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DEPARTMENT OF LINGUISTICS
UNIVERSITY OF HAWAII
HONOLULU 96822

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A SKETCH OF KUTCHIN PHONOLOGY¹

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I. Introduction

The Kutchins are a group of Athapaskan Indians who live in an area between the East Fork of the Chandalar River in Alaska and the Mackenzie River in Canada. Eight main groups were classified by Osgood (1936) on the basis of the principal river in their area. They are as follows:

- (1) Yukon Flats Kutchin (Kutcha Kutchin)
Birch Creek Kutchin (Tennuth)
Chandalar River Kutchin (Natsit)
Black River Kutchin (Tranjik)
Crow River Kutchin (Vunta)
Upper Porcupine River Kutchin (Tukkuth)
Peel River Kutchin (Tatlit)
Mackenzie Flats Kutchin (Nakotcho)

To this list McKennan (1965) adds a ninth group, the Dihai Kutchin. McKennan prefers Chandalar Kutchin or just simply Chandalar over the term Natsit since it avoids orthographic confusion. (nedse, neyetse, netsi, ned'si, etc.) The material on which this paper is based was collected during the summer of 1972 in one of the settlements of the Chandalar Kutchin, Arctic Village.

The language, Kutchin, may be formally isolated from the other Northern Athapaskan languages principally on the basis of the palatalization of Proto-Athapaskan (PA) *d series consonants and PA *n which in Kutchin frequently (but not always) are dj and ndj, respectively, when followed by i or the glide v. This results in the name of the group, Kutchin (gwitc'in/gutc'in², cf. Chipewyan hot'inε) and the Kutchin word for person or man (dindji cf. Chip. dεne). It has never been established that this formal isolation of Kutchin corresponds to any other isolation, cultural or ecological. McKennan (1965) reports that the Chandalar Kutchin expressed a stronger feeling of group unity than any other Athapaskan group with which he had worked but also he suggests there are factors which are "tending to blur dialectal differences" (p. 15). Krauss has repeatedly said (Krauss 1964b, 1972) that

it is not possible to subclassify the Athapaskan languages meaningfully solely or even largely on the basis of the Stammbaum model, but that Athapaskan must be viewed as a dialect complex with many convergence ('wave') as well as divergence (Stammbaum) relationships." (1972, p. 179)

This paper is a phonological study of Kutchin as it was spoken to me and in my presence in Arctic Village (AV) in the summer of 1972. From this limited point of view there is considerable evidence that Krauss' position is correct. The next section will present a discussion of the main varieties of Kutchin reported to me as well as some comments on the relationship between Kutchin and English. The third section will sketch out a phonological description of Kutchin on the basis of my material. Since both synchronic and historical aspects are relevant to this discussion I have made no attempt to separate these into separate discussions. In the fourth section, however, I will give a summary discussion of some general historical developments. The fifth section is a stem list of the forms on which this study is based.

A number of other ethnologists and linguists have preceded me in working on Kutchin. I have already mentioned Osgood and McKennan. Sapir collected a considerable amount of material in 1923 from John Fredson. This material has been passed on from hand to hand but to my knowledge it has still not reached publication. Richard Mueller has worked for many years in AV and Ft. Yukon but since the emphasis of his work is on producing materials in Kutchin for the use of Kutchin speakers he has not published any descriptive materials for a more general linguistic audience. Krauss is, perhaps, the linguist with the fullest formal understanding of Northern Athapaskan including Kutchin but, again, his other interests, such as his work on Eyak, the still enormous task of comparative coverage of the Alaskan Athapaskan languages, and the very important task of the preservation of the Alaskan languages for the people who speak them, have prevented him from producing any fuller study of Kutchin. Ultimately, it seems that the sociolinguistic questions raised by this study will only be fully understood and answered by a native speaker of Kutchin. It is to be hoped that Athapaskans will replace Athapaskanists in this work.

II.1 Arctic Village

It is difficult to define AV as a community and even more difficult to define it as a speech community. The earlier ethnographic reports of Osgood and McKennan emphasize this difficulty for all Kutchin groups. Nelson (1973) reiterates the individualism of the Kutchins at Chalkyitsik and says

widely spoken as the principal means of speaking among Alaskan Natives of differing language and dialect groups. The other varieties listed were mentioned so rarely or in such a specialized context (e.g. Tukkuth Kutchin as the written form of the Bible and other liturgical materials before Mueller's work) that I am not able to make any fuller statement about them.

II.2 Ft. Yukon Kutchin and Arctic Village Kutchin

The distinction between FTYK and AVK is maintained in at least six ways in the phonological system. The most obvious (and perhaps ultimately the only clear and invariable) distinction is in a set of consonants which are reflexes of the PA *dz series. In a number of cases³ PA *ts and *ts' have become AVK tc and tc' and FTYK k and k'. (Reflexes of PA *dz are difficult to establish.) The list below shows some of these.

| (3) | PA initial | AVK | FTYK |
|--------------|------------|-------|-------|
| 'stone' | *ts | tcí | kí |
| 'tongue' | *ts | -tca? | -kia? |
| 'head' | *ts | -tci? | -ki? |
| 'daughter' | *ts | -tcí? | -kí? |
| 'grandchild' | *ts | -tcí | -kí |
| 'mosquito' | *ts' | -tc'í | k'í |

This variation occurs in a small set of words (perhaps 20) which can mostly be analysed as noun stems. This only applies to reflexes of PA *dz series consonants. PA *g series consonants are unaffected (e.g. 'arrow' *k'a? > AVK k'i?, FTYK k'i?).

A second difference is in the treatment of some vowel-nasal sequences. For example, in AVK the form for 'it is good' is gwí·zı but in FTYK it is gwínzi. Although Mueller (1964) gives both ɬąı and ɬain for 'dog' all of my informants gave only ɬąı. In my data this variation is limited to a small number of prefixes.

A third difference is in the vowel in a number of words such as 'jackfish' (AVK ʔaltín, FTYK ʔiltín). Again, this is not a general difference but, rather, restricted to a small list of words.

A fourth difference between AVK and FTYK that can be noted is in the tone of some verb stems. Kutchin is a tone language as are some of its Northern Athapaskan neighbors (e.g. Chipewyan). The following list shows several examples of the AVK - FTYK differences.

| | | | |
|-----|---------|--|---|
| (4) | | AVK | FTYK |
| | 'make' | -tsí, {-tsai, {-tsia {-tsi {-tca | -tsi, {-tsi, {-tsia ⁴ {-tsai} {-tca |
| | 'run' | -gál | -gal |
| | 'sit' | -dí, --, día | -di, --, -dia |
| | 'drink' | -ní | -ni |

The differences are all in one direction as this list indicates. AVK high tone is FTYK low tone. I have found no examples of the opposite. This variation, again, is limited to some small number of forms.

These differences between AVK and FTYK are the clearest and most noticeable. Mueller (1964) shows a distinction also between y and j (< *x) and r and ç or ř (< *y) in forms such as the following:

| | | | |
|-----|-----------------------|-----------|-----------|
| (5) | | AVK | FTYK |
| | 'mouth' | jik | yik |
| | 'ice crystal snow' | tsaihja? | tsaihya? |
| | 'sunlight' | drin-?ori | drin-?ori |

These forms were much more variable with my informants. A single informant frequently gave both forms. Generally, these two distinctions are not maintained between FTYK and AVK with any regularity.

The distinction between FTYK and AVK can be summarized as follows:

| | | | |
|---------------|--|---------------|------------|
| (6) | | AVK | FTYK |
| PA *dz series | | (dj), tc, tc' | (g), k, k' |
| Vowel-nasal | | ɣ | vn |
| vowels | | a | i |
| tone | | á | á |
| PA *x | | j | y |
| PA *y | | ř | r |

The question that must now be raised is: what or whom does this distinction between FTYK and AVK characterize? In a general and limited way it is possible to characterize individuals as speakers of FTYK or AVK. This distinction, however, often appears to be more a question of attitude toward the varieties than actual use. One speaker of FTYK said that he could not understand why another person (whom he referred to by name) said tc' and tc when k' and k are so much easier to say. That person said, in turn, that tc' and tc are much clearer than k' and k. In conversation with each other these two speakers freely use their own varieties without any apparent loss of intelligibility and, perhaps more important, without animosity.

The attitudes of the two groups toward my pronunciation of Kutchin varied. Those who thought of themselves as speakers of AVK tolerated much variation without attempts at correction while speakers of FTYK tended to insist that I get it right. At the same time it was speakers of AVK who took the greatest interest in drawing me into the Kutchin speaking community.

In several cases speakers' attitudes toward the FTYK-AVK distinction as well as their knowledge about it came to light in conversations which I had taperecorded. In the first of these an elderly couple (speakers of AVK) were visiting us. Early in the visit we were eating fish. I referred to it as ?iltín (FTYK 'jackfish, pike'). The woman said ?altín to herself (AVK form). Later an interesting dialogue took place between the woman and me.

(7) (W=woman, M=me)

W: ?iltín vandaí? ('Do you know [the word] ?iltín?')

M: (no answer)

W: ?altín, yeah, van--you know?

M: Yeah.

W: You know?

M: Yeah.

W: ?eltín'

M: ?ahā? (Kutchin =yeah)

W: ?ā. ?altín.

Notice in this dialogue that W first uses the FTYK form of the word in speaking to me. This is either because she is aware that I used this form earlier or because she assumes that someone would learn the FTYK form first. When she gets no answer she switches to the AVK ?altín. When I say 'yeah' in answer she doesn't acknowledge this as an answer. (Note her own use of 'yeah'--that is, she certainly knows this word). It is only after I switch to the Kutchin ?ahā? that she accepts that we are conversing. Then she makes her point which is that ?iltín should be pronounced ?altín. Following this dialogue the couple talked to each other about the two variant forms but I cannot follow that conversation. It seems clear in this case that W is trying to get me to speak Kutchin and preferably AVK.

In another situation I was speaking with a group that included one elderly speaker of AVK, one young speaker of FTYK, and a group of children under 10 years of age. I was 'officially' learning words from the speaker of AVK but the others were all 'helping'. I asked for the Kutchin word for 'narrow'. The older man (OM) gave tc'í. A child said k'í (correcting the initial tc'to k'. A second voice said k'i

(correcting the tone) and then OM said k'i? as his 'final' form and the young man (YM) confirmed with k'i? but noted that instead of giving me 'narrow' they had given me 'arrow'.

A few minutes later I asked for 'below'. OM gave tc'íjak. YM again corrected the initial to k'íjak. In this case, however, OM stuck to his original form contending that tc'íjak is di gindj'ík whereas k'íjak is gutcá gutc'ín.

What is interesting about these two cases is that in both cases OM first gives tc' and the others correct to k'. In one case OM accepts the correction but in the other he argues that there is a dialect difference. The initial consonant in the first case ('arrow' k'i?) can be shown to be the reflex of PA *k'. In the second case tc' and k' are the reflexes of PA *ts'. By his willingness to accept correction in the one case but not the other OM indicates some kind of awareness of this historical distinction between the consonants.

In the third case I will cite, I was trying to elicit the perfective stem of the verb 'to make' from a speaker of AVK. We went over it a number of times. Each time he gave me -tsaí as the form of the stem. When I switched on a second tape recorder to record this form he gave -tsí as the stem. I was surprised and asked what -tsaí was. He reported -tsaí to be the FTYK form--that they really meant the same thing.

This case is particularly interesting since another informant who regards himself as a speaker of FTYK in giving this same form rehearsed -tsi a number of times. When I switched on the second tape recorder he then gave -tsaí as the correct form. In this case the informant didn't characterize the difference between -tsi and -tsaí but just said they were the same. (A summary of these forms is given in (4) above).

In both cases the speakers show a vacillation between forms with one showing up in a somewhat more pressured situation. Notice that the speaker of AVK claims that one of the two variant forms belongs to FTYK but the speaker of FTYK does not refer to the AVK forms according to any dialect distinction. Since the speakers of AVK are all older residents of AV this may indicate that they are conscious of a time when the AVK/FTYK distinction was actually a geographical dialect difference. Speakers of FTYK (younger people and older people who have come from

Venetie or Ft. Yukon) seem to be less conscious of this difference but only regard AVK as different for some inexplicable reason. Since these latter are in the majority among Chandalar Kutchins this attitude is not surprising.

Since I have said that younger people are speakers of FTYK I should point out further that children make a wide variety of mistakes (e.g. the perfective stem of 'make' -tse, or tone differences) which the adults assume they will overcome with age. This raises the general question of whether the speakers of AVK who are elderly people expect the younger people of AV to become speakers of AVK when they too become elders. This seems unlikely since one of my informants was of the same generation as the speakers of AVK but spoke FTYK. Since this man was somewhat of an outsider in the village, however, it might be argued that it is age taken together with prestige (status of village elder) that admits one to AVK. This might be refuted by the case of OM quoted above who was of the right age but apparently did not have the status of a village leader. It is further refuted by the fact that these same elders made frequent attempts to get me to speak AVK. If AVK were assumed to be the natural outcome of a life of speaking FTYK then they would not have worked at teaching me.

Perhaps it is clear by now that the distinction between FTYK and AVK does not represent a simple geographical dialect division to people in AV. Although all speakers tend to preserve the distinction in their own speech their attitudes toward this distinction vary. It would take a sociolinguistic study of much greater depth to approach an understanding of just what kind of a distinction this represents. For now I can only suggest that the use of AVK represents a preservation of an older form of speech in a few limited areas of the language and that this preservation is associated for at least some speakers with religious activity in AV. As I will show below the *tc* (← **ts*) in AVK appears to be related to the same development in Tukkuth and Peel River Kutchin. I suggest that this PA development has been retained in AVK as a result of the introduction to AV of the Bible and other church materials in the Tukkuth Kutchin translations of Archdeacon MacDonald. The distinction between AVK and FTYK appears to be quite similar to that maintained in some Protestant sects by the use of the older forms 'thee' and 'thou' in religious contexts.

II.3 Kutchin and English in Arctic Village

A view of AV that only looks at the distinction between FTYK and AVK would still be somewhat too simple. Kutchin (of both varieties) and English are in a complex relationship in actual use. It is frequently difficult to decide if a particular utterance is in one language or the other. One finds English words 'borrowed' into Kutchin sentences in Kutchin discourses as follows:

- (8) a. XXX dindjǐ nekwaǐ or thrée dindjǐ XXX (XXX represents conversation in Kutchin which I cannot follow).
b. eight o'clock airplane-a dagóndji 'a? ('Has the eight o'clock airplane left yet?')
c. tape recorder t'open hendrá? (Is the tape recorder on?)

Or one finds Kutchin used in the context of English discourse as in "vanotǐít he like it inside house." ('Whitemen like to stay in the house.')

Perhaps the clearest expression of this pervasive overlap between the languages was given when I asked an older person how to answer the question vadzaǐ konlǐ? ('Are there any [a lot of] caribou?') He told me that the correct negative answer was vadzaikwá ('There are no caribou.'). Later in another setting I used this answer to the same question (an important and frequent question in late summer in AV). That person said my answer told him that I was not a native speaker (his words) of Kutchin. I asked what was correct and he said no? was correct. Notice that he claims that the borrowed English form (with ? final) is the correct Kutchin form. Later the person who originally gave me the form vadzaikwá was recorded in conversation with his wife--all of it in AVK. He regularly used no? as the negative.

The conclusion that I draw is that the first person gave me vadzaikwá on the basis of the normative categories of Kutchin (pure) versus English (pure) not on the basis of the way he actually speaks. The second person caught the problem. Although I cannot be certain, I feel that these normative categories were, in fact, my categories--categories that I had suggested through my persistent attempts at first to elicit a homogeneous variety of Kutchin for my linguistic work. The evidence I have that this is so has to do with questions of both use and attitude. One of the elders in the village claimed that the only reason the "old people" didn't borrow words was because they didn't know them. They called borrowed cultural items by Kutchin terms only as long as they were ignorant of the "right name".

