THE UNMARKING OF QUAPAW PHONOLOGY:
A Study of Language Death.

Robert L. Rankin

The Quapaw language is a member of the Siouan family of American Indian languages. Within Siouan it is most closely related to the other languages of the Dhegiha subgroup, Omaha and Ponca, spoken in Nebraska and Oklahoma, and Kansa and Osage, spoken in Oklahoma. In late prehistoric and early historical times the Quapaws lived along the Mississippi River near the mouth of the Arkansas, south of Memphis.

They were soon forced to move and made their way to the Indian Territory, later the state of Oklahoma, where they have lived both on the Osage Reservation and on their own lands in the northeast corner of the state.

The Quapaw language is no longer spoken. The last person able to make up sentences died in 1975, so that the language is now, to all intents and purposes, extinct. I began field work on Quapaw in 1973 and was privileged to work with the last fluent speaker as well as several other persons who had been exposed in varying degrees to the language during their lives.

Younger interviewees who could recall sentences, isolated phrases, or words they had heard from their elders showed systematic and interesting reductions in the inventory of Quapaw phonemes. Some of these reductions can be described as simple acculturation--that is, they result in a more English-like phonology. Others however, can not be described purely in terms of acculturation, hence the title of my paper "The unmarking of Quapaw phonology."

The Quapaw phoneme inventory (phoneme in whatever sense you care to define it) is given below.

Glottalized:		t͡ʔ	k͡ʔ	ʔ (<*p?)
Aspirated:	pʰ	tʰ	kʰ	
Tense:	pp	tt	kk	
Lax. (vl.):	p	t	k	
Glottalized:		sʔ	xʔ	
Tense:		s	x	h
Lax:		z		
Resonants:	m (m~b)	n (n~d)		
	w			
Vowels:	i	o	į	ų
	e	a		ą

The phonological inventory is fairly rich in consonant distinctions, containing as it does a four way voiceless distinction among stops and a three way distinction among fricatives. The palatal frica-

tives are also phonetically retroflexed, a characteristic shared with several other southeastern Indian languages.

My sources for the complete Quapaw inventory are three: (1) Texts and vocabularies collected between 1827 and 1930 by several scholars and amateurs, (2) Comparative data from my field notes on the closely related Omaha and Kansa languages, and (3) Two speakers of the Quapaw language, both women. I was able to work for a short period with one before she suffered a stroke in 1974. The other had died shortly before I began my work, but her voice was preserved on tape by her grandsons. Numerous examples and comparison with philological materials show that both speakers had good command of the entire inventory and accompanying clusters and rules.

All other Quapaws I interviewed possessed truncated systems lacking one or more series of phonemes. These other speakers fall naturally into three groups.

Group I, only one member, a woman in her 70's who had known the language well as a child, and who remembered numerous phrases, several hundred words and a short prayer.

Group II, consists of three people in their 50's and 60's whose parents had been fluent. These people remembered between 150 and 300 words each along with a few short sentences.

Group III, consists of all the rest, mostly grandchildren of fluent speakers. One of these had written down in an English based orthography about 250 words spoken by his grandmother.

The total sample unfortunately is quite small -- only thirteen people -- so that in order to retain some sort of statistical validity, I am forced to confine my comments to phenomena which were very widespread. There are, however, a number of isolated phenomena which may take on significance as we learn more about language decline.

