The Phonemes of Mary's River Kalapuyan: Analyzing an Extinct Language[1]

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Introduction

This paper is a preliminary report on the phonology of Kalapuyan. It is a brief summary of my M. A. thesis, which is a descriptive account of the segmental phonemes of Mary's River, a dialect of the central Kalapuyan language. While work is still in progress on the phonology and other aspects of the three Kalapuyan languages, no linguistic description of any of them has yet appeared; therefore, it seems worthwhile to present my results, even though they are incomplete.

The three Kalapuyan languages, formerly spoken in the Willamette Valley of Oregon, form one branch of the Takelman family, classified as Oregon Penutian. Mary's River and Santiam are the two best known of an undetermined number of dialects which form the language spoken in the central Willamette Valley. The northern language consisted of two dialects, Tualatin and Yamhill; the southern, Yoncalla, is known to have included more than one dialect, but there is very little material available for Yoncalla. These three languages were treated as a language family in the Powell classification, while the related Takelma was considered a language isolate, and was so treated by Voegelin as recently as 1966. The relationship of Takelma and Kalapuyan was suggested by Frachtenberg in 1918 and by Sapir in 1921. Swadesh grouped Kalapuyan and Takelma in a "Takelman" family in 1956, and Shipley has more recently (1969, 1970) attempted phonemic reconstructions of Proto-Takelman and Proto-Kalapuyan. The genetic relationships between Takelman and the other language families in

Sapir's "Oregon Penutian" have not been demonstrated; Oregon Penutian may in fact be a geographical rather than a linguistic classification, but many linguists seem to feel that the relationships exist and will eventually be worked out (cp. Thompson 1973).

Kalapuyan in all its branches is now extinct; the last known speaker of Santiam, John Hudson, died ~~sometime~~ in 1954 ~~the early 1960's~~. Louis Kenoyer, the last Tualatin speaker, died in 1936. Phonetic transcriptions of the languages, after the fragmentary recordings of missionaries and travelers, began in 1877 with Albert Gatschet's work with two Tualatin informants, Peter Kenoyer and Dave Yatchkawa. He also recorded short vocabularies in Yamhill and in two central dialects. His phonetic accuracy leaves something to be desired, but his work is nevertheless usable.

In 1913-14, Leo Frachtenberg collected a considerable body of texts (myths for the most part) in the Mary's River dialect, mostly from William Hartless, and also a small amount of material in Yamhill and Yoncalla, and one text from Hudson in Santiam. In 1915, he made notes and corrections directly in Gatschet's field notebooks with the help of Louis Kenoyer, the son of one of Gatschet's informants and the last speaker of Tualatin. Jacobs is critical of Frachtenberg's phonetic accuracy, but after working with his texts I think the main difficulty may be over-accuracy, not the reverse. He worked in a pre-phonemic tradition, and the amount of variation recorded is considerable; forms were not elicited with a view to whether or not they were "the same" to the speaker.

In 1928-36, Melville Jacobs collected material in Santiam from John Hudson and Eustace Howard. He too checked and corrected Gatschet's

Tualatin materials, and corrected Frachtenberg's corrections, in preparing these materials for publication, and collected some Tualatin of his own from Louis Kenoyer, including an unfinished autobiography of Kenoyer begun earlier by Jaime de Angulo and Lucy Freeland (who had both also worked on Tualatin). Jacobs also collected some Yoncalla vocabulary. He began a grammatical sketch of Kalapuyan, which was not finished or published; and in 1945 he published the Kalapuya Texts, which includes much of his own Santiam material from Hudson, and most of Gatschet's Tualatin texts and Frachtenberg's Mary's River texts--these latter reworked in his own phonetic transcription and corrected with Louis Kenoyer and John Hudson. Jacobs' texts are awkward to use for phonemic analysis, since he often seems to have regularized intuitively, but without phonemicizing. The regularization is sometimes based on morphology, sometimes on phonology; the transcription therefore is basically phonetic, but not always. Also, as has been pointed out by Preston (1946), since Jacobs does not provide interlinear translations, a morphemic analysis of the texts is rather difficult.

Thus, the materials available for analysis are of variable quality, but all are basically phonetic. But in addition to written data, there are, fortunately, some tapes of John Hudson in existence. In the 1930's, Jacobs recorded Hudson's speech on Edison wax cylinders; this material was later transferred to tape, but the sound quality is still that of the much-played originals. In the 1950's, Swadesh made a good-quality tape of Hudson, recording a word list and a brief text.

As mentioned, no complete analysis of Kalapuyan exists. Swadesh and Shipley both use presumably phonemic transcriptions, but present no analysis. Jacobs' grammatical sketch was not completed or published.