The attitude toward borrowing expressed by this person about language agrees with Nelson's (1973) description of the people of Chalkytsik who lack any interest in the old ways and prefer to borrow wherever possible. On the other hand it runs directly contrary to Sapir's (1921) statement that

the Athabaskan languages of America are spoken by peoples that have had astonishingly varied cultural contacts, yet nowhere do we find that an Athabaskan dialect has borrowed at all freely from a neighboring language. (p. 196)

There is also a footnote which says rather than "freely" that "one might all but say 'has borrowed at all'". At least in AV there is evidence of frequent borrowing and if the older people did not borrow it is said that it was only from lack of opportunity, not from any basic psychological prejudice against borrowing.

II.4 Children's Language in AV

To close this section on language use in AV it is important to mention two aspects which may be of considerable importance in determining the future uses of language. I was interested in studying the acquisition of Kutchin, particularly the very earliest stages, for comparison with my work done with a child learning Hawaiian English (Scollon 1974). I found this impossible because the mother of the only one year old child in AV reported that they spoke to the child only in English. I had a fair opportunity to observe this in a variety of settings both with this child and with other children somewhat older. In general, English (AVE) forms a kind of baby talk register which is used in speaking to children under about four years of age. It is quite like other baby talk registers reported (e.g. Ferguson 1964) in that it is widely but not exclusively used in speech to the child. It is clear that it is preferred to Kutchin because some of the more conservative speakers of AVK were observed to use English--even in the face of claiming to me that they could not speak any English. One person after a session in which he claimed to have no knowledge of the English conjunction and, and even went so far as to say that it was ridiculous for a language to have such a word, said to his grandchild (three years of age) "You and me, go home."

So far this use of English is restricted to a baby talk register. Children around four were observed to listen intently to conversations in Kutchin but when they asked questions in Kutchin they were answered in English. Older children speak and are answered in Kutchin.

These statements, however, must be considered tentative and possibly obsolete. A statewide bilingual education program was in preparation during the summer of 1972 while I was in AV. This program was to be instituted in AV in the fall of that year. It is to be expected that the institution of formal education in Kutchin will strongly affect patterns of usage in AV. The description of these patterns must be left to linguists who are in closer contact with AV.

III. A phonological description

The study presented here is based almost entirely on my own work in the summer of 1972. I used Mueller's dictionary (1964) in some of my early elicitation and with the exception of tone and vowel length have largely agreed with the forms he gives. Since I have relied heavily on tape recorded material for this study, however, I have not used entries from his dictionary that I did not also elicit from my informants. My access to Sapir's material has been limited to a dozen pages of notes copied from Sapir's originals by Fang-Kuei Li. I received these after doing the bulk of this analysis and so that material was not used to any extent in preparing this study.

My purpose in stressing the independence of my work is that I feel that if what I do is to have any significance it will be as an independent source of information and analysis. It is clear from what I have seen of Sapir's notes that in certain critical areas he had arrived at essentially the same analysis. On the other hand, because of the complex situation in AV it is possible that a number of the conclusions I have drawn will have to be altered in the perspective of the wider knowledge of Kutchin of those who have worked in this area much longer than I have.

III.1 Order of presentation

This section gives a discussion of the analysis that led to the current form of the word/stem list in section V. This analysis begins as a synchronic study but ultimately introduces historical-comparative material for consideration. This study consists of twelve sections as follows:

- III.2 Nasals
- III.3 Dentals and alveolar affricates
- III.4 Interdental stops
- III.5 Dental affricates
- III.6 Retroflex affricates
- III.7 Velar stops

- III.8 Laterals, glottal stop, and v
- III.9 Fricatives
- III.10 Final consonants
- III.11 Vowels
- III.12 Tone
- III.13 Phonology of loan words

(A list of the segment symbols used throughout this discussion is given at the beginning of section V, the word/stem list.)

Phonological studies in Athapaskan languages have generally been restricted to the initial consonants of verb stems. These are more conservative and internally consistent than prefix consonants and much more conservative than final consonants--many of which have been lost. In this discussion I treat these stem consonants first but I have then expanded the analysis to consonants in other positions. Because there are fewer nasals than other stop consonants I begin with them.

III.2 Nasals

There are four nasal consonants, [m], [n], [ŋ], and [ɲ], nasal vowels, and sequences of [n] followed by many of the other consonants. [m] occurs in very few words, all but -ma? 'breast, milk' clearly borrowed into the language. [ŋ] always and only occurs before velar stops and can be assumed to be a phonetically conditioned variant of /n/. [m], [ɲ],⁵ and [ŋ] are not of major importance in this discussion.

There are two sequences which, because of the prevailing consonant-vowel syllable structure and because of morphological evidence, behave as single segments rather than sequences. These are [nd] and [ndj], for example, 'island' ndjú, 'lips' ndéva, 'I know' gacíndai (ga-, verb theme, ce-, 1st person singular disjunctive subjective prefix, -ndai, 'to know', imperfective stem. Note: it is not n + -dai, -n-, 2nd person singular subjective prefix.)

The distribution of [nd] and [ndj] is as follows:

(9) ndj/ $\left. \begin{array}{l} i \\ u \\ ia \end{array} \right\}$

(10) nd/ $\left. \begin{array}{l} e \\ ai \\ ak \end{array} \right\}$

Since u is phonetically [iu], this distribution indicates that [ndj] is a palatalized variant of /nd/.

A relationship between nd and n can also be established as the following examples illustrate:

- (11) 'drink' -nɨ́, -nɨ́ʔ, -ndja
 'sharp' -nin
 'lift' -ndji
 'pull' -ndak

Comparing these with the environments in (9) and (10) above it can be shown that [nd] and [ndj] are found in non-nasal environments as in (12),

- (12) $\left. \begin{matrix} \text{nd} \\ \text{ndj} \end{matrix} \right\} \text{---} \begin{matrix} \text{V} & \text{C} \\ \text{[-nasal]} & \text{[-nasal]} \end{matrix}$

but [n] is found as in (13).

- (13) $n / \left\{ \begin{matrix} \text{---} \text{V} \\ \text{---} \text{[-nasal]} \\ \text{---} \text{V} & \text{C} \\ \text{---} & \text{---} \text{[+nasal]} \end{matrix} \right\}$

As I will argue below, there is reason to think that surface nasal vowels are the result of an underlying vowel-nasal sequence. If this is so then (9), (10), (12), and (13) could be summarized as in (14).

- (14) /n/ → ndj / $\left[\begin{matrix} +\text{palatal} \\ -\text{nasal} \end{matrix} \right]$
 nd / $\left[\begin{matrix} -\text{palatal} \\ -\text{nasal} \end{matrix} \right]$
 n / [+nasal]

The two processes, palatalization and denasalization interact so that /n/ must be denasalized to nd in order to undergo palatalization. These processes are quite general. I find no exceptions among the stem initial consonants. Prefixes, however, present problems. For example the 2nd. person singular and plural subjective prefixes are, respectively, né-, and nohó-, not *ndé-, and *ndohó- as the rules above would predict. Some words of the other classes have initial consonants of both types, e.g. 'island' ndjú but 'salmon-berry' nákal not *ndákal, and 'long time' níyuk not *ndjíyuk. The implication, of course, is that, at least for prefixes and nouns there is a contrast between /nd/ and /n/.

If an underlying contrast between /nd/ and /n/ is accepted for stems as well, then the analysis above would be incorrect. 'drink' -nɨ́, -nɨʔ, -ndja as analysed above would be /nín/, /ninʔ/, /nia/ with denasalization and palatalization applying to give the surface forms. If the contrast between /nd/ and /n/ is accepted, then 'drink' would be /nín/, /ninʔ/, /ndia/ with only the palatalization process needed to give the surface forms.

This suggests that /n/ plus the two processes of denasalization and palatalization represent an earlier stage. The contrast between /n/ and /nd/ amounts to denasalization having been a deep process which is represented by a contrast in underlying segments. To anticipate some later points, we can see that an even later stage would be to represent both denasalization and palatalization in the underlying forms with /n/, /nd/, and /ndj/ all contrasting.

One set of forms illustrates these processes quite well. For the verb, 'to say' two informants gave me different forms. One speaks mainly AVK and the other speaks mainly FTYK. This material suggests that AVK is the more conservative of the two varieties.

- (15) 'to say' -niá, -niá, -niáʔ (AVK)
 -ndja, -nã, -ndjaʔ (FTYK)

Two solutions can be offered for these differences. The first solution would assume that denasalization and palatalization were surface processes. The derivation of the imperfective would be as follows:

- | | | | | |
|------|----------|--------|-------|--|
| (16) | | AVK | FTYK | |
| | 'to say' | /nián/ | /nia/ | |
| | | nián | ndia | denasalization |
| | | nián | ndja | palatalization |
| | | niá | ndja | vowel nasalization and final consonant loss |

In this solution both speakers are assumed to have /n/ as the initial consonant. They differ only in the presence of vowel nasalization--represented by an underlying vowel-nasal sequence. Denasalization is taken to be a surface process.

A second solution is as follows:

- | | | | | |
|------|----------|--------|--------|--|
| (17) | | AVK | FTYK | |
| | 'to say' | /nián/ | /ndia/ | |
| | | nián | ndja | palatalization |
| | | niá | ndja | vowel nasalization and final consonant loss |

This solution takes the denasalization to be encoded in the underlying contrast between /n/ and /nd/.

Considering only the nasals there appears to be no way to decide which is the correct solution. Tentatively, I suggest that (17) is correct and that denasalization of /n/ to /nd/ took place in the past and that these segments contrast in their underlying forms.

In final position there is only one nasal segment, n. There are also nasal vowels in all positions which I suggest result from an underlying vowel-nasal sequence. Stems such as 'hold'-tą and 'teach'(pl.) -tan allow at least three solutions, as follows:

| | | |
|------|--------|---------|
| (18) | 'hold' | 'teach' |
| a. | /tą/ | /tan/ |
| b. | /taN/ | /tan/ |
| c. | /tan/ | /tane/ |

The first (a) assumes underlying nasal vowels, the second (b) assumes some underlying 'nasalizing' nasal consonant (which never appears on the surface) contrasting with /n/, and the third (c) assumes that /n/ before a word boundary would nasalize the preceding vowel. This solution also assumes that a final vowel or nasal would then be deleted.

There are a number of cases in which nasal vowels are clearly the result of a vowel-nasal sequence in casual speech. For example, one informant gave both gwinézi and gwí·zi for 'to be good'. In other cases this nasalization is a regular morphological process. The second person singular subjective prefix, -n- results in the nasalization of the preceding vowel, for example, 'he sits' óidi, 'you sit' óíndi but 'he makes' ?átsi, 'you make' ?átsi. These examples indicate that the third solution above (18c.) is correct. The conditions under which /n/ nasalizes the preceding vowel have to be expanded somewhat, however. This process takes place before word boundaries, before some consonants (e.g. dz series consonants), in casual speech, and in some morphological processes. I have intentionally left these environments vague because their full specification will depend on a fuller discussion of morphological processes which I have not yet undertaken. In general it can be said that there is an overall tendency toward an open syllable structure of consonant - vowel, and toward stems of a single syllable. These processes taken together give more strength to the solution (18c.) which assumes surface nasals result from underlying vowel - nasal sequences.

To conclude this discussion of nasal vowels and final nasals it will be useful to look at some comparative evidence. The following Chipewyan forms are from Li (1933a).

| | | | |
|------|----------------------|---------|------------|
| (19) | | Kutchin | Chipewyan |
| | 'mother' | -ʔé | -ʔə |
| | 'grandmother' | -tsú | -tsuné |
| | 'hold' | -tə | -tún, -tún |
| | 'teach (pl.)' | -tan | -tan, -ta |
| | 'teach (sg.)' | -tan | -tə |
| | 'trail' | -təi | -tane |
| | 'be Class II object' | -tin | -tə |
| | 'father' | -ti | -tə |
| | 'people' | -tc'in | -t'inε |

These forms indicate that all of the possible correspondences of a vowel-nasal sequence or a nasalized vowel occur between Kutchin and Chipewyan, except that Kutchin does not have any final vowels following a nasal consonant. Although these few examples are insufficient for a reconstruction of the historical forms they do indicate that it is not unreasonable to consider the nasalization of vowels from underlying vowel-nasal sequences and the surface vowel-nasal sequences to come from underlying vowel-nasal-vowel sequences.

As a tentative summary I suggest that the surface nasals [m], [n], [ŋ], and [ñ], surface nasal vowels, and vowel-nasal sequences result from the following underlying nasals: /m/, /n/, /nd/, /VnV/, and /Vn/.

III.3 Dentals and alveolar affricates

The palatalization of /nd/ to ndj suggests that the same thing might happen with the dental series stops, d, t, and t'. For this reason in this section I will be looking at the pairs, d/dj, t/tc, and t'/tc' in that order.

The first pair is illustrated by the following list:

| | | | |
|------|-------------|----------------|---|
| (20) | | | |
| | 'heavy' | -dí, -di | |
| | 'sit' | -di, -di? | |
| | 'go, be' | -di, -dí, -día | |
| | 'choke' | -dak | x |
| | 'fear' | -dját | |
| | 'old, worn' | -djat | |
| | 'four' | đə | x |
| | prefixes | di-, de-, da- | x |
| | 'this' | dji | x |
| | 'horn' | tcídji? | x |
| | 'new' | -djit | x |
| | 'buy' | -djik | x |
| | 'vomit' | -djú | x |
| | 'come' | -dik | |

For the forms marked with (x) the following rule could be assumed

- (21) /d/ → dj/___ [+palatal]
 d /elsewhere

A number of forms do not undergo this rule, however. That is, some /d/'s do not palatalize and some dj's are found in non-palatal environments. There are several ways to try to resolve this difficulty. Comparative evidence shows that those cases of dj which precede non-palatals are reflexes of PA *gʷ. This would not account, however, for the d's which appear on the surface before palatals. In this case there is no final nasal to appeal to as in the case of the nasal initials. An alternative would be to posit [-palatal] underlying vowels in these cases. As I will show later the comparative evidence indicates that forms such as 'to sit' -di < PA *da.

As far as a synchronic description is concerned it is difficult to argue for the rule expressed in (21) above. The simplest solution is to assume a contrast between /d/ and /dj/. Of course, if this description is accepted here, it implies that the palatalization process is an historical development. This would lead to reanalysing the nasals as /nd/ contrasting with /ndj/ as well as with /n/ for the sake of the consistency of the description.

In the case of the aspirated pair t/tc things are more complicated as the following list indicates:

| | | | |
|------|------------------------|-----------|---|
| (22) | 'hold' | -tə | x |
| | 'freeze' | -tan | x |
| | 'smooth' | -təi | x |
| | 'be Class II object' | -tin | x |
| | 'thick' | -tí | |
| | 'find out' | -tia | |
| | 'sleep' | -tci | x |
| | 'put Class III object' | -tci? | x |
| | 'count' | -tcá | x |
| | 'tie' | -tca | x |
| | 'big' | -tcó | |
| | 'water' | tcu | x |
| | 'stone' | tci/kí | |
| | 'tongue' | tca?/kia? | |
| | 'wood' | datcán | |

A rule parallel to (21) above would work for the cases marked (x). This rule is (23).