Turning to the earliest non-fluent generation we find the following modifications in the Quapaw segment inventory:

(1) Glottalized fricatives have deglottalized and have everywhere merged with their voicelsss plain counterparts:

Group I		Fluent Speakers	
waš́áge-ɦi	<	waṣ̌ʔáke-ɦi	'very big'
waxó	<	wax̣ʔó	'woman'

(2) Glottalized stops appear to vary, but examples are few:

wikkí~wikʔí	<	wikʔí	'I give' (sic) ('I give you')

(3) Aspirates are intact:

íšpahą̀ nį̀kháše	'you pl. sitting understand'
mį̀khé	'I'm the one, sitting'
tekhé~dekhé	'that one, lying'

(4) Retroflex sibilants vary, even with successive pronunciations of the same morpheme:

šų́ke	'dog' but šų̀keágnį 'sit-on-dog = horse'
žǫ́	'flesh, skin' but žožitte 'red skin, Indian'
aččéža	'goodness!'
ažų́	'sleep'

(5) Dental stops often palatalize and affricate before i.

jíe	<	díe	'you'
akjíni	<	akdé nį	'I returned'
šcítte	<	stétte	'tall'

This frequent palatalization may be due to interference from Osage however, since one group of Quapaws lived among and inter-married with the Osages over a period of several generations. The Osage palatalization products are assibilated chi , c?i, cci (where c =ts).

(6) Nasal vowels are intact:

šų́ke	'dog'
jdé	'ache'
sáttą	'five'
ažų́	'sleep'

(7) Voiceless tense unaspirated stops are intact.

kkattappá	'football'
sáttą	'five'
nį́kka	'man'
ppahí	'head'

(8) Lax stops, while tending to remain voiceless, sometimes voice, not surprisingly, when following nasal vowels. But I will deal with the lax stops in greater detail below.

Children of fluent speakers, who may not have mastered the language in their youth, were able to recall only words and short phrases. Their segmental phonology shows further reductions, but equally interesting are their retentions.

(1) Glottalized fricatives have, of course, merged with their plain voiceless counterparts, except for the velars x?, x which have become h.

wesá wes-á	<	wesʔá	'snake'
wahó	<	waxᵔó	'woman'
mekkáhe	<	mi̯kkáxʔe	'star'

Having given 'star' as mekkáhe one speaker volunteered that "The Osage word is mikákʔe," producing without difficulty the ejective kʔ. He and all younger speakers had lost all glottalized stops in their Quapaw examples however.

(2) Ejectives merge with the corresponding voiceless tense, unaspirated stops.

wíkki	<	wikʔí	'I give you'
tte	<	tʔe	'dead'

(3) This generation has also merged the aspirates with the tense, unaspirated series.

i̯ppá~i̯pá	<	opha̯	'elk'
wátte̯	<	watha̯	'melon'
watta̯se	<	watha̯zi	'corn'
watti̯ska	<	wathi̯ška	'river'
kkáge	<	kháke	'third son'

The phonetic products of the reduced glottalized and aspirated stops seem to defy description purely in terms of phonological acculturation. This is especially true of aspiration which was lost even in those environments where English would show strong allophonic (phonetic) aspiration--initially and before stressed vowels. This English phonetic rule failed to apply in the Quapaw vocabulary of those speakers whose command of the language in their later years was limited to word lists. Merger of glottals and aspirates with the least marked Quapaw series, rather than the nearest English series, was the rule.

(4) Retroflexed shibilants appear most frequently as clusters of alveolar sibilant followed by r.

zro	<	ẓ̌o	'flesh'
srúke	<	šr̥úke	'dog, horse'
sróté	<	šr̥ótte	'smoke'
mą́sro	<	mą́žu	'land'
ppóši	<	ppóši	'screech owl'
šíšta	<	šíšta	'quail'

(5) Some dental stops are palatized and affricated, as with the older generation, but their capricious distribution and the complete lack of intermediate stages such as the tʸ, dʸ found in Kansa lead me again to suspect an Osage source for the affricates.

	wiččígo, wiccígo	<	wittíko	'grandfather'
	mʃxči	<	mʃxti	'one'
	čekažíze	<	?	'lightning'
but:				
	nʃttiudìši	<	nʃtte odíši	'trousers', etc. (lit. 'covers buttocks')

(6) Nasal vowels, again, are largely intact:

į	<	į	'rock'
srų́kə	<	sų́ke	'dog'
sʃkə	<	sʃka	'squirrel'

