVCV root:
V-1-DstPast-PossAgr



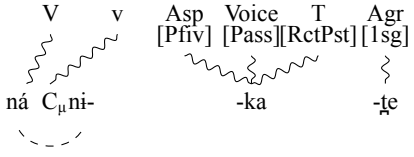
Passive Perfect with CVC root
V-Pass-Perf-NomAgr



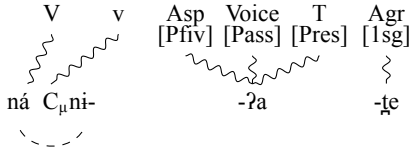
The phonological conditions associated with these exponents for a particular root shape may override the syntactic conditioning in this case (cf. French, where unmarked masculine exponents are sometimes used in marked feminine contexts to satisfy phonological preferences, as in *mon arme* 'my weapon (f)', as discussed in Svenonius 2012).

There are also two passive exponents which appear with stem 1 in the absence of a conditioned allomorph of the suffix. These are the Present Passive *-ka* and the Recent past Passive *-ʔa* (the Andative also follows this pattern).

(13) Passive Recent past: V-1-Pass.RctPst-NomAgr



Passive Present: V-1-Pass.Pres-NomAgr



The forms in (13) provide an argument in favor of the low [Pfiv] hypothesis. As depicted here, the TAM suffixes for Recent past Passive and Present Passive are portmanteaux which include the low Asp head (equivalently, they could include Voice, if the [Pfiv] feature appears on Voice, dispensing with the low Asp head). As portmanteaux spelling out the head bearing [Pfiv], it can be seen how they exclude the stem 2 exponent, if exponence cannot overlap.

On the alternative high [Pfiv] hypothesis illustrated in (10), on the other hand, the stem 2 formatives can be conditioned by [Pfiv] at a distance. If that were the case here, we would expect to see stem 2 formatives instead of stem 1.

9. Conclusion

We have shown how to account for the complex distribution of stems in Sierra Miwok in a piece-based approach, without resort to specifically morphological devices such as morphomes. Our account is solidly grounded in independently motivated phonology and syntax. The complexity of the system comes from the interplay of properties that we believe to be unavoidable: contextual allomorphy, including phonological selection, underspecified exponence, prosodic prespecification, and portmanteaux. Our syntactic assumptions are not radical. Whether they can be independently confirmed in the absence of careful work on Miwok aspectual semantics is another question.

References

Aronoff, Mark (1994). *Morphology by itself: Stems and inflectional classes*. Linguistic Inquiry Monographs 22, MIT Press, Cambridge, Ma.

Bye, Patrik & Peter Svenonius (2010). Exponence, phonology, and non-concatenative morphology. Ms. CASTL, University of Tromsø; available at ling.auf.net/lingbuzz/001099.

Bye, Patrik & Peter Svenonius (2012). Non-concatenative morphology as epiphenomenon. Trommer, Jochen (ed.), *The Morphology and Phonology of Exponence*, Oxford University Press, Oxford, 427–495.

Downing, Laura J. (2006). *Canonical Forms in Prosodic Morphology*, vol. 12 of *Oxford Studies in Theoretical Linguistics*. Oxford University Press, Oxford.

Freeland, L. S. (1951). *Language of the Sierra Miwok*. Waverly Press, Baltimore, Md.

Hayes, Bruce (1989). Compensatory Lengthening in Moraic Phonology. *Linguistic Inquiry* 20, 253–306.

McCarthy, John J. (2003). OT constraints are categorical. *Phonology* 20, 75–138.

McCarthy, John J. (2008). *Doing Optimality Theory: Applying Theory to Data*. Blackwell Publishing, Oxford.

Merchant, Jason (2015). How much context is enough? Two cases of span-conditioned stem allomorphy. *Linguistic Inquiry* 46:2, 273–303.

Smolensky, Paul (1995). On the structure of the constraint component Con of UG. Handout of talk at UCLA, 4/7/95. Rutgers Optimality Archive 86. Available at http://roa.rutgers.edu.

Svenonius, Peter (2012). Spanning. Ms., University of Tromsø. Available at https://ling.auf.net/lingBuzz/001501.

Trommer, Jochen & Eva Zimmermann (2014). Generalized Mora Affixation and Quantity-manipulating Morphology. *Phonology* 31:3, 463–510.

Zimmermann, Eva (2017). *Morphological Length and Prosodically Defective Morphemes*. Oxford University Press, Oxford.

Proceedings of the 37th West Coast Conference on Formal Linguistics

edited by D. K. E. Reisinger
and Marianne Huijsmans

Cascadilla Proceedings Project Somerville, MA 2021

ISBN 978-1-57473-477-5 hardback

Ordering information

Orders for the printed edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

Bye, Patrik and Peter Svenonius. 2021. Stem Alternations in the Passive in Sierra Miwok. In *Proceedings of the 37th West Coast Conference on Formal Linguistics*, ed. D. K. E. Reisinger and Marianne Huijsmans, 107-115. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3520.