- (23) /t/ → tc/__[+palatal]
 t /elsewhere

This requires, however, a different a in 'hold' -tə from that in 'count' -tcá. It is also difficult to explain 'find out' -tia. In many cases there is a contrast between /a/ and /ia/. This distinction is neutralized on the surface following the dj series consonants. A rather large group of these forms (e.g. 'be'Class II object, -tin) behaves like the nasals. That is, the final nasal appears to be blocking palatalization. Unfortunately, there are counterexamples (e.g. 'sleep' -tcí). Again, there are cases where tc occurs before non-palatals (e.g. 'big' -tcó, 'wood' datcán). As with dj these cases can be shown to be reflexes of PA *kʷ.

In addition to these problems there are a number of nouns and at least one prefix for which tc alternates with k (and to anticipate the next section tc' alternates with k'). This small set of words has been discussed above (II.2) as characterizing the AVK/FTYK difference. Comparative evidence shows that this tc/k (tc'/k') distinction only occurs for noun initials and prefixes but not for verb stems initials and for these only for tc < PA *ts (tc' < *ts'). This indicates that either speakers know in some way the history of these segments or the list is memorized. I suggested in II.2 that at least one speaker, OM, appeared to be aware of this history. Of course, it is possible that different speakers process this distinction in different ways.

Since tc comes from at least three different PA sources, (i.e. t/__[+palatal], tc < *kʷ, and tc < *ts) rule (23) above would obscure this history--which in the case of tc < *ts appears to be important in preserving the AVK/FTYK distinction, and it would require using the process of nasalization to block palatalization. This latter process seems, at least for the nasals to be demonstrably historical. For these reasons it seems best to consider (23) an historical process which is now represented by an underlying contrast between /t/ and /tc/. The case of tc < *ts will be taken up again later (III.4).

The glottalized pair t'/tc' has already been mentioned. The following list gives more examples:

- | | | |
|------------|----------------|---|
| (24) 'cut' | -t'í | |
| 'feather' | -t'e | x |
| 'hit' | -t'án | x |
| 'wrap up' | -t'o | x |
| 'butcher' | -t'ú | |
| 'people' | -tc'ín | x |
| 'live' | -tc'i | x |
| 'below' | tc'íjak/k'íjak | |
| 'sinew' | tc'i/k'i | |
| 'mosquito' | tc'í/k'í | |

As in the case of the other consonants I have discussed, a palatalization process seems to be occurring or to have occurred in the past. These glottalized consonants only show two exceptions to this general process, 'cut' -t'i and 'butcher' -t'u. Except for these rule (25) would work in every case, including the tc' < *ts'.

(25) t' → tc' / __ [+palatal]
 t' / elsewhere

Unfortunately, there is no ready explanation for the two exceptional cases. Furthermore, speakers do not appear to be deriving tc' from /t'/ in the case of tc' < *ts'. Again, the best solution seems to be to consider /t'/ and /tc'/ as contrasting in underlying form.

One further note on t' should be made here. In some cases these result from a coalescence of the D classifier and a stem initial glottal stop, e.g. 'come past' -t'ai (< /d - ?ai/). I have treated these separately under -?.

III.3.1 Summary

For nasals in stem initial position the interaction of denasalization as an underlying process and palatalization worked to produce /n/ in contrast with /nd/. For t' and tc' the palatalization process also appears to be quite general although it obscures historical developments. For the aspirated and unaspirated consonants, d/dj and t/tc, however, there seems to be no choice but to assume the underlying contrasts /d/ with /dj/ and /t/ with /tc/. Since this solution does not make any problems with either nasals or glottalized consonants it seems best to consider the palatalization process an historical development which is reflected in these underlying contrasts.

III.4 Interdental stops

There are relatively few examples of the interdental stops, dθ, tθ, and tθ'. The following examples illustrate these stops.

| | | |
|------|--------------------|----------------------|
| (26) | 'sand' | dθák |
| | 'throw Class I' | -tθak |
| | 'all' | -tθak |
| | 'pierce' | -tθai |
| | 'hear, understand' | -tθ'ak, -k'í, -tθ'ák |
| | 'scrape' | -tθ'ai |

The first thing to be noticed is that there are no instances of dθ, tθ, or tθ' before a [+palatal] segment. The perfective of 'to hear' suggests rule (27).

(27) /tθ'/ → k'/_ [+palatal]

If this is the case then at least some of the occurrences of g, k, and k' in this [+palatal] environment might be expected to be the result of this or a similar rule. The set of nouns and prefixes mentioned above in connection with the dj series consonants are of this type. The following list gives some examples along with the corresponding forms from Chipewyan (Li 1933a).

| | | | | |
|------|----------------|--------|--------|--------|
| (28) | | FTYK | AVK | Chip |
| | 'stone' | kí | tcí | tθɛ |
| | 'head' | kiʔ | tcíʔ | tθí |
| | 'tongue' | kiaʔ | tcaʔ | tθú |
| | 'sinew' | k'i | tc'i | tθ'é |
| | 'mosquito' | k'í | tc'í | -- |
| | 'hear' (Imp.) | -tθ'ak | -tθ'ak | -tθ'ay |
| | 'hear' (Perf.) | -k'í | -k'í | -tθ'a |
| | 'hear' (Fut.) | -tθ'ák | -tθ'ak | -tθ'a |

On the evidence of the perfective stem -k'í we can see that rule (27) above is supported for verb stems in both FTYK and AVK varieties and for all cases in the FTYK variety. This, then, leaves the problem of accounting for the small group in which PA *dz series consonants have dj series reflexes in AVK.

There are three ways this split may have developed. AVK could have a rule like (29). (g will be used to represent the full series of stops).

(29) g(< *dz) → dj (for nouns and prefixes)

A fuller representation of the same thing would be (30):

(30) /dθ/ → g/_ [+palatal][+verb]
 dj/_ [+palatal][-verb]
 dθ/ elsewhere

A third explanation would assume that all of these forms were simply memorized.

There are several things which have to be considered in making an explanation of this development. I pointed out above that there is a general awareness on the part of all speakers of these differences. Either they have memorized the list or have access to the history of the segments. The fact that a young child was able to correct an older speaker on his 'mistake' may indicate that rather than working from a memorized list it is done by rule. Informants who speak FTYK refer to their variety--specifically in reference to the

k/ɬ split--as 'easier'. Speakers of AVK refer to their variety as 'clearer'. The FTYK side of the split results in k and k' (<*ts and *ts') merging with k and k' (<*k and *k'). On the AVK side the resulting merger produces dj series consonants. Because of the palatalization mentioned above there is already an abundance of dj series consonants in the language. Perhaps it is, in one way, easier for these cases to be g series consonants since that would tend to reduce homophony, whereas the AVK dj series consonants would tend to increase homophony.

It remains to be seen in what way the AVK dj series merger is 'clearer'. If we suppose (I think it is correct) that AVK represents a somewhat more conservative variety, then we can assume that the historical development was as follows:

- (31) *dz > dj/ __ [+palatal]
dɔ̃/ elsewhere

This was followed at a later time by

- (32) dj > g/ __ [+palatal]

To account for the retention of a small number of cases where the second process does not apply we can consider that AV began as a settlement when Albert Tritt led a group of people away from Ft. Yukon. The movement was both a religious movement (Tritt had been converted to the Episcopal religion) and a nativistic movement. According to McKennan (1965) the English that Albert Tritt spoke in 1933 was King James English--since the King James Bible had been the source of his education in that language. He learned English by comparing his Tukkuth translation with the King James. In this context it is not surprising to find a small number of forms--nouns and prefixes which do not undergo extensive morphological alternations as the verb stems often do--which preserve an archaic form of the language. It is strikingly similar to the use of the King James English forms, 'thee' or 'thou' in current Standard English protestant services. Further, my main two informants who gave these AVK forms are, in fact, priests in the Episcopal church. These forms are not used exclusively by them but there does seem to be an association of AVK with the elder status of these speakers.

The following material gives further support for this interpretation. Dyen and Aberle (1974) give two kinship terms (their terms 51 and 52) for several of the Kutchin

groups. I have reproduced these here with several changes. The AVK and FTYK forms are from my own material. I have checked Fredson's forms in Dyen and Aberle, Osgood (1936) and in Li's copy of Sapir's original notes. The Peel River Kutchin forms are from Osgood (1936). Tukkuth Kutchin forms are from Morgan (1871). The term I list for 52 disagrees with Dyen and Aberle's listing but it is the form Morgan gives. It is inexplicable to me why Dyen and Aberle give any other form. The Liard form is from Osgood but he claims to have no knowledge of what group of Kutchins this represents. Since the Tukkuth forms were from Peel River Fort they may be the same as Osgood's Peel River.

| (33)D and A | PA | AVK | FTYK | Fredson | PR | Tukkuth | Liard |
|-------------|----------|-------|------|---------|------|---------|------------------|
| 51 | *-tse? | -tci? | -ki? | -ki? | -tci | -tshere | {-che} {-ché} |
| 52 | *-tsweye | -tci | -ki | -k'oi | -tei | -tshe | -tci' |

From this it can be seen that there is an apparent relationship between Tukkuth Kutchin and the AVK forms. Since the forms given by Morgan were collected by McDonald in 1865 we must consider these forms as potentially more conservative. Of course, this is what the current usage of AVK suggests as well.

It seems best, then, to regard the rules given in (31) and (32) as the historical development. As the first stage of this development PA *dz > dɔ̃. This development is shared by other languages such as Chipewyan. The second stage, which appears to be a Kutchin development, is the palatalization of dɔ̃ to dj. Then as a third stage dj (<*dz) > g. Since speakers of FTYK treat all of their forms by this last rule they may claim it is easier. On the other hand speakers of AVK may feel their variety is clearer since it preserves an earlier stage of the language in at least some part.

III.5 Dental affricates

Here I will mention a few points about the dental affricates dz, ts, and ts', and then return to them later. A look through the stem list reveals a surprising number of dz series consonants in the [+palatal] environment. Because of the amount of palatalization noticed above with other consonants, one suspects that at least some of these may be the result of palatalization. Recall that in the discussion of the d/dj consonants there were a number of cases of dj<*g' in a non-palatal environment. The palatalized alternates of those show up here in the dz series. A few examples will illustrate:

| (34) | | PA Initial |
|-------------------|--------|------------|
| 'fear' | -dját | *gʷ |
| 'old' | -djat | *gʷ |
| 'tie' | -tca | *kʷ |
| 'big' | -tcó | *kʷ |
| 'tear' | -tc'á | *kʷ' |
| 'mink' | tcidzu | *gʷ |
| 'handle Class II' | -tsin | *kʷ |
| 'narrow' | -ts'ík | *kʷ' |

These forms suggest the historical rule (35).

- (35) *gʷ > dz/___ [+palatal]
 dj/ elsewhere

Although this rule, if taken as a synchronic rule, would eliminate some of the exceptions found in the d/dj list there is no combination of synchronic rules which would take care of all the exceptions. For this reason it seems better to consider this a process of palatalization that happened somewhere in the development between Proto-Athapaskan and the present.

For the dental affricates, then, we can assume the underlying segments, /dz/, /ts/, and /ts'/' to directly underlie the surface segments.

III.6 Retroflex series consonants

The consonants of this series, dr; tr, and tr' have long been a source of difficulty in comparative studies. Two reconstructions have been suggested. Sapir's reconstruction which was never actually published as such is reflected in the reconstructions of Li (1933b) and Hoijer (1960). This reconstruction gives PA *dj but Krauss (1964a) reconstructs a separate series *gʷ. To anticipate the later discussion of historical developments, the three sets of developments, *dz > dʒ, *dj > dz, and *gʷ > dj can be seen to be the result of a general forwarding of the tongue position. In this context Krauss' *gʷ series resulting in dr seems to fit. It is difficult to explain, however, why Chipewyan which also has this general forwarding of all these stops does not also have the retroflex series. I will take up this problem later in the historical discussion. For now I want to suggest simply that synchronically at least /ts/ and /tr/ are in contrast.

There are several forms which suggest this contrast.

| | | |
|------|-------------|--------|
| (36) | 'smell' | -tsin |
| | 'excrement' | -trin? |
| | 'beaver' | tse |
| | 'cry' | -tré |

Obviously, these are not exact minimal pairs. They are the closest that are available, however.

A number of forms such as the first two in (37) indicate that there may be some relation between the palatal environment and the retroflex series.

| | |
|-----------------|--------|
| (37) 'muskkrat' | dzán |
| 'day' | drín |
| 'canoe' | tr'í |
| 'spruce' | ts'ívi |

The second two forms, however, make it difficult to maintain this relationship for the whole series. To summarize, dr is always found in the pre-palatal environment, tr is mostly but not always found before palatals, and tr' is only sometimes found before palatals.

Because of the difficulty of stating the environments which would produce the dr series from the dz series consonants synchronically, I feel it is best to consider /dr/, /tr/, and /tr'/ to be in contrast with /dz/, /ts/, and /ts'/', respectively.

III.7 Velar stops

In the word list two velar stops have been written in both a labialized and a non-labialized form, i.e. g/gw and k/kw. k' occurs only in the non-labialized form. In the elicitation of these forms, in some cases one was given but not the other. In a few cases, however, an informant repeated the word several times. It is these repetitions that will serve as an introduction. In one case three informants gave the following six forms.

| | |
|----------------|------------------------|
| (38) 'to lift' | dagoíndji |
| | dagwíndji |
| | dagwoéndji |
| | dag ^w óndji |
| | dagwəndji |
| | daywəndji |

The symbol (w) indicates a slight labialization. It is because of variation of this type that I have analyzed all surface gw as /go/ with the following rule:

| |
|--------------------------------|
| (39) /g/ → gw/___ ^o |
|--------------------------------|

A second example will illustrate further. One informant gave these two forms for the word 'five':

- (40) 'five' ?iʔakwénli?
 ?iʔónli?

In the analysis of vowels, I have written [ə] as a in closed syllables. Yet here, because of the o in the second form it seems clear that the underlying form must have /o/, i.e. /ʔiʔakónli?/. This would require a rule similar to (39) and a further rule which reduces o to ə before n.

- (41) /k/ → kw/___o
 o → ə /___n

The result of this analysis is that a word like 'dirt house', 'camp' [kwénʔ] would be analysed as /kón/ assuming the rules of (41).

The prefix for 'weather', 'people', 'place' occurs in both gw and g forms. The following examples suggest that the best analysis is /go/.

- | | |
|---|--------------------------|
| (42) 'to be good (weather, person, place)' | gwí·zì |
| 'trail, road' | tą́ gundjík/tą́ gwindjík |
| 'dirty' | goaṛą́/gwa·ṛą́ |
| 'Ft. Yukon Flats' | gutca/gwitca |
| 'people' | gutc'ín/gwitc'ín |
| 'meadow' | gorą́cí/gwą́·cí |

As these examples show, the labialized gw does not contrast with g.

On the basis of the examples that have been given I feel that rules (39) and (41) are supported as the best analysis. There are several troublesome cases, however, in which k appears to contrast with kw. For example, pairs like 'sew' -kai and 'vomit'-kwai seems to show this contrast. The following list gives some of these forms as well as the Chipewyan forms (Li 1933a) for comparison.

- | (43) | Kutchin | Chipewyan |
|-------------------|---------|------------------------|
| 'not' | -kwa | -- |
| 'paddle canoe' | -kwa | -kaíh, -kí, -keí |
| 'two' | -kwą́ | -kε |
| 'feet' | -kwaiʔ | kε, -ké |
| 'vomit' | -kwai | -kui |
| 'mound, heap' | -kwai | kí |
| 'sew' | -kai | -kaih, -ká, -kaih |
| 'handle Class IV' | -kai | -kaíh, -ką́, -kaí etc. |

A number of solutions can be suggested. First we could assume a contrast between *k* and *kw*. Of course, it is somewhat problematic that no contrast could be shown for *g* and *gw*. A second solution would be to assume that *a* is [+round]. It would be hard to explain, then, why such forms as 'I know' *gacindai* have *ga* not **gwa*. The third solution, and the one I propose, is an underlying rounded diphthong /*oa*/ which would labialize the *k* by the rule given in (41) above.