(7) Tense, unaspirated stops are preserved intact:

šáppe	'six'
sátta	'five'
šą́kka	'nine'

(8) Whereas most instances of the lax stops were voiceless for fluent speakers, this first non-fluent generation voices the majority of them. Labials are the most affected, velars the least:

p	nąbe	<	napé	'hand
	hąbé	<	hapé	'shoe'
	bahʃtt	<	paxʃtt	'sweat'
	nų́bə~nų́pə	<	nupá	'two'
	bagít 'fiddle'	<	pakʃtte	'accordian'
t	ibadó	<	ipaxtó (?)	'fork'
	šedó	<		'get away!'
	kkóda	<	kkóta, kkóda	'friend'
	wadé-	<	wetá-	'index (finger)'
	dákka	<	tákka	'hot'
but:				
	tóba	<	tóba	'four'
	tátta	<	tátta	'what'
	tanʃba~danʃba	<	tanʃpa	'smoke, pipe'
k	gahíge	<	kahíke	'chief'
	ttų́ka	<	(same)	'big'
	srų́kə~sǫ́ge	<	šų́ke	'dog'
	tti kəhé	<	tti-káxe	'carpenter'
	hinʃke	<	(same)	'leggings'
	sʃkə	<	sʃka	'squirrel'

While voicing of the lax series in Quapaw has become predominant only after contact with French and English and may thus be viewed as acculturation, it is a trend that was established in Dhegiha Siouan languages before contact with Europeans. These Proto-Siouan lax stops had voiced in the closely related Omaha-Ponca language in prehistoric times and have become voiced in the Kansa language within the last 100-150 years. The James Owen Dorsey papers show that there was considerable fluctuation in Kansa in the 1880's, but voicing is complete in the speech of the last four or so speakers of Kansa today.

The Dorsey papers also reveal sporadic voicing of the lax bilabial stop in Quapaw in the 1800's, and Albert S. Gatschet also recorded voiced stops in Quapaw at about the same time.

The point here is not really to argue the source of Quapaw voicing, but rather to show that by the time the glottalized and aspirated stops simplified, the systematically least marked stop series in the language was the voiceless tense unaspirated series. The lax series had already acquired voicing.

It is impossible to tell whether the Quapaw speakers of these intermediate generations simply failed to acquire the necessary phonological oppositions in infancy, thus reducing the inventory to the two less-marked series, or whether the more marked glottals, aspirates, etc. were, for the most part, acquired early and subsequently lost. Several of the older Quapaws mentioned however, that they had spoken the language with their parents and grandparents in their youth and that in fact the latter had spoken English badly.

It is safe to say in any event, that the generation born just before and during World War II failed to acquire the more marked series, learning only the few words and short phrases that they were exposed to.

In this third group whose mastery of Quapaw is limited to memorized words and phrases, acculturation apparently takes over and the phonology and phonetics are highly Anglicized. There are of course no glottalized fricatives or stops, and no retroflex fricatives. The English aspiration rule applied to words uttered in isolation, although one speaker who read me a list of about 250 words he had written down, lost his Anglicized consonants and vowels as he "got warmed up."

The lax stops again tended to be voiced, and again the labials were completely voiced while the velars show considerable fluctuation. Lack of nasalization of vowels is also prominent:

to	<	ttų~tta	'town'
makáša	<	mą́kkáša	'coffee'
ówič(č)i	<	owíčhį	'I hit him' (sic) ('I hit you')
žop(p)é	<	žąppe	'leaves'
ſšta	<	įštá	'ax' (sic), ('eye')

The velar fricative x (from x and x?) generally appears as h. This is not unexpected, since it is not an English sound. In a few cases, far

too few to be anything but suggestive, assimilation to place of articulation of a following obstruent has occurred.

ogáfpa	<	okáxpa	Quapaw
θtá	<	xtá	skinny
mĩʃąkščĩ	<	mĩʃxti	one

These are about all the generalizations I feel I can safely make about the decomposition of Quapaw phonology.