Jacobs has notes on the phonology scattered through the Kalapuya Texts. My phonemic analysis of Mary's River is based on the manuscripts of Frachtenberg's Mary's River texts, copies of which were obtained from the National Anthropological Archives; except to provide clues for interpretation, I preferred not to use Jacobs' corrections, since, as he points out himself, an overlay of Hudson's Santiam was created by the corrections. In working with the texts, the major problem, of course, was to establish the range of variation of sounds. Since no informant is available to check whether two forms are "the same" or not, I relied on a careful tally of all variations of each form occurring in the texts. (To keep the material manageable, I used only the first six myth texts, constituting two of Frachtenberg's thirteen manuscript volumes--Jacobs' Mary's River myths numbers 1, 2, 8, 5, 3, and 9--and supplemented these with vocabulary from the three volumes of grammatical notes and a short ethnography, also from William Hartless. I consulted a typescript of the fifth myth, prepared by Frachtenberg, which showed some interesting regularization of forms.) I worked first with those forms that occurred three times or more; I took the most frequently occurring variant for each form (the "modal" form), when there was one, as the basis for comparison, and proceeded to look for contrast and complementary distribution in the usual way. When patterns seemed to be emerging, I checked the modal forms against the other variants and against those forms occuring only once or twice. However, pattern, rather than frequency of occurrence, was the determining factor.

This method obviously does not compensate for the lack of an informant, but something like it is necessary. There are still a number of unanswered questions: some result from limitations of the material and

the method, some from incomplete analysis. Some, further, are due to the fact that a morphological analysis has not been completed yet. Other dialects have not yet been described, though I have begun work on Tualatin and Yoncalla phonology, and a student at Portland State University, Susan McClure, is working on the morphology of Santiam. The following, therefore, is still a preliminary account.

The Phonemes

The segmental phonemes appear to be as follows:

	Consonants				
	Obstruents		Fricatives	Resonants	Glides
	Plain	Glottalized			
Labial	p	p̓	f	m	w
Alveo-dental, Alveo-palatal	t	t̓	s	n	y
	c	c̓	š	l	
Velar	k	k̓	x		
Labiovelar	k^w	$k̓^w$			
Glottal		ʔ	h		

Vowels				Diphthongs			
i	i•	u	u•	ai			ui
	a	a•			au	a•u	

There is a phoneme of stress, as well.

Consonants

Consonants occur initially, medially, and finally, with these exceptions: glottalized consonants are only initial (see below), as are /w/ and /y/ (diphthongs, however, could be interpreted as /ay/, /aw/, /a•w/, /uy/). /k^w/ rarely occurs finally except after /u/.

Consonant clusters are limited to two members initially and finally, leading to the interpretation of [k^w] and [ts] as units, not clusters, since they may occur with other consonants. The sequences of three or

(rarely) four consonants in word-medial position involve morpheme boundaries. Except in medial position, /ɬ/, /x/, /h/, and /ʔ/ do not cluster (for /ʔ/, however, see below). Aspiration and epenthetic vowels are sometimes written as transitions in "difficult" clusters (e.g., /kti/ sometimes appears as k^{ə}ti).

Nasals can function as syllable centers.

Consonant length occurs occasionally as a stylistic feature; it is much more frequent in Tualatin, but is still apparently not phonemic there.

Palatalized variants of /l/, /k/, /s/, /c/ occur, apparently conditioned by the surrounding vowels.

/l/ includes an occasional [r] variant.

The voiceless stops sometimes show voiced variants.

/s/ varies between [s] and [š], and likewise /c/ varies between [ts] and [tš].

Kalapuyan is noted for the presence of a bilabial fricative (maybe labiodental in some dialects or for some informants), which apparently derives historically from a rounded velar fricative--there are occasional correspondences between Mary's River /f/ and Yoncalla [x^{w}], for instance. Cayuse and Molala are the only other regional languages possessing an /f/. There appears to be some phonemic (or morphophonemic) variation between /f/ and /w/. One might expect to find such variation between /f/ and /h/ or /x/, as well, considering the historical relationship (Jacobs suggests as much for Santiam: 1945:14), but I have not discovered any for Mary's River.

Velars, glottal stops, and glottalized consonants are problems. Phonetically, [q] and [k] are both recorded by Jacobs and Frachtenberg; Jacobs assumed that the distinction existed but was difficult to per-

ceive. Frachtenberg's transcriptions tend to vary between the two, but in some situations their occurrence seems to be conditioned: [q] is found before low back and central vowels, while [k] occurs before front vowels, [u], and [a], but rarely before [o]. ([k^w] does not occur before either [o] or [u]; therefore, [ku] can be treated as the result of /k^w/ + /u/, while /k/ + /u/ yields [qo].) [l^y] occurs in the same syllable with [k], but almost never with [q]. The variation in transcription is such that the patterning is not very clear, but in any case requires that [k] and [q] be treated as members of one phoneme. (As Jacobs does in Santiam. However, he also considers the glottalized velars to be variants of the unglottalized: "I also write this stop with a glottal catch preceding it: ʔk, ʔq" [1945:13].) The velar stops vary particularly often with their glottalized counterparts; the contrast of /k^w/ and /k'^w/ is especially insecure.

The whole glottalized series is a little shaky, because of the amount of variation. Glottalization was rather weak in Kalapuyan, unlike in other Northwest Coast languages; Jacobs referred to it as "this impressively elusive phenomenon" in his unpublished grammatical sketch. Still, there are enough cases of probable contrast to justify postulating a separate glottalized series--for instance, [pí·nə], "girl," is found 24 times, [p'í·nə(ʔ)], "have," five times. All glottalized consonants are found only in initial position; sequences of glottal stop plus consonant occur other than initially and are thus in complementary distribution with the glottalized consonants. The sequences of glottal stop plus consonant vary with or complement their unglottalized counterparts: in the case of [ʔt] and [ʔts], the variation seems to be random, but [ʔp] and [ʔk] tend to follow [o] or [a]. Therefore, I assume that

in non-initial position glottal stops plus consonants do not contrast with unglottalized consonants.

The glottal stop itself is distinctive only in final postvocalic position, although it occurs elsewhere to mark word or morpheme boundaries. If it occurs postvocalically at the end of a monosyllable, it seems to be preserved in larger constructions, while the glottal stop preceding a final consonant is less often retained. Medial contrasts, such as /wá?la?/, "nowhere" (/wa?/ + /la?/), and /wálah/, "downhill," are thus created. A complete morphological analysis should help to sort out the morphophonemics involved.

Jacobs held that there were three series of stops in Kalapuyan: aspirated surds, glottalized surds, and "intermediates" (unaspirated surds with occasional brief voicing). He inserted intermediates in Frachtenberg's and Gatschet's texts where voiced stops were written, and elsewhere, presumably where he heard them in Hudson's and Kenoyer's speech. An examination of the distribution of intermediates in Jacobs' corrected Mary's River texts shows that they generally do not occur preceding a stressed vowel, and tend to vary with unglottalized stops in all positions (less often initially, however, and most often finally, where there is a loss of contrast among all three series). This is confusing, since Jacobs says, for Santiam, that intermediates are recorded inconsistently for glottalized stops, because acoustically they are almost identical (1945:151). (For Tualatin, however, he says in the Kenoyer autobiography that intermediates alternate with unglottalized stops.)

Shipley maintains that for proto-Kalapuyan the contrast is between aspirated and unaspirated stops--he says that glottalization is sporadic

and unpredictable, a view which Jacobs rightly attacked. However, aspiration cannot be used for two series of stops in Frachtenberg's Mary's River texts; Frachtenberg is too inconsistent in showing aspiration. (Both glottalized and unglottalized stops are sometimes shown aspirated.) There is possibly some conditioning involved: [t] tends to be aspirated in final position, and [p] and [k] are aspirated finally if they follow back vowels, paralleling the distribution of glottal stop plus consonant. (Postvocalic aspiration, like the glottal stop, is distinctive.) There is, at any rate, evidence for two series of stops, but three seems quite unlikely.

The /x/ is rare, occurring in only six forms, two of which are borrowings from Chinookan. Because of its rarity, Frachtenberg paid attention to it when it occurred and did not vary in recording it. [x] is apparently more frequent in the northern and southern languages. On the tapes, John Hudson sometimes uses an [x] in repeating forms usually containing a [k] or [q]. With further analysis, the phonemic status of [x] may be changed.

Vowels and Diphthongs

As noted, three vowels with two degrees of length occur. (It is possible that Tualatin has four vowels, adding /e/.) Length is often highly inconsistent in the texts, partly due to rhetorical lengthening. For the diphthongs, length appears not to be distinctive, with the exception of /au/ and /a·u/; /ai/ occurs long with stress, short otherwise, while /ui/ is always long. It seems likely that the /au/ - /a·u/ contrast is spurious, but I have not yet been able to get rid of it. The diphthongs may have a relationship to the long vowels which I have not yet discovered.

There is a good deal of variation in vowel quality as well as in length: /i/ ranges from [i] to [æ], and /u/ from [u] to [ɔ]. There are centralized variants for all. Schwa, however, is not phonemic; it functions as a substitute for other vowels, as an epenthetic vowel, and with syllabic nasals.

Stress

Stress is independent of length. It falls on the first syllable of a root in Mary's River and Santiam, remaining there when prefixes are added, although in Tualatin and Yoncalla it is often shifted to the prefixed elements. It is generally accompanied by higher (or sometimes lower) pitch, forming what Jacobs calls pitch accent.

Concluding Remarks

The system looks very much like Molala, as presented in a brief note by Rigsby (1969), though the grammar and vocabulary are quite different. There are two series of obstruents in Molala (p, t, c, k, q, however, not p, t, c, k, k^w), the fricatives are the same except for the lack of /x/, the resonants add /ŋ/ but are otherwise the same, and there are four vowels (i, e, u, a), with length phonemic. Consonant clusters seem very similar. The related Takelma, as presented by Shipley (1969), has three series of stops, and lacks /f/ and /ɬ/, but the other fricatives and resonants are the same. There are five vowels, with length phonemic, and two pitches. On casual inspection, consonant clusters are more complex, and diphthongs are more numerous.

Resemblances of this kind to Molala and Takelma are not surprising; the Northwest Coast is noted for borrowing of phonological features among neighboring groups. The relative lack of resemblance to Chinookan

is perhaps more surprising, considering the known contacts between Chinookan and Tualatin speakers. It is to be hoped that further phonemic analyses of the Kalapuyan languages, besides providing a foundation for more comprehensive linguistic work, may also create a basis for ethnohistorical inferences.

NOTES

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