The evidence for this solution is both internal and comparative. Comparative evidence indicates that *kw* < **k*. Also, *kw* appears in places where *a* and *ai* are reflexes of higher vowels, e.g. *i*, *e*, *ɛ*, *ui*. To anticipate the discussion of the history of vowels, the diphthong /*ia*/ appears to have developed as a lowering and diphthongization of **i*. What I propose is that one diphthong *ia* developed from **i* and the initial of *ia* became rounded to *oa* following the velar consonants. In the past this was phonetically conditioned but is now preserved in the underlying distinction between /*ia*/ and /*oa*/.

The forms in which *k* precedes *ia*, e.g. 'tongue' -*kia*? (FTYK) do not represent a problem if we assume this *k* (<**ts*) to have first been *tc*. That is, the development I have suggested above of the AVK *tc* forms being an intermediate stage between PA **ts* and FTYK *k*.

III.7.1 Summary

I can now summarize the analysis of velar stops. I have assumed /*g*/, /*k*/, /*k'*/, and two diphthongs /*ia*/ and /*oa*/. I have further assumed a set of processes by which /*g*/ and /*k*/ optionally become *gw* and *kw* when followed by /*o*/. I have also assumed, but not explicitly mentioned yet, a number of vowel harmony processes which I will discuss later (III.11.1).

III.8 Laterals, glottal stop and *v*

The stops, *d*, *tɨ*, *tɨ'*, *ʔ*, and the fricative *v* need little mention since they undergo no changes. *ʔ* in some cases coalesces with the classifier *d* to give *t'*. Of course, without further morphological evidence it is impossible to separate *t'* </*d* + *ʔ*/ from *t'* </*t'*/. In some cases *t'* from either source becomes *d* in casual speech. It is possible that some of the stems now analysed as *d* come from *t'*. The stem 'to come' -*dik* may originally come from the classifier *d* + -*ʔik* (cf. 'several go' -*ʔo*, -*tc'íl*, -*ʔal*).

III.9 Fricatives

There are two interdental fricatives, δ and θ . With one exception the voiced form δ appears to be phonetically conditioned as the following examples illustrate:

- | | | |
|------|----------------|-----------------|
| (44) | 'you are warm' | nin δ á |
| | 'I am warm' | ni θ á |
| | 'you want' | yin δ án |
| | 'I want' | yi θ án |

The second person singular prefix in this case is -n-. The first person singular prefix is -c-. It rarely occurs on the surface. The choice in this case, of course, is between considering the underlying form to be / δ / which is devoiced after -c- or / θ / which is voiced following -n-. Several other examples will show that / θ / is probably the correct form.

- | | | |
|------|------------|--------------|
| (45) | 'trousers' | θ áá |
| | 'portage' | θ etá |

In my data there is only one case of δ word initially and that is the δ perfective. For example, for 'sat' one informant gave all of the following forms:

- | | | |
|------|-------|------------------|
| (46) | 'sat' | t'e δ ídi |
| | | de δ ídi |
| | | δ ídi |

I suggest that in word-initial position δ results from the coalescence of the two prefixes de and δ .

There is only one peculiar case of the opposite, i.e. θ in intervocalic position, 'abomasum' tc'idé θ a. I had taken this word from Mueller's dictionary (1964) and asked the informant if he knew it. He did not say it was unknown to him but he pronounced it very carefully. Of course, it is not surprising that a process which voices intervocalic fricatives in casual speech has been suppressed in the event of cautious pronunciation.

Although the evidence is still not strong I feel that it is most natural to consider the voiceless / θ / to be the underlying form with a surface voicing process producing δ in voiced environments.

The fricatives s and z occur in very few forms. (47) gives several representatives.

| | | |
|------|----------------------|-----------|
| (47) | 'good' | -zɨ́ |
| | 'to be good' | -zɨ́ |
| | 'grasshopper' | tc'ahasík |
| | 'star' | sáʔ |
| | 'young bull caribou' | dazotsó |

As in the case of δ/θ , s and z alternate. Again, we have the same choice between considering the voiced alternate as the underlying form with a devoicing rule or the opposite. Here, as with δ and θ I feel it is more natural to assume /s/ with a rule voicing it to z intervocalically. The one exception, 'grasshopper' tc'ahasík is, again, a word the informant did not seem to know but was pronouncing it carefully on the basis of my prompting from Mueller's dictionary. Concerning these two exceptions, 'abomasum' tc'idéθa and 'grasshopper' tc'ahasík it is important to note that Mueller has recorded them as not being exceptional. That is, presumably his informants did know these words and were not being particularly careful. For my analysis, however, I feel that a single exception each for δ/θ and z/s is not enough to contradict the analysis.

The fricatives c and j, unlike the others, do contrast as the following list indicates.

| | | | |
|------|--------------|----------|------------------|
| (48) | 'don't hunt' | nónɾicɔʔ | (Not: *nonɾijɔʔ) |
| | 'it blows' | gwácol | (Not: *gwájol) |
| | 'bear' | cíʔ | |
| | 'louse' | jíʔ | |

As can be seen from these few examples c and j contrast in both initial and medial position. One further process should be mentioned here. In some cases j is weakened to y a palatal glide. (49) gives several examples.

| | | |
|------|-------------------------|-------------------------------|
| (49) | 'snow on spruce boughs' | déjaʔ |
| | 'ice crystal snow' | tsaíyaʔ |
| | 'ice on a creek' | tányáʔ |
| | 'far' | nɨ́jít |
| | 'far' | nɨ́nyít (form given by child) |

By way of comparison I should also note here that ɾ varies with r, a frictionless retroflex, in rapid speech.

There is no evidence for contrast between ɾ and c. c occurs in initial position with ɾ occurring intervocalically. Several examples are given in (50).

| | | |
|------|-----------------|-------------|
| (50) | 'knife' | çí |
| | 'sun' | çé |
| | 'hunt' | -ri |
| | 'dirty' | çai |
| | 'to be black' | -raí |
| | 'to bark, yell' | -raí ~ -raí |

The frictionless retroflex r also has another source. The 1st person plural and 3rd person indefinite prefix is tr'- when it occurs in initial position. When it occurs intervocalically, however, it is reduced to r. For several examples see (51).

| | | |
|------|----------------|-----------|
| (51) | 'we hunt' | narári |
| | 'we hear them' | gorítθ'ak |
| | 'we drink' | tr'iní |
| | 'we make' | tr'átsi |

There are several cases where r appears and it is not certain that it is from either of these sources. For example, in 'store' tc'aroxwejé/tc'aroko'jé the r may or may not be the third person indefinite prefix. I think it is likely that it is. In another case, however, it definitely is not. One informant gave me the following sentence: 'Is that something sitting up there?' ?ot'e-a dodír? At this point the final r in this one form is a complete mystery.

There are many examples of the velar fricatives, x, xw, γ, γw. (52) is a list of the most problematic of them.

| | | |
|------|--------------------------|-------|
| (52) | 'winter' | xai |
| | 'root' | xai |
| | 'kill' | -xwai |
| | 'fall (Class II)' | -ya |
| | 'throw (Class II)' | -xa |
| | 'leg' | -ywa |
| | 'pack, carry on back' | -ywa |

There are no cases of γ or γw in word initial position. γ and x alternate in the 'fall/throw' forms, with x after the -t- classifier. On the basis of these considerations, x and γ can be seen to follow the same process of intervocalic voicing as most of the other fricatives. As for the labialized forms, xw and γw, I have analysed these as being similar to the velar stops. That is, I have assumed an underlying diphthong /oa/ where x and γ are labialized before a surface a. In all of the other cases where xw and γw occur they precede o, the environment for labialization. The four velar fricatives, x, xw, γ, and γw can be seen to be derived from one underlying fricative, /x/.

The laterals, ʃ and l are, perhaps, the most difficult of the fricatives. There are many forms in which l is found as a word initial, for example, 'money' lerá , 'salt' lesíl . In all of these cases the words can be shown to be borrowings from French or English. In historically Kutchin forms l does not occur in word initial position. (53) gives examples of some of these forms.

| | | |
|------|-------------------------------|--|
| (53) | 'tea' | ledí |
| | 'fish' | ʃúk |
| | 'ling cod' | trelúk |
| | 'dirt' | ʃu |
| | 'smoke' | ʃát |
| | 'I put the logs there' | $\text{tra níli (ní - } \emptyset \text{ - li)}$ |
| | 'I always put the logs there' | $\text{tra níʃi (ní - } \text{ʃ} \text{ - li)}$ |

In these cases the solution is to consider /l/ for the borrowed forms and /ʃ/ for native forms with an intervocalic voicing process as with the other fricatives. There are several problems with this solution. First, both ʃ and l are found in final position. For example, 'trousers' is θaʃ , but the diminutive suffix is -tsal . This problem could be resolved by assuming that final ʃ derives from an underlying final /l/ , and final l derives from an underlying /lV/ . This is similar to the analysis of nasal vowels in final position being derived from underlying vowel - nasal sequences and final nasal consonants deriving from an underlying vowel - nasal - vowel sequence. Again, as in the case of the nasals, comparative evidence is in support of this (cf. Chip. 'small'- tsele).

This does not clear up all of the problems, however. (54) lists some of the problem forms.

| | | |
|------|--------------------|------------------------|
| (54) | 'jackfish' | ʔiltín/ʔaltín |
| | 'yellow pond lily' | kalt'ú |
| | 'one' | ʔiʃák/djiʃák |

In the case of 'jackfish' it is difficult to explain why it is not *ʔiʃtín . The intervocalic environment could be restated as 'following a sonorant' to take care of this case. However, in the case of the final l 's I analysed them as having a vowel after the ʃ . It seems clear that to avoid losing that generality, ʔiltín must be assumed to have /l/ , i.e. /ʔiltín/ .

In the case of 'one' ʔiʃák it is difficult to explain why it is not *ʔilák . For now the best solution is to assume an underlying contrast between /l/ and /ʃ/ wherever there is no surface alternation. In the cases where there is alternation the underlying form must be /ʃ/ as with the other fricatives but with an intervocalic voicing process which is blocked in several cases such as for 'one' ʔiʃák .

Finally there is a surface alternation between the two classifiers \ddot{t} and l . Although I have not completed my analysis of Kutchin classifiers it seems best now to consider all cases of the surface classifier l to result from a coalescence of the two classifiers, \ddot{t} and d .

Finally there is the fricative h . Several examples should be sufficient to illustrate.

(55) 'to talk'

| | | | |
|----------------|-----|------|------|
| 1st. pers. sg. | -ci | -he? | -ca |
| 3rd. pers. sg. | -he | -he? | -hia |

'one person goes'

| | | | |
|----------------|-----|-----|-----|
| 1st. pers. sg. | -ca | -jí | -cá |
| 3rd. pers. sg. | -há | -jí | -há |

As in other Athapaskan languages the third person singular is not marked. The first person singular is $-c-$ in the imperfective and future and $-i-$ in the perfective. It is clear that this is the source of the alternation between c and h in these forms.

III.9.1 Summary

In the analysis above I have assumed the following underlying fricatives: $/\theta/$, $/s/$, $/c/$, $/j/$, $/ç/$, $/x/$, $/\ddot{t}/$, $/l/$, and $/h/$. In every case except some instances of $/c/$ and $/\ddot{t}/$ the voiceless fricatives become voiced between sonorants. Because of the limited amount of data on which this study is based and because the analysis of the fricatives rests on an analysis of morphological processes these statements should be understood to be tentative.

III.10 Final consonants

The number of consonants found in final position is quite limited. They are t , k , l , \ddot{t} , n , $?$, and the sequence $n?$. I have written t and k rather than d or g because they are variably aspirated in final position. The aspiration in final position is never as strong as in initial position, however, where it has sometimes been transcribed, e.g. $[t\text{̥}]$. Of the final consonants only two are voiced, l and n . I have suggested in the separate analyses that these have a vowel following them in the underlying representation.

III.11 Vowels

The following vowels are found on the surface: the tense vowels i , e , a , o , the lax vowels, ɪ , ɛ , ə , ɔ , the

diphthongs ia, iu, oa, ei, oi. All of the above except oa are found in both nasal and oral forms.

Of course, a number of these vowels are predictable. The lax vowels are found in closed syllables and the tense vowels in open syllables. A syllable of the shape CV? acts as an open syllable, i.e., the vowel before a glottal stop is tense.

Although in some cases a distinction in length appears on the surface, I have analysed these surface long vowels to be the coalescence of an underlying sequence of vowels. For example, in (56) the i· is produced from the 1st person singular perfective i coalescing with the vowel of the ɔ perfective. (The third person perfective is ∅.)

(56) 'I sat' ɔí·di
 'he sat' ɔídi

In several other cases the long vowels can be shown to result from a sequence of prefixes from which a consonant has been deleted. For example see (57).

(57) 'it is good' gwĩnezĩ
 'it is good' gwĩ·zĩ

Both of these forms were given by the same speaker.

In discussing final nasals I also indicated that I have analysed surface nasal vowels as resulting from underlying vowel-nasal sequences. In fact, all surface vowels are nasalized when they precede a nasal. Only in the cases where this nasal does not appear on the surface has nasality been marked. For example, 'to be in a place (Class II)' -tin is phonetically [tɣĩn] and 'to hold'-tɔ is phonetically [tɣɔ]. The nasal vowel in -tin is predictable on the basis of the following n and for this reason has not been marked.

There are two palatal initial diphthongs, ia and iu. iu does not contrast with u and for this reason I have always written it as u. The other diphthong, ia contrasts with a. Several examples are given in (58).

(58) 'he will speak' -hia
 'he will go' -ha
 'to see, look (fut)' -?ia
 'to eat (imp)' -?a

This contrast is neutralized following all consonants of the dj series and the dr series as well as the stops of the d1 series. (59) gives several examples.

| | |
|----------------|--------|
| (59) 'to wash' | -tciaə |
| | -tcia |
| | -tca |
| 'wet' | -tra |
| | -trə |
| 'mocassin' | -trie |
| | -tra |
| | -trə |

This contrast between ia and a is also neutralized in rapid speech. For example, 'very' in rapid speech is tʰá but in slower, more careful speech it is tʰiá.

The diphthong /oa/ was discussed above. Historically I analyse it to be the variant of ia which occurred after velars.

There is considerable surface variation of the diphthongs ϵi , $\text{ə} i$, $\text{ɔ} i$, and ξi , $\text{ʔ} i$, $\text{ʒ} i$. (60) gives several examples.

| | | |
|-----------------|-------|-------------------|
| (60) 'to kill' | -xwξi | (Speaker of AVK) |
| | -xwʔi | |
| | -xwʒi | |
| 'to kill' | -xwξi | (Speaker of FTYK) |
| | -xwʔi | |
| 'smooth' | -xwɛi | |
| | -xwɛi | |
| 'wife's sister' | -xwɛi | |
| | -xwɔi | |

I assume two underlying diphthongs /oi/ and /ai/. /oi/ labializes /x/ to [xw]. /ai/, as in 'winter' xai (but never *xɛi or *xɔi) does not result in [xw]. /oi/ varies on the surface between [ϵi], [$\text{ə} i$], and [$\text{ɔ} i$].

III.11.1 Vowel harmony

One of the difficulties in analysing the vowels of Kutchin is the widespread vowel harmony. As far as I have been able to determine, however, this affects only prefix vowels. For this reason the analysis I am presenting here is based on the kinship terms I have collected which always require a possessive prefix.

The first person singular possessive prefix can easily be shown to be c- plus some vowel. (61) gives a number of examples.

| | | |
|------|----------------------|------------|
| (61) | 'my father' | cítiʔ |
| | 'my wife' | citr'índja |
| | 'my niece' | cídju |
| | 'my friend' | cídjaʔ |
| | 'my son-in-law' | cedeniá |
| | 'my younger brother' | catcá |
| | 'my wife' | cáʔat |
| | 'my husband' | cákajʔ |
| | 'my sister-in-law' | coxwaí |

It is clear from these examples that the surface prefix vowel is i before i, ia, u; e before e; a before a and ai; and o before /oi/. All of these assume an intervening consonant. Two forms which I have not given yet indicate that the underlying vowel for this prefix must be /e/. These two forms are 'my older sister' cedjí and 'my uncle (mother's brother)' ceʔí. I have analysed these two forms as /ce#adjí/ and /ce#aʔí/, respectively. This analysis would allow the following rules:

- (62) /e/ → i/__(C) $\left\{ \begin{array}{l} i \\ u \\ ia \end{array} \right\}$ (i.e. [+palatal])
- a/__(C) a(i)
- o/__(C) [+round]
- e/ elsewhere

This set of rules would give the forms of (61) quite simply and also explain why 'my older sister' was not *cidjí.

In the discussion of velar stops I mentioned the assumption of a vowel harmony rule. This rule is as follows:

- (63) o → u/__(C) $\left\{ \begin{array}{l} i \\ u \\ ia \end{array} \right\}$

As an example of this we have 'people' gutc'ín from /gotc'in/. This form is further changed in rapid speech to gwitc'ín indicating that the environment __i at least, tends to front as well as raise the preceding vowel.

Although I feel a certain amount of confidence in this analysis of vowel harmony, it is incomplete as it stands. A further study would have to include rather complex morphological processes and would certainly have to be based on a larger amount of material than I have collected.

III.12 Tone

Kutchin has two tones, high and low. The high tone is a high falling pitch with a quick diminution of intensity. It is marked here with an acute accent ('). The low tone is also a falling tone but does not drop as far as the high tone and is extended somewhat in length. That is to say there is a length distinction which accompanies the pitch distinction with high tone being shorter than low. Low tone is not marked since whatever is not high tone is low.

In addition to these tones there is a question pitch which is expressed by making the last syllable of a sentence a high level pitch. Under this condition the distinction between high and low tone is neutralized. In closed syllables the vowel is always short so in these the length distinction between high and low tones is neutralized. These tones are found in their 'purest' (i.e. highest or lowest) form in the verb and noun stem syllables.

In the prefix syllables tones are somewhat more difficult to determine because of two processes. Prefix high and low tone are not as high or low, respectively, as in the stem syllables. In addition, in casual speech stress is given to the penultimate syllable. This results in high tone in this position remaining high but preceding high tones being depressed. A low tone receiving stress is raised but not as high as the level of a high tone. These effects can be summarized by saying that in casual speech the last underlying high tone in a word will be high with the preceding high tones lowered.

Several examples which will make these processes clearer came up in the course of elicitation. The form for 'I will return tomorrow' is k'enehiǰdík. The informant gave it to me slowly, building it up by syllables as follows:

(64) k'ené
 k'enehí
 k'enehiǰdík

That is, -né-, -hí-, and -dík are underlying high tone. In pronouncing the whole word, however, only the final syllable receives the highest tone. The syllable -hí- /hé/ is the future prefix and in cases where the stem syllable is low tone and there are no other high tone prefixes following, the high tone appears on the surface. For example, 'I will go hunting' is nahálǰi .

Finally, as an example of both slow and rapid speech, 'I throw it (e.g. a cup of tea)' was given in slow speech as ?ó-an-hó-ttít but in rapid speech as ?oanhótít.

Having said this much about tones, I should point out now that many informants are not entirely consistent. The stems for the verb 'to make' will indicate some of this variety. The informant, J, is generally a speaker of AVK. S is a speaker of FTYK. D is an eleven year old girl. The forms are given as in the word list in the order, imperfective, perfective, and future.

| | | | | | |
|------|-------------|----|-------|--|-------------------|
| (65) | 'to make' | J: | -tsí, | {-tsaí (rehearsed), {-tsi (recorded)} | {-tsia} {-tca} |
| | | S: | -tsi | {-tsi (rehearsed), {-tsaí (recorded)} | {-tsia} {-tca} |
| | (quoting J) | S: | -tsí | --- | -tsiá |
| | | D: | --- | --- | -tse |

(Note: in another case S gave both -tsí and -tsi for the imperfective. Also note the variation between -tsaí and -tsi for both J and S. This variation has been discussed earlier (II.2) as indicating a contrast between FTYK and AVK, at least for J. The forms -tsia and -tca are in variation for both J and S.)

A comparison of the first two sets shows that the difference between J and S (therefore AVK and FTYK) is that where J has high tone S has low tone. Further evidence that this is really the principle is indicated by the fact that S quotes J as saying -tsí (correct) and -tsiá (incorrect). This latter is not correct but does follow a general interpretive principle or hypercorrection which assumes that AVK has high tone where FTYK has low. To get the correct forms one has to go from AVK to FTYK, i.e. it works to lower high tone to low tone but it is incorrect to raise some low tones to high tones. These differences were further corroborated by another informant, a speaker of AVK, who gave high tone for 'to make' (imperf.) -tsí, and the child D (FTYK) who gave the low tone on -tse.

This distinction between AVK and FTYK is apparently fairly regular and fairly widespread. Examples have been given in II.2 (4) and are repeated here.

| | | | | |
|------|------------|----------------|--|----------------|
| (66) | | AVK | | FTYK |
| | 'to sit' | -dí, ---, -diá | | -di, ---, -dia |
| | 'to run' | -gál | | -gal |
| | 'to drink' | -ní | | -ni |
| | 'to stab' | -got | | -got |

In addition to these examples there are many more which follow this general principle. On the other hand there are no examples of the opposite. That is, there are no cases where FTYK has a high tone and AVK has a low tone. All of these can be described as a shift from the AVK (therefore, conservative) high tone to FTYK low tone.

There are several ways that this difference could be understood. One solution would be to assume that FTYK has an underlying high tone where AVK has high tone but that a penultimate stress rule shifts that high tone to low. This could not be the case, however, since in many places the two varieties agree in giving high tone to final syllables, e.g. 'I am hurt' gwiɬts'ík (AVK and FTYK).

The explanation that seems most plausible to me is that FTYK is in the process of replacing tone with stress. All of the changes mentioned here result in the penultimate syllable receiving a higher pitch than the final syllable. It is only in the cases where underlying high tone is still marked that a final syllable receives high pitch and in the other cases no underlying pitch is represented.

It is not surprising that FTYK which speakers of AVK associate with the language of contact with English because Ft. Yukon was the principal place of contact with non-Indian culture, should show processes which tend to make it somewhat more like English. One person who speaks FTYK even made this connection more explicit by pointing out that in speaking Kutchin you have to 'go up' in places you don't in English, especially 'at the end'. The meaning of this is that Kutchin has high pitch in places where English does not have primary stress. In this particular case he was, in fact, pointing out a final syllable high tone.

Of course, this is not the final word on tone and stress in Kutchin. If I am right in this analysis then the treatment of stem syllables when they are followed by suffixes would assign penultimate stress to the stems. In this case I would expect a low stem syllable to be raised in pitch. Unfortunately, I don't have the data I would have to have to check this.

In the word list (V.6 and V.7) I have marked only the high tones. I have assumed that all others are low (AVK) or unmarked (FTYK). Since I do not have many of the forms in the list from speakers of both varieties, the marking of tone must be taken to represent that of speakers of FTYK. The high tones which are marked are probably more generally accurate since I depended more heavily on a speaker of FTYK than any other single informant. Since there are no cases

where FTYK has a high tone and AVK has a low tone, a high tone probably represents both varieties but a low tone may only represent FTYK.

III.13 Phonology of loan words

I pointed out earlier (II.1) that there are four main linguistic varieties in use in AV. In this section I am referring to words used by Kutchins as AVK or FTYK words within contexts of those varieties. I am explicitly not referring to AVE or SE phonology which may be quite different. Because these distinctions are quite difficult to make in practice, in this section I am referring only to words which I recognize as loans (mostly from English) which have appeared within sentences in which the grammatical elements are Kutchin or in several cases words which informants gave as Kutchin words in the context of the elicitation of lists of Kutchin words. In most cases these were not treated by the informant as borrowings but given without comment as Kutchin. Because of these restrictions the number of forms I will refer to is quite limited. I was specifically eliciting Kutchin forms in most of the sessions and informants would sometimes actively suppress a borrowed form even if it was the preferred form. That is to say, what is represented here is a set of fairly well integrated forms.

Some examples of borrowed forms are given in (67). They are grouped into several general types.

(67) Names of borrowed objects:

| | |
|--|-----------------|
| airplane | érblein |
| spoon | spun/cpun/sapun |
| money | lerá |
| tape recorder | teíbrigordah |
| tea | ledí |
| Numbers above ten; but others too, recently: | |
| ten | tín |
| seven forty-five | seven fórdi fai |
| several | trífor |
| The English Alphabet | |
| ABC | a·bese |
| Christian names | |
| James | jémis |
| Isaac | aízík |
| John | jan |
| Other | |
| last year | lasyir |
| family | fámli |
| hungry | hángri |

It should be clear, especially, from the last group that borrowing is common and not solely restricted to objects borrowed into the culture. Whether such a concept as 'last year' is exactly synonymous with the Kutchin term is, of course, open to question. In this case the Kutchin form must refer to season, e.g. hecín 'last year, last summer' or hexaí 'last year, last winter'. The borrowed word is indeterminate for season. Nevertheless, the point I wish to make is that these are not objects in the way that airplanes, tape recorders, and spoons are.

Of the consonants listed in the stem/word list two are found only in loan words, b and f. The bilabial nasal, m, which is quite rare in historically Kutchin words is found only in 'breast, milk' ma'. It is more frequent in borrowed words.

The retroflexed vowels ɪr, ɛr, and ɔr which I have written as ir, er, and or must be added to the list of vowels. There is also one instance of [u] in 'canoe' [kxinu]. This is the only case in which u is not phonetically [iu].

In borrowed forms there are also a number of clusters which are not found elsewhere in Kutchin. They are as follows: bl, ml, sp, cp, ls, br. It is likely that more forms than these would turn up in a fuller study.

The borrowed words given above and in the word list are sufficient to show up a number of processes. In a study of AVE that I have also planned I will look at some of these processes in more detail and in retrospect will likely want to clarify some of the things presented here. With the forms available here, however, we can see some quite general processes. All final voiced consonants in English are absent in the corresponding Kutchin forms. For example, 'five' is fai. The final consonant of 'eight' and the intervening schwa are reduced to produce from 'eight o'clock' eták. Notice the substitution of Kutchin tɨ for the English sequence kl. The final sequence ns in 'license' is reduced to n in Kutchin laisen.

Intervocally consonant clusters are simplified by either the elimination of a consonant or an epenthetic vowel being introduced. For example, 'James' is jémis but 'last year' is læsyir. (James may be a spelling pronunciation.)

In general Kutchin consonants are substituted for the nearest equivalent in the borrowed language. What this means

is that the Kutchin voiceless, unaspirated series consonants are used in place of English voiced consonants. For example, the final syllable of 'tape recorder' is dah. Kutchin aspirated series consonants are used for English aspirated consonants, e.g. 'tape recorder' te'brigordah. It should be recalled that aspiration in Kutchin is much stronger than in English. Notice that 'tea' led₁ has d not t. This form was probably borrowed from French and not English.

I have tentatively marked tone on some of these words. One speaker of AVK appeared to make at least some tone distinctions. At the time of collecting this data however, I didn't investigate this question. The number of forms at my disposal now makes any statement about tone in borrowed forms quite tentative.

One final and important note should be made about articulation in general. All of the sounds of Kutchin and English are articulated with the tongue in a position which is farther back than for speakers of SE. This gives to all of the consonants and vowels a quality that is somewhat different from the corresponding English quality. The symbols I have used in this paper represent the Kutchin basis of articulation (Drachman 1973, Delattre 1966, Gregerson 1973, Kim 1972) which is the same for all of the varieties spoken by Kutchins in AV.

IV. Notes on Kutchin historical developments

In the discussion of Section III I made some references to historical developments in Kutchin. In this section I will summarize the points made above, add some new observations and then sketch what I see as the general outline of Kutchin's history.

The list that follows in (68) gives some correspondences for forms taken from the stem/word list of Section V. I have made comparisons with Chipewyan (Li, 1933a) and in many cases with Navajo (Hoijer 1974). This list is not intended as a basis for reconstruction of Proto-Athapaskan but rather to illustrate correspondences and processes in Kutchin. The PA consonants are taken from Krauss (1964a) with the exception of his *g^w series. I feel that my evidence supports Sapir's reconstruction of *aj for the Kutchin retroflex series. To keep the list as brief as possible only a few examples of each correspondence are given.

(68)

| PA | Kut | Gloss | Kutchin | Chipewyan | Navajo |
|-------|------------------|---|---|--|---|
| *w | > v | stomach gray, blurred | -vat -vé | -bér -ba | -bid -ba? |
| *d | > d | heavy sit four | -dí, -di -di, -di? dɔ | -daɔ -da, -dá, -dá | -daaz -nédá díí |
| | > dj | this horn | djí tc'ídji | diri -dé | díí dee? |
| *t | > t | hold teach (sg.) three father | -tə -tan, -tín tík | -tún, -tún -tá tayε | -tə? -tin, tíí táá? |
| | > tc | road sleep count water | -təi -tcí -tca tcɥ | -tə -tane -tí, -tí -ta tu | -taa? -tiin - - -tah tó |
| *t' | > t' | cut feather hit (fist) | -t'í -t'e -t'án | -t'aθ -t'a -t'us | -t'as -t'a? - - |
| | > tc' | people live | -tc'ín -tc'i | -t'ine - - | - - -t'ííí |
| *n | > n | drink eye fall (paper) know | -ni, ni -nde? -ndak -ndai | -dá, -da -na, -naya -né -ni, -ni, -ni | -nééh, -na, -nah -náá? -nééh - - |
| | > ndj | drink (fut) long island person | -ndja -ndjá, -ndja ndjú dindjí | -dá -neθ, -neɔ nu dene | -nah -neez - - diné |
| *dl | > dl | laugh squirrel | -dla dlak | -dlóγ dlíyε | -dlo - - |
| *tɛ | > tɛ | throw (mud) | -tɛit | - - | -tɛeh, -tɛéé |
| *tɛ' | > tɛ' | grass hind part hard, strong | tɛ'o -tɛ'i -tɛ'ó | tɛ'oy -tɛ'a -tɛ'éɔ | tɛ'oh - - -tɛ'iz |
| *ɛ | > ɛ | one flour | ?iáák ɛu | ?iááyε ɛéz | ɛá? ɛá |
| | > 1 ⁶ | many | lɛ, lí | ɛá | ɛá |
| * (1) | > 1 ⁶ | hand be, become | -(nd)li? -li | -n-lá -lé | -la? - - |

| PA | Kut | Gloss | Kutchin | Chipewyan | Navajo |
|------|-----------------|-------------|--------------|--------------------|-------------|
| *dz | >dø | mountain | døá | (doubtful example) | dzií |
| *ts | >tθ | anus | -tθáí | -tθéíε | - - |
| | | flesh | -tθáí | -tθén | -tsí? |
| | >tc,k | stone | tcí, kí | tθε | tsé |
| | | head | tci?,ki? | tθí | -tsii? |
| | | tongue | tca?,kia? | tθu | -tsoo? |
| *ts' | >tθ' | bone | tθ'an? | tθ'en | -ts'in |
| | | also, again | tθ'aí | tθ'i | - - |
| | | hear | -tθ'ak | -tθ'ay | -ts'ííh |
| | >tc', | dish | k'it | tθ'aí | - - |
| | >k' | hear(perf) | -k'í | -tθ'á | -ts'áá? |
| | | sinew | tc'i,k'i | tθ'é | -ts'id |
| | | mosquito | tc'í,k'í | - - | ts'i'ii |
| *s | >θ ⁶ | be warm | -θa | -ðel | -zil |
| | | think | -θat | -ðan | -zin |
| | | skin | -θa | -ðéð | - - |
| *dj | >dz | muskrat | dzán | dzán | - - |
| | | ear | -dze? | dzayá | djaa? |
| | >dr | day | drín | dzine | djí |
| *tc | >ts | make | -tsí,-tsi | -tsi | -tcí |
| | | red | -tsík | tsi | tcíí? |
| | | smell | -tsin | -tsan | tcáá? |
| | | beaver | tse | tsá | tca? |
| | | small | -tsál | -tsele | tcil |
| | >tr | feces | -trin,-tra?a | -tsán,-tsá | -tcí?,tcáá? |
| | | wet | -trá | -tsel | - - |
| | | cry | -tré | -tse | -tcáh |
| *tc' | >ts' | hurt,sick | -ts'ík | -ts'ai | - - |
| | | lie | -ts'it | -ts'í,-ts'i | -tc'ííd |
| | | spruce | ts'ívi | ts'u | tc'ó |
| | >tr' | canoe | tr'í | ts'i | - - |
| | | wind blow | -tr'aí | -ts'i | -tc'i |
| | | woman | tr'índja | ts'é | - - |
| | | 3rd. indef. | tr'- | ts'ε | - - |
| *c | >c | I | cí | si | cí |
| | | my | cé | sε | - - |
| | | bear | cí? | sas | cac |
| | | spring | cín | sine | cí |
| | | sun | çé | sa | ca |
| | >ř | hunt | -ři | -zε | -jééh |
| | | name | -ři | -n-zi | -í-ji? |
| | | black | -řáí | -zan | -jin |

| PA | Kut | Gloss | Kutchin | Chipewyan | Navajo |
|-------------------|--------|-----------------|----------------|---------------|-------------------|
| *g ^v | } dj | fear | -dját | -djer | -dzid |
| | | old | -djat | -djer | -dzid |
| | } dz | berry | dják | -djíyε | -dzé |
| | | here | dzią | djā | dzaąą |
| | | mink | tcidzú | tedjusé | - - |
| *k ^v | } tc | tie | -tca | -tceθ | - - |
| | | big | -tcó | -tcoy | -tso |
| | | wood | datcán | detcin | -tsin |
| | } ts | be big | -tsí | -tca | -tsa |
| | | tail | -tsi | tcé | -tsee? |
| *k ^v ' | } tc' | tear | -tc'á | -tc'uɪ | -ts'iɪ, -ts'iɪ |
| | | } ts' | -ts'ík | -tc'uðε | - - |
| *x ^v | } h | say | -hi, -he, -hia | -si, -ní, -si | - - |
| | | go (one person) | -ha, -jí, -ha | -sa, -ya, -sa | -hááh, -yá, -hááɪ |
| *y | } j, y | go (one, perf.) | -jí | -ya | -yá |
| | | snow | -já, -yá | yaθ | yas, zas |
| | | below | -jé | -yε | - - |
| | | house | jé | yε | - - |
| | | louse | jí? | ya | yaa?, -ya? |
| *? | } ? | wife | -?at | - - | -?áád |
| | | look, see | -?ín | -?ɪ | -?ɪ |
| | | snowshoe | ?ai | ?ai? | - - |
| *g | } g | white | gáɪ | -gai | -gai |
| | | arm | gin | -gané | -gaan |
| *k | } k | sew | -kai | -kai? | - - |
| | | sweet | -kaɪ | -kan | - - |
| *k' | } k' | fat | -k'í | -k'a | -k'ah |
| | | arrow | k'i | k'á | k'aa? |
| *x | } x | winter | xai | xayε | xai |
| | | root | xai | xai | - - |

*g^w } (Since all of these can be predicted synchronically in
 *k^w } Kutchin from consonants above, no direct correspondences
 *k^w' } with PA consonants can be shown.
 *x^w }

It is evident from the correspondences above that there has been widespread palatalization in Kutchin's history. Before looking at this process we should look first at some vowel developments. In the discussion of section III I pointed out the diphthong ia which was responsible for palatalization of the preceding consonant. From the examples given above it can be seen that in many cases (but not all)

Kutchin ia < PA *i. (See, for example, 'to tell' -niá/-ndja; cf. Chip. -ni, Nav. -nii#).

Another development is that PA *a > i in Kutchin. In these cases, however, the i does not palatalize the preceding consonant. (See, for example, 'heavy' -dí, -di; cf. Chip. -daš, Nav. -daaz). A further development is that in some cases this i (< *a) becomes ia, e.g. 'go, be' -di, -dí, -día, cf. Chip. -dé, -dé, -dé). This ia, however, does not palatalize the preceding consonant. The ordering that these developments suggest is this: First, consonants palatalized in environments preceding PA *i, second, PA *a > i, and finally, i from any source optionally becomes ia.

Evidence given in section III and the comparative evidence above suggests the rule given as (35) above and repeated here as (69).

(69) *gʷ > dz/__[+palatal]
dj/ elsewhere

Forms such as 'to become big' -tsí, -tsi (cf. Chip. -tca, Nav. -tsa) indicate that this development took place after PA *a > i, since that development produced the environment for rule (69). Also notice that the 'normal' development for PA *dj is dz in Kutchin and Chipewyan. Since this earlier development appears to be context free that would place it earlier than the vowel developments listed above.

Another development, the one which characterizes the AVK/FTYK split, was discussed in section III above and summarized in rule (31), repeated here as (70).

(70) *dz > dj/__[+palatal]
dɔ/ elsewhere

followed by:

dj > gʷ/__[+palatal]

Of course, (70) produces just the opposite effect of the process in (69). It seems, therefore, quite unlikely that these two developments were going on at the same time.

The split of PA *dj into dz and dr is another development which must be accommodated to this outline. Since this split has the effect of reducing the number of dz series consonants we may suppose that it took place after one of the developments producing dz series consonants. This would argue for a somewhat more recent time for this split.

I mentioned above that virtually all of the consonants are palatalized (in this case meaning palatalized consonants of the same point of articulation) when followed by i, u, or ia. In rapid speech this palatalization is reduced in some cases, (e.g. 'very' ɬiá becomes ɬá) but actually changes the consonant in others, e.g. 'to make' (fut.)-tsia varies with -tca.

These developments can be summarized as in the chart (71). Only the consonants and vowels which undergo changes are mentioned. In each case the unaspirated consonant is used to represent the whole series.

(71)

| | Fronting | Palatalization | Vowel Raising | Consonant Shift | Vowel Lowering | Consonant Retraction | AVK/FTYK Split | Surface Palatalization | Casual Speech |
|----------------|----------|----------------|---------------|-----------------|----------------|----------------------|----------------|------------------------|---------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| dɫ | - | - | - | - | - | - | - | dɫ dɫ ^v | dɫ |
| d | - | d dj | - | - | - | - | - | d d ^v | d |
| dz | dɔ | - | - | - | - | dɔ dj | - | - | - |
| dj | dz | - | - | - | - | dz dr | - | dz dz ^v | - dj dj |
| g ^v | dj | - | - | dj dz | - | - | - | dz dz ^v | - dj |
| g | - | - | - | - | - | - | - | g g ^v | g |
| i | - | - | - | - | i ia | - | - | - | - a |
| a | - | - | a i | - | i ia | - | - | - | - a |

In working towards an explanation of these developments I suggest that the first three indicate a generalized fronting of the basis of articulation or tongue root position (Drachman 1973, Delattre 1966, Gregerson 1973, Kim 1972). Dentals became interdental, alveolars became dentals, and alveopalatals became alveolars. From this point of view, Krauss' reconstructed *g^w series might at first seem reasonable. It still remains difficult, however, to explain why Chipewyan which also underwent the same fronting did not develop the retroflex series. In this case the evidence does not support Krauss' *g^w series.

The widespread palatalization of *d to dj and the following raising of *a to i in some cases seem to be quite natural developments. Although now it is difficult to state under what conditions PA *a became i, it is likely that it had some relation to final consonants which are now lost.

A by-product of the palatalization of PA *d to dj and of the increase in palatalizing environments with the PA *a to i shift is an increase in the number of dj-type consonants in the language. The result, of course, is an increase in homophony. The process numbered (4) above which, although it may be natural enough, is further motivated by the need to reduce homophony. Since only those dj's which go back to PA *g^v undergo this change it is apparent that /g^v/ was still the underlying form for these consonants and /d/ the underlying form for the dj consonants. That is, at that time palatalization was a process which applied to underlying forms.

The fronting that took place in Kutchin is paralleled in Chipewyan only in the first step. This suggests that a time could be placed on these developments. That is, (1) took place after the Northern groups split with the Southern groups, and (2) through (4) took place after Kutchin split with Chipewyan.

The processes that I have numbered (5) through (8) reflect a retraction of the basis of articulation. The lowering of i (from whatever source) to ia began before (6) since ia is in the environment of some of the forms undergoing that change. This change is probably still going on.

The split of dō to dō and dj can be seen to be a retraction as well as the split of dz into dz and dr. It is peculiar, of course, that the environment for the retracted alternant is [+palatal]. (This is invariable in the case of dj but it is quite unclear in the case of dr.) The instability of this situation is, perhaps, reflected in the fact that these dj's

ultimately become palatalized velars (g^v) except for a small group which are retained for sociolinguistic reasons. The dr 's produced by this split in rapid speech sometimes become dj 's.

Of course, something needs to be said about the motivation for these changes. McKennan (1965) reports that all of his informants agreed on an origin for the Kutchins in the Tanana River area. The legendary migration to their present position may account for some of these changes. In their present position the Chandalar Kutchins were in frequent contact with Eskimo groups across the divide. Both Osgood (1936) and McKennan (1965) report that Kutchins regularly visited Eskimo camps and Eskimos reciprocated. These visits lasted for days and sometimes ran on into months. Unfortunately neither McKennan nor Osgood mentions how the Kutchins and Eskimos talked to each other during these prolonged periods.

The Kutchin attitude toward borrowing may shed some light on this matter. In the case of French and English it is clear that borrowing was and is an active process and has had the effect of introducing new consonants into the speech of Kutchins. I suggest that contact with the Eskimos may have had the same result during the time that it was common. The presence in Eskimo of a distinction between a forward velar and a back velar stop indicates, at least for those consonants, a retracted tongue position. I suggest, then, that from the period of regular contact with Eskimos the Kutchin began a retraction of the general basis of articulation which resulted in at least some of the changes in (5) through (8) in (71).

One further bit of evidence for the retracted position is the presence of such forms as 'sit (fut)' -dia. Apparently the combination of the two processes, retraction and palatalization result in the abundant palatalized consonants of modern Kutchin. The combination earlier in history of fronting and palatalization produced the changed consonants dj , ndj , etc.

One final note on the Kutchin basis of articulation is appropriate here. One of the elders once told me that the whiteman's tongue was too long to speak Kutchin. I take this to mean that speakers of SE using a SE basis of articulation in speaking Kutchin have their tongues too far forward.

V. Kutchin-English word and stem list

This section begins with an introduction which presents the symbols used in the word and stem list along with some notes about their interpretation. This introduction is followed by the list itself. This list is in two parts, a Kutchin-English list and an English-Kutchin list.

V.1 Consonants

| | Stops and Affricates | | | Nasals | | Fricatives | |
|----------------------|-----------------------|---------------------|-------------|---------------|-------|-------------------|-------------------|
| | Voiceless Unaspirated | Voiceless Aspirated | Glottalized | Pre-nasalized | Nasal | Voiceless | Voiced |
| bilabial | b | | | | m | | v |
| labio-dental | | | | | | f | |
| dental | d | t | t' | nd | n | | |
| inter-dental | dθ | tθ | tθ' | | | θ | (ð) |
| dental sibilant | dz | ts | ts' | | | s | (z) |
| alveolar sibilant | dj | tc | tc' | ndj | | c | j |
| retroflex sibilant | dr | tr | tr' | | | ç | (ʀ) |
| retroflex continuant | | | | | | | r |
| velar | g | k | k' | | | x | (ɣ) |
| labio-velar | (g ^w) | (k ^w) | | | | (x ^w) | (ɣ ^w) |
| lateral | dl | tɬ | tɬ' | | | ɬ | l |
| glottal | | | ʔ | | | h | |

The segments in parentheses are predictable, e.g. g^w is found before o , or δ is found following a sonorant. Since in some cases, however, it appears that g^w </go/ may now be analysed as / g^w / by younger speakers, both forms are given in the word list, e.g. 'people' gutc'ín/gwítc'ín. This is an instance of a general principle I have followed with velars and the fricatives, where my analysis is least secure, of listing the phonetic shape of the forms. The alphabeticization is based on my analysis, however, so that δ and θ , for example, are listed under θ .

The segments b , f , and r are treated phonemically only in words borrowed into the language. r in historically Kutchin forms appears to be reduced from d or in some cases from tr '.

Virtually all of the consonants are palatalized when followed by i , u , or ia . The velars, especially, have alternate forms, g^y , k^y , k^y' , and x^y and are also articulated farther forward than g , k , k' , and x . These alternates have not been indicated since they are predictable.

V.2 Vowels

The vowels i , e , a , o , and u their lax forms ɪ , ɛ , ə , ɔ , and ʊ occur in both nasal and oral forms. Since the lax vowels occur in closed syllables I have written them all i , e , a , o , and u .

The diphthong ia contrasts with a with palatalization of the consonant preceding ia . In the cases of the dj series and the dr series consonants this contrast is neutralized. These have been written without the i of the diphthong, e.g. 'to wash' -tcá, not *-tciá. In the case of the laterals the contrast also appears to be neutralized, at least in rapid speech. The i has been marked for $\ddot{\text{t}}$ and l only since these are palatalized except in very rapid speech.

V.3 Tone

Kutchin has two tones, high (falling) and low (falling, but also long). High tone has been marked with an acute accent, e.g. 'person' dindjí. A vowel unmarked for tone is assumed to be low tone.

V.4 Alphabetical order

The words in the list have been given in the following alphabetical order: i , ia , e , ei , æ , a , ai , o , u , ʔ , h , y , b , m , f , v , n , ndj , nd , d , t , t' , $d\delta$, $t\theta$, $t\theta'$, θ (δ), dz , ts , ts' , s (z), dj , tc , tc' , c , j , dr , tr , tr' , ç (ř), g , k , k' , x (γ), dl , $t\ddot{\text{t}}$, $t\ddot{\text{t}}'$, $\ddot{\text{t}}$, l .⁷

V.5 Classificatory verb stems

As in the rest of the Athapaskan family, Kutchin has a set of stems with which objects are classified by semantic properties. There are six sets of these in Kutchin:

Class I: small solid round objects, but also culturally borrowed objects. This is, further, the miscellaneous class. Examples are: rock, cup (empty), cap, ball of yarn, store, heavy box (empty), and blanket.

Class II: long thin objects; e.g. pencil, rifle.

Class III: animate objects; e.g. person, puppy.

Class IV: container with contents (liquid or granular); e.g. cup of tea, cup of sugar, handful of sugar.

CLASS V: cloth-like objects; e.g. paper, shirt, (but note not blanket, which is Class I.

Class VI: plurals and rope-like objects; e.g. rocks, rope, pile of logs.

These classificatory verbs inflect in five ways which I have translated as (1) to be in a place (neutral), (2) to put or to handle (momentaneous), (3) to put or to handle (customary), (4) to fall, and (5) to throw.

V.6 Kutchin-English word and stem list

| | |
|---|--|
| -índji? son (man speaker) | a· 'A' (the letter A) |
| íjik right there (not close to speaker) cf. jík | aí as for (topicalizing particle) |
| iltín pike, jackfish (FTYK) cf. ?altín (AVK) | aízík Isaac |
| ířar urine | řahř?, ?řahř? yes |
| -e?í uncle (mother's brother) | -ahř brother-in-law (wife's brother) |
| -endjít for e.g. cendjít for me | avé blurred, unclear (as without eyeglasses), grey |
| -edzř? daughter (woman speaker) | atsín rain cf. -tsín |
| -edjř older sister | ágat needles (of tree) |
| -ejř nephew (brother's son) | akwa no cf. -kwa (suffix) |
| -ek'aí aunt (mother's sister) | ak'í fat (as a food) |
| etiák eight o'clock | ak'an fire |
| érplein airplane | altín pike, jackfish (AVK) cf. iltín, ?altín |
| | -ondé older brother |
| | řdjít whiteman cf. vanotřít |

| | |
|---|--|
| ot'é above cf. -t'e | -ʔá (±) to crawl |
| ojé below cf. -jé | -ʔai (Ø) to be in place |
| -ótr'i mother-in-law (wife's mother) | Class I |
| -óri? name cf. -ri to name or or | -ʔai (±) to put, to handle |
| oben open (to be turned on) | Class I |
| ólso also | -ʔai to be lying on back |
| uénin West | -ʔai to set (sun) |
| uéndji? South | ʔai snowshoes |
| uét'i? North | -ʔan to (the place of |
| úndjik slave | -ʔat woman, wife |
| utsaivin weasel | ʔat'ó birch |
| -ʔí (l) to hide, to do something stealthily | -ʔak (Ø) (cust) to put, to handle, Class I |
| -ʔi, --, ʔia (Ø) (FTYK) to have (AVK) -ʔí | ʔa.k'í cow |
| -ʔi to give birth | ʔak'í fat (adj) |
| -ʔia (fut) to have | ʔatr'í spruce bark cf. tr'i, canoe |
| -ʔia (fut) to fish | ʔatr'ai wind cf. -tr'ai, wind blows |
| -ʔia (fut) to see, look | ʔaltín pike, jackfish |
| -ʔia? (perf) to see, look | -ʔo, tc'il, -ʔal (Ø) several persons go cf. -há one goes |
| -ʔín, --, ʔia to fish. cf. -ʔín, to see, look | -ʔó (±) to sneeze |
| -ʔín, -ʔia?, -ia (±) to see, look | -ʔok (±) to flow (as a creek) slowly |
| -ʔín to play (lerá tseʔín, to gamble) | -ʔu to step (on) |
| -ʔin to copulate | -hi, -he, -hia to talk |
| -ʔin to be (?) | hídza? always |
| -ʔin to want, do (?), e.g. djadení?inkwa Don't do that! | -hia (fut) to talk cf. -hi hirt hurt |
| -ʔil several objects hang cf. -tsit one object hangs | -he? (perf) to talk cf. -hi hecín last year (summer) hétok all |
| ʔiák one, once cf. djiák, djié (one person) | -há, -jí, -há One goes cf. -ʔo several go |
| ʔiák diníldi djedatín one hundred | -ha one goes (imp) ha with (by means of) |
| ʔiakónli? five cf. djiónli? | hatc'ák'it a sore |
| ʔiawatín ten cf. djiawatínhan river | haintr'ai belch cf. -tr'ai wind blows |
| ---, -ʔe, -ʔé (±) to lie down | handjí almost |
| -ʔé round | hángri hungry |
| -ʔé, -ʔé? straight | -ho grind |
| -ʔe to hate | yéa yeah |
| -ʔé to fear, be afraid | yétcalu? glacier deposit like flour |
| -ʔé to give, hand over | ye Kai northern lights |
| -ʔa, -ʔal, -ʔa (Ø) to eat, bite | -yeyan father-in-law (wife's father) |
| -ʔa (±) to feed | |

yahá that, close by
 be 'B' (the letter)
 bába papa
 -ma? breast, milk
 mama mama
 masí? thank you (French)
 masitcó
 mací?
 macitcó
 faí five
 fámli family
 fór four
 fórdi forty
 -via? to swim (animal) cf.
 -vík
 -via? arch cf. çevia?
 rainbow
 -vík to swim (person)
 vitté gedjinedéda wagon
 vitcatsík Alaska blackfish
 vé- 3rd pers sg possessive
 prefix
 vegwá·ðat February
 (ndé)-va? lips
 ván lake
 van? morning
 van tc'ará?a breakfast
 vanan ets'an tc'ají July
 vanan di'ilí August
 vanan tc'íyo June
 vanotíit whiteman cf. ódjít
 vándi? seeds
 -vat stomach
 vat'í?i shaman
 vadzaí caribou
 vadzairí October
 varají piedmont
 varajik'q' piedmont creek,
 Arctic Village
 vóntsaneónzaizetín nine
 voka?á table
 vú seagull
 -ní, -ní?, -ndja (d) to drink
 nia? moss
 -niá, -niá, -niá? to say
 (AVK) cf. -ndja (FTYK)
 níyuk long time
 nín animal
 -nín sharp

-nindó?gy small intestine
 nindjí lynx
 nindjijú cat ('small lynx')
 nínča? fur (animal skin)
 -nídi? chin
 -nitθ'an jaw
 níts'a? how cf.
 nídjuk where
 nijít far nijít
 nítra wolverine
 nik'idq eight
 nik'itik six
 nilí meat
 nígají dry meat
 né- wnd pers sg possessive
 pronoun prefix
 -ne negative suffix
 ne'é mother
 neviá? caribou skin house
 nénohot'é butterfly
 netán thunder
 nedðák sand
 nedjúk seal (animal)
 netc'agwahé foggy
 negq fox
 ne·k'ík sparrow
 neyán lake fish
 -negwí·hájí semen
 nekwaí two, twice
 netíi winter dog salmon
 nerátsu coat
 -na (perf) to say (FTYK) cf.
 -niá (AVK)
 -nā to leave a remainder
 -nāí (∅) to fall (Class I)
 -nāí (∅) to fall (Class III,IV)
 -nāí (±) to throw (Class III,IV)
 -nāí pluralizing suffix
 -nāí (perf) () to break wood
 -nāí to enter
 nán you (2nd pers sg subjective
 pronoun)
 nán ground, earth
 -nant'íjak lower back
 nagajitcatsál beading needle
 nagajidjatsál
 nagajitθatsál
 nagón near cf. -gon short,
 shallow
 nakát territory cf. -kat
 nákal salmonberry

| | |
|---|--|
| nak'ódji? sometime | dindjí person, Indian |
| naxón you (2nd pers pl subjective prefix) | dindjí cinilí doctor |
| nátłat bush cranberry | dindjijú person, man |
| nohó- your (2nd pers pl possessive pronoun prefix) | dindjítł'u? mucus cf. djítł'u? |
| nq no | pitch, sap |
| no? | dindjók moose |
| -ndji to lift | dindjiki? moose head |
| -ndji to pray | dindjikrí September |
| -ndjí to strangle | díti? k'egwá·ōat God |
| ndjindji? when | didjí 3rd largest bull moose |
| -ndjók creek | -dík, --, -dík (ł) to come, return |
| -ndjók to finish | dixón we (1st pers pl sub- jective pronoun) |
| -ndja to drink (fut) cf. | díl lesser yellow legs |
| -ni | de what |
| -ndja, -na, -ndja? to say (FTYK) cf. -nił (AVK) | déna what did you say (FTYK) |
| -ndjá long (adjective) | dénia (AVK) |
| -ndja to be long | deńia (older forms of devainia déna) |
| ndjú island (of timber) | deátc'i? old person cf. dáđji? |
| (ní)nde? eye | deviá? door |
| (ní)ndetçų tears ('eye water') | -deniá son-in-law (daughter's husband, woman speaker) |
| -nde to swallow | denátło wet snow cf. |
| -ndai, ---, ndai (d) to know | dedzłł loon |
| -ndai to be alive | dets'at sucker fish |
| -ndak (ł) to be tired | détc'a white fronted goose |
| -ndak to pull | déja? snow on spruce boughs |
| -ndak (l) to fall (Class V) | détr'a'đjak swamp cranberry |
| -ndak, --, ndak (ł) to speak | détr'a? crow, raven |
| dí- our, someone's (1st pers pl/3rd pers indef possessive pronoun prefix) | -dėyan body |
| -dí heavy | detła? book, paper |
| -di to be heavy (Ø) | detłátł pencil |
| -di (Ø) to squeeze | detł'a fish trap (drag net) |
| -di to push | deládzal spruce cone |
| -di?, -di, -dia to sit | -da blood (person) cf. tc'ekłł animal blood |
| -di, -dí, -diá (d) to be in a place (Class III) | dłł fowl, chicken |
| -dia (Ø) (fut) to sit | daigų? maggot cf. gų? worm |
| -diá (d) (fut) to be in a place (Class III) | daántło wet snow cf. denátło |
| diví sheep | da'łł axe |
| diviri November | -dádzal boy's penis cf. -ōo penis |
| diniri? ripe | datsó mouse |
| dink'e gun cf. -k'e to shoot a gun | datsótrin? rice (mouse excre- ment) |
| dink'ékon gunpowder | dats'an duck |
| -dinye beard cf. -ye? hair | dazó 2nd largest bull caribou |

| | | | |
|--------------------------|-------------------------------------|----------------------|--|
| dazotsó | young bull caribou | taitas | Titus |
| dádji? | old person cf. | taĩtsál | canoe paddle (small) |
| deátc'i? | | -tán (1) | to freeze (water) |
| datcán | wood, stick, stump, tree | -tan, -tín, -tca (1) | to teach one person |
| datcán gwitrá | shoes cf. tan | -tán (1) | to teach several persons cf. -tiq'? |
| gwitrá, gwitrá | | -tia | thin ice on creek |
| dacú | dry (adj) | tan gwitrá | shoes cf. datcán gwitrá; gwitrá |
| daján | shaman | -tal | to bloom |
| -dak | to shoot (arrow) | tó | dark, night |
| -dak | to choke | -t'í (Ø) | to cut, scrape |
| dak'ia | rock ptarmigan | (ná)t'it | hip |
| daai? | soap | -t'é | above cf. ot'é |
| dq | four | -t'e (Ø) | to fly cf. tc'it'e wing |
| docó | towel | -t'ai (d) | to come to a lying position (t' < d + ?ai) |
| dor | door | -t'ai | to flow fast (creek) |
| dúle? | maybe | -t'ai | to rub |
| -tí | uncle (father's brother) | -t'ai (±) | to split |
| -ti? | father | -t'ai | sweet |
| ti'ia | father | -t'ai (Ø) | to be sweet |
| ti'á | father | -t'ai | power |
| -tí | thick (adj) | t'aví | canvasback duck |
| -tí (Ø) | to be thick | -t'an (Ø) | to stick |
| tík | three, three times | -tin-t'an (perf) (±) | to hit with open hand, slap |
| -tín | ten | -t'ak (d) | to throw (Class V) (t' < d + ?ak) |
| -tín (perf) | to teach cf. | -t'ó | to wrap up |
| -tán | to teach (pl), -tia | -t'ok | to lick |
| -tin (±) | to trap fish cf. | -t'ok | woman's breast |
| (±) to handle (Class II) | | -t'oktsi | nipple |
| -tin (Ø) | to be in place (Class II) | -t'ú | to butcher |
| (Class II) | | dóá | mountain |
| -tin (±) | to put, handle (Class II) | -dóák | sand cf. |
| (Class II) | | tóá | ground squirrel |
| -tia (perf) | to find out | -t'óai | to dive |
| -tiq'? | to teach each other cf. -tán; -tan | -t'óai | to pierce |
| tiq'it | deep | -t'óai | flesh cf. -t'óai fat |
| te- | water (incorporated form) cf. teq'í | -t'óai | fat (person) |
| teq'í | beach | -t'óak | to throw (Class I) |
| teibrigón | to tape record | -t'óak | to hit with (Class I) |
| teibrigordah | tape recorder | -t'óak | all |
| -tá | above | -t'óal | anus |
| -tá (±) | to hold | -t'ó | brown, yellow (as for brown bear) cf. atsó |
| tai | hill | | |
| tai | trail | | |
| tai | gwindjik trail, road | | |
| -tai | smooth (surface) | | |

- tθ'ai to scrape, to remove
flesh from skin
- tθ'an? bone, leg
- tθ'átθ'ai? buttocks
- tθ'ak, -k'í, -tθ'ák to hear,
understand (∅)
- tθ'aktr'atsín bald eagle
- θetá portage
- θáí trousers
- ða to be young
- ða (∅) warm, hot (weather,
objects, etc.)
- ða (∅) to be warm, hot
(weather, objects, etc.)
- ða (±) to be warm (person)
- ða? skin, hide
- ðaí to fall forward
- ðán, ja?, -ðan (∅) to want,
to like
- ðát dead (adj)
- ðat to be dead
- θat (±) to fight
- ðat liver
- ðát to be standing
- ðat to come to a stand
- ðák to kick
- ðak to blink
- ðat (∅) to think
- ðo penis
- dzit (∅) to whisper
- dzirétí'a? sinew in wrist
- dzík (∅) lightweight
- dze? ear
- dzá (∅) to dance
- dzą here cf. zą; za
- dza toward
- dzán muskrat
- tsí, -tsáí, -tsia to make
-tsi -tca (AVK)
- tsi, -tsai, -tsia
-tsi -tca (FTYK)
(also many other uses in
combination with prefixes,
e.g. bury, dig, pick, sell,
whittle, tell story)
- tsí big (adj)
- tsi to be big
- (nin)tsí nose
- tsí grandfather
- tsín to rain
- tsin to smell, stink
- tsin (±) to smell (trans)
- tsík red (adj)
- tsik to be red
- tsik rib
- tsí± snowdrift
- tsit (±) one object hangs
cf. -?il
- tsit (±) (perf) to give
(Class III) cf. -?é (any
Class) -?áí (Class I)
- tsia (fut) to make cf. -tsí
- tsia? upper thigh muscle
- tse (±) to yawn
- tse beaver
- tsét'it pocket
- tsegí young beaver cf. -gí
- tsáí; -tsáí (perf) to make
cf. -tsi; -tsi
- tsáí (±) to get revenge
- tsaiya? ice crystal snow
- tsan? vagina
- tsál small, few
- tsal (∅) to be small
- tsó brown, yellow (as for
brown bear) cf. -tθó
- tsu (∅) to be in place (CLASS V)
- tsu (±) to put (Class V)
- tsú grandmother
- tsu feather
- tsu? vwins
- ts'ivi spruce, forest, timber
- ts'it porcupine
- ts'it (∅) to lie (falsehood)
- ts'ik large intestine
- ts'ík, ts'ik (±) to be sick,
hurt, hungry
- ts'ík narrow
- ts'é ground hog
- ts'édit tobacco
- ts'ediki? pipe (tobacco head)
- ts'egí young ground hog cf. -gí
- ts'á? how
- ts'áí side
- ts'an from (PP), since (PP)
- (nin)ts'at forehead
- ts'at'ík heavy shirt
- ts'ats'ahéts'ínekwaí seven

- se 'C' (the letter)
 seven seven
 sá? star
 sūgāi? sugar cf. cūgāi?
 spuntsál teaspoon
 -zī good (adj)
 -zī (Ø) go be good
 za there (near you) cf. dza
 -zō bad (adj)
 -zō (Ø) to be bad
 dji this (near me)
 -dji (±) to be empty
 -dji where
 -dji maybe
 -dji to gather
 -dji? with (accompany) (PP)
 djínín sharp (adj)
 djínrú housepost
 djídi what (thing)
 -djít to be new
 djítsí iron, hard rock
 djítci datcántia coffin
 djiji?ík shirt
 -djik to take back
 djitá'u? pitch, sap
 djiták one, once cf. ?iták
 djité one person (conserv)
 djitawatín ten
 djitónli? five
 djémis James
 -dja to differ
 -dja friend
 djai why (also: djahai; zai)
 djan John
 -dját old, worn, rotten
 -djat (Ø) to be old, worn
 -dját (Ø) to be scared
 djatcó apple cf. dják
 djátθāi animal (for food)
 cf. -tθāi flesh
 djago 4th largest bull moose
 dják berry, fruit, blue-
 berry
 djatá'ó blue, green cf. -tāó
 djat fish hook cf. -tcal
 djatá'a fishing line
 djatxók young bull moose
- djokit navel
 dju who
 -dju to vomit
 -dju younger sister
 -dju niece (brother's sister)
 djúde who cf. de what
 djuk now
 -tcī (±) to sleep cf. -tcī to
 handle (Class III)
 -tcī (±) to put (Class III)
 -tcī (±) dead (adj) animal
 -tcī (±) to be dead
 -tcī? (±) (cust) to put
 (Class II)
 tcí stone, rock (AVK) cf.
 kí (FTYK)
 -tcí grandson
 -tcí? daughter (man speaker)
 tcívia fish net
 tcítin dip net
 tcidzú mink
 tcítsi? tail
 tcitsál bird
 tcíjin golden eagle
 -tcíkāi? son-in-law (daughter's
 husband, man speaker)
 tcíkat bed
 -tcá (±) to wash, soak, to
 spill water cf. gutcá Ft.
 Yukon Flats, 'flooded place',
 -trá, wet
 -tcá younger brother
 tcá Northern flicker
 -tca (fut) to make (casual
 speech variant of -tsia, see
 -tsí; -tsi
 -tca (±) to tie
 -tcá to count
 -tcá wide (adj)
 -tca (±) (Cust) to put (Class
 V)
 -tca to float cf. -tca to
 wash
 -tca (fut) to teach cf. -tan
 -tca? tongue (AVK) cf. -kia?
 (FTYK)
 tcavá toboggan

- tcán again
 -tcán too
 tcatsál small needle
 tcáyo? egg
 -tcal fish hook cf. djaɪ
 -tcó big (suffix)
 tcɥ water
 tcɥtiá cup
 tcɥtcó ocean ('big water')
 tcɥtcové ocean beach
 tcɥninða xɥɪlɥ hot spring
 -tc'i (cust) to put, to handle
 (Class III)
 -tc'i (‡) to live, be in a
 place
 tc'i mosquito (AVK) cf.
 k'i, k'idjól (FTYK)
 tc'idjól mosquito
 tc'iyat'ók cow caribou that
 can bear calves
 tc'ivédze? biscuit
 -tc'in people
 tc'idéθa abomasum
 tc'it'e wing feather cf.-t'e
 tc'it'e wing
 tc'idji? horn, antlers
 tc'itcerí April
 tc'itc'uk the other way
 tc'ijinrí March
 tc'ijak downward (AVK) cf.
 k'ijak (FTYK)
 -tc'il (perf) several go cf.
 -?o
 tc'irindjá pintail duck
 tc'édɥ fish spear
 tc'edzits'ík hornet
 tc'ekɥ blood (animal) cf.-da
 -tc'a to be (copula)
 -tc'á to tear (Ø)
 -tc'a, -tc'a, --, (‡) to
 cook, roast, fry
 tc'ahasík grasshopper
 tc'andá more, much
 tc'ándja? old person
 tc'ándja January
 tc'átan high fog
 tc'atál willow grouse
 tc'át'an? leaf
 tc'at'ó nest
 tc'atsál December
 tc'átr'at ice fog
 tc'ókot átsi to sell cf.-kot
 tc'axwétcints'ik hawk
 tc'aradzá to dance
 tc'aradzajé dancehouse
 tc'aratθá needle (moose skin)
 tc'arókotjé store
 tc'aróxwejé
 tc'uvátc'u bark of tree
 tc'unt'ai hat'int'ai shaman
 cɪ I (1st pers sg subjective
 pronoun)
 cí? brown bear
 ci food
 -ci to snow
 cín springtime, summer
 cits'ɥ right side cf.
 tθots'ɥ left side
 cé- 1st pers sg possessive
 pronoun prefix
 cɥ my brother-in-law (wife's
 brother) cf. -ɥhɥ
 ca footbone
 ca'ái semi-palmated plover
 cat scar
 catsó bank swallow
 -cɥ? prohibitive suffix
 corɥ black bear
 -col to blow
 cu? slow, slowly
 cúgɥ sugar cf. súnɥ
 cpuntsál teaspoon cf. spuntsál
 -jí (‡) to dress, undress
 -jí; -ji (perf) one person
 goes cf. -ha
 jí? louse
 -jit in, inside
 -jik to bring
 jík 3rd pers sg pronoun, also:
 that, there
 jiknɥ they cf.-nɥ pl suffix
 jé house
 -jé below cf. oje
 jeyá Wilson's snipe
 jekát sky
 jek'ó cloud

- já a little rotten
 -ja? (‡) (perf) to like,
 want cf. -ðán
 ja maybe
 ja snow cf. tanyá/ tsaiya?/
 déja?
 -jak (Ø) to breathe
 -jak below
 jó wolf
 jotsál coyote (small wolf)
 -jú small (suffix)
 -jú son (woman speaker)
 -drí light
 -drí spider cf. gwidedrí
 -dri? heart
 drín light, day
 drindetít week
 drínjit Sunday
 drintí'é Monday
 drintí'é nekwaí Tuesday
 drintí'é tík Wednesday
 drintí'é dō Thursday
 drintí'é djiónli? Friday
 drintí'é nik'itík Saturday
 drindlán tc'ará'a lunch
 -drítsi? chest
 -dríl thin
 -drítt'ok lungs
 trí three
 -trin? excrement cf. tr'a'á
 -tré (Ø) to cry, howl
 trelúk small white ocean fish
 tra land otter
 -trá (‡) wet cf. -tcá to
 wash, soak
 tra firewood, logs
 -trat to scratch
 tr'í bark (of tree) cf. k'itr'í
 tr'í canoe
 tr'itsál small canoe
 tr'itcó boat (big)
 tr'inín child
 tr'inintsál baby
 tr'índai? blackfly
 tr'índja woman
 -tr'índja wife
- tr'ínða sweat cf. -ða
 -tr'ít work
 tr'a'á excrement cf. trin?
 -tr'ai (‡) to blow (wind)
 tr'andú devil
 tr'agihíjé church
 tr'akáí bitter
 tr'aít'ók small willows
 -tr'ó kidney
 çí knife
 -ri, -ri, -ri (1) to hunt
 -ri (perf) to give a name
 -rik saliva
 -ré to spit
 çé sun, moon
 çévia? rainbow
 çenán month
 çá sheefish
 -rak belly
 -rál to bark, yell, shout
 -rál
 çáí dirty object
 -raí (Ø) to be black, dirty
 çu robin
 -gí child, young one
 -gin arm
 git glacier
 gé rabbit
 gexaídza besides
 géywa? macaroni ('rabbit
 leg'--old form)
 -gaí to fight
 -gaí dry
 -gaí thin person
 -gaí claw, nail
 -gaí white
 -gál, -gál, -gál (1) (AVK) to run
 -gal, -gal, -gal (1) (FTYK)
 gó- 3rd pers pl possessive
 pronoun prefix
 go- prefix indicating place,
 weather, time, etc.: also
 gu-, gwi-
 goraci } meadow
 gwa'cí }
 gwintí'ó much
 gudedrí } spider
 gwidedrí }

| | |
|-------------------------------|-------------------------------|
| gutc'in people | -kaɪ (∅) to be in a place |
| gwitc'in | (Class IV) |
| gwitrá mocassins | -kaɪ (ɜ) to handle (Class IV) |
| gwidlan steep place | -kat on (top of) |
| gutcá Ft. Yukon Flats | -kat (cust) (∅) to handle |
| gwitcá | (Class IV) |
| gwitɜ'e xaí next year | -(na)kát territory |
| gulurí May | -kó (∅) to cough |
| góga? that's all right | kón? dirt house, camp |
| -gón short (adj) | kón'za? campfire |
| -gon (∅) to be short | kóntcɥ whiskey (fire water) |
| -gón shallow (adj) | -kot to buy, pay, sell |
| gonjí vegetable | k'í mosquito (FTYK) cf. tc'i |
| -got knee | k'idjól mosquito |
| -gót (∅) to stab, spear (AVK) | k'idjót mosquito |
| -got (FTYK) | -k'í (ɜ) to make a fire cf. |
| -gót dull | -k'a? to burn |
| -got to hit with fist | -k'ɪ (ɜ) to listen cf. -tθ'ak |
| -gót'á clothing | k'i? arrow |
| gú? worm | k'índak East |
| gú | k'int'evia door cf. devia |
| -ki? head | k'idocó dish towel |
| kí rock, stone (FTYK) cf. | -k'ít to spill |
| tcí (AVK) | k'it dish |
| kí iron cf. kí | k'íjak downward direction |
| kivitr'í flint | (FTYK) cf. tc'íjak (AVK) |
| kiníki? grindstone | k'ídak upward direction |
| kinú canoe | k'itr'í birch bark, canoe |
| kitc'a'an cave | -k'é to be fat |
| kítθak gravel | -k'é to shoot (gun) |
| kítɥu? ashes | k'edjí something |
| -kiyáɪ brain | k'édjit new, clean, young |
| -kia? tongue (FTYK) cf. | k'et'ai yesterday |
| -tca? (AVK) | -k'a?, -k'in, -k'in (∅) to |
| kiaɾáɪ Bonaparte's gull | burn cf. ak'an fire |
| -kwa (∅) to ride in a canoe | k'andjík mountain creek |
| -kwa negative suffix | -(e)k'ai mother's sister |
| -kwaɪ two cf. nekwaɪ | k'aitɬák small willow |
| -kwai pile, heap | k'ó alder |
| -kwai to vomit | -k'ó neck |
| -kwai? feet, foot | -k'ó (∅) cold, to be cold |
| kwaík'it town | k'q valley creek |
| kalt'ú yellow pond lily | -k'u to suck |
| -kaɪ sweet | -xi to be crazy |
| -kai (ɜ) to sew | -ɣít mouth |
| -kai (ɜ) to pack, carry | -xe (ɜ) to fool, deceive |
| -kaɪ? husband | -ɣwa (∅) to pack, carry |
| | -ɣwa? leg |

- xwai' sister-in-law (wife's sister)
-xwai' (t) to kill, to fight
-xwai'
-xwai' (t) smooth
-xwai' (t) to thaw, melt
xwai'dak'á? candle
-ye? hair
-ya (Ø) to fall (Class II)
-xa (t) to throw (Class II)
xadétsik young cow moose
xai root
xaitiá basket
xai' winter
xai' year
xaidza autumn
-yái vicinity
xán fast
xáitai round whitefish
xal tθ'an? crippled leg
-xal (t) to open (intr.)
-yo (FTYK) to fall down
-yó (AVK)
-yo round
-yo? testicles
-yo? teeth
-yón (Ø) to growl
-xón (t) to fight
-dli to be in a place
(Class VI)
-dli' to sing
(nán)dli? hand
-dla to laugh
dlák Alaska red squirrel
-dlaí round (ball)
dlotθá shrew
dlogwatθá
-tít to be spoiled
-tít to spill
-tí'i? hip region
-tí'it to fall (CLASS VI)
-tí'it (t) to throw (Class IV or VI)
-tí'a to braid
-tí'a rope
tí'atr'án? dragonfly
-tí'ák to jump
-tí'ó green, blue
-tí'ó? gall
-tí'ó grass
tí'ots'ái? left side cf.
cits'ái right side
tí'okát grassy open place
tí'ótakát flat (ground)
-tí'u to weave
tí'u horsefly
-li many, plenty, lots
-li to put (Class VI)
-li to become
-ti (t) to put (cust)
(Class VI)
-li to swell up, bulge
tiak'á? candle (Old John word)
tiá very
tíic kindling wood
-lia (Ø) to dream
-lia (t) to carry (in arms)
-lik dog cf. t'ai
-lil to drag
-lé many, plenty, lots
tetiá bottle
tát smoke
t'ai dog
t'aitcó horse ('big dog')
tú ice
tú? dirt
tú'atr'aí dust
tú'ohotán frozen dirt
tutc'a? bread
tutr'á?a flour
tutc'ánt'at mud
túk fish
tuktó king salmon
túk'y? fish egg
tútíi fish tail
ledí tea
leditiá teapot
lerá money
lerá
lerádátsik gold
lesil salt
lekévar paper (old form)
lasyir last year
lokocok'é bacon
laisen license

V.7 English-Kutchin word and stem list

| | |
|--|--------------------------|
| 'A' a· | beach teyǎǎ́ |
| abomasum (part of the stomach of moose or caribou) | ocean beach tcɥtcové |
| tc'idéθa | bear: black corǎǎ́ |
| above ot'é; gwatá | brown cí? |
| again tcán | beard -dínye? |
| airplane érblein | beaver tse |
| Alaska blackfish vitcatsík | young beaver tsegí |
| alder k'ó | become -li |
| alive -ndai | bed tcíkat |
| all datθák; hétok | belch haintr'aí |
| all right góga? | belly -rak |
| almost handjí | below oje; -jak |
| also also | berry dják |
| always hídza? | besides gexaídza |
| animal (for food) djátθǎǎ́ | big: suffix -tcó |
| (game) nín | adj -tsí |
| anus -tθál | verb -tsi |
| apple djatco | birch ?at'ó |
| April tc'itceří | bird tcitsál |
| arch -viá? | biscuit tc'ivédze? |
| area -yǎǎ́ | bitter tr'akǎǎ́ |
| arm -gin | black aǎǎ́ |
| arrow k'i? | blackfly tr'índai? |
| as for -aí | blink -ðak |
| ashes kítu? | blood: animal tc'ekǎǎ́ |
| August vanan di'ilí | man -da |
| aunt (mother's sister) -ek'aí | bloom -tal |
| autumn xaídza | blow -col |
| axe da'ǎǎ́ | wind blows -tr'ai (±) |
| 'B' be | blue -tǎ'ó |
| back (lower) -nant'íjak | blueberry dják |
| bacon lokocok'é | blurred avé |
| bad: (adj) -zq | boat tr'itcó |
| to be bad -zq | body-déyan |
| bank swallow catsó | bone tθ'an? |
| bark (verb) -řál | book, paper detta/detta? |
| bark of tree tr'í; tc'uvátc'u | bottle řetiá |
| birch bark k'itr'í | braid -tǎ'a |
| spruce bark ?atr'í | brain -kiyǎǎ́ |
| basket xaitiá | bread řutc'a? |
| be: to be in a place | break (perf) -nǎǎ́ (±) |
| Class I -?ǎǎ́ (Ø) | breakfast van tc'ará'a |
| Class II -tin (Ø) | breast -t'ok/-ma? |
| Class III -di, -dí, -diá(d) | breathe -jak (Ø) |
| Class IV -kǎǎ́ (Ø) | bring -jik |
| Class V -tsu (Ø) | brother: older -ondé |
| Class VI -dli | younger -tcá |
| Existential -tc'a (Ø) | -in-law (wife's |
| Attributive