The types of reductions and the order in which they occurred in Quapaw correlate well with our understanding of relative phonetic complexity of segment types, their relative frequency of occurrence in the world's languages, and the order of acquisition and loss during first language learning and aphasia.

This study of language death confirms the relative hierarchy of sound types found by Greenberg (1966, 63-66) in several languages including Chiricahua Apache, which has a somewhat similar three-way contrast of glottalized, aspirated and plain stops, along with nasal vowels. The Quapaw progression suggests a few minor additions and refinements. Proceeding from most to least marked Quapaw consonant series, that is, from first lost, to last lost, to retained series, we arrive at the following ranking:

(1) Glottalized fricatives were lost first.
(2) Glottalized stops were retained sporadically by those who had lost the fricatives.
(3) Aspirated stops were retained by those who had lost all glottalization.
(4) Lax stops voiced; labials affected first, velars last.
(5) Retroflex shibilants were retained as clusters by those who had lost all aspiration.
(6) Nasal vowels were still common in the pronunciation of speakers who showed no glottalization, aspiration or retroflexion at all.
(7) Tense voiceless unaspirated stops remained the least and last affected by changes in the system.

If I had begun my study of Quapaw ten years earlier, perhaps interesting observations on grammatical and morphophonemic decline might have been forthcoming along with my treatment of inventory. The moral is clear and was, in fact, drawn by Dressler (1972) in his excellent paper on phonological decline in Breton. If we are to understand the facts of language decline, the field linguist researching dying languages must obtain material from non-fluent speakers of several generations as well as from fluent speakers.

With respect to the subject of this paper, it would be interesting to know whether or not, between the fluent generations on the one hand and the acculturated generations on the other, there are normally speakers whose phonological inventories become less marked without necessarily moving in the direction of phonetic accomodation to the dominant tongue.

Footnotes

1 I wish to express my appreciation to all those Quapaws who helped me in various ways with this study: Mrs. Pat Allen, Mrs. Alice Gilmore, Mr. Hayes Griffin, Mr. and Mrs. George McWatters, Mrs. Mary Redeagle, Mssrs. Bill, Charles and Kugee Supernaw, Mrs. Maude Supernaw, Mr. and Mrs. Leroy Watson, Mr. Robert Whitebird.

2 Field work on Kansa cited in this study was supported by the University of Kansas and by the Phillips Fund of the American Philosophical Society.

3 It is interesting that Dorseys' Kansa Texts (c.1880) show (among the lax stops) that the velars were voiceless more often than the dentals (few cases) or labials (nearly all voiced).

References

Campbell, Lyle. 1976. Language contact and sound change. William Christie, ed. Current Progress in Historical Linguistics. North Holland pub.

Dorsey, James Owen. 1890. The Ɂegiha Language. CNAE VI, 1-783.

_____. c. 1890. Quapaw-English Vocabulary. Unpub. MS. NAA, Dorsey Collection: Quapaw 3.2.4 (16).

_____. c. 1890. Kansa-English Vocabulary and Texts, Unpub. MSS. NAA, Dorsey Collection (4800).

Dressler, Wolfgang. 1972. On the phonology of language death. PCLS-8. 448-57.

Greenberg, Joseph H. 1966. Language Universals: With Special Reference to Feature Hierarchies. Janua Linguarum, Series Minor, 59. The Hague.

Hadley, Lewis. 1882. A Quapaw Vocabulary and the Quapaw and Ponca Compared. Unpub. MS. National Anthropological Archives (NAA) (No. 918?).

Hamp, Eric P. 1968. Acculturation as a late rule. PCLS-4.103-10.

Rankin, R. L. 1973-. Unpublished field notes on Quapaw, Kansa, Omaha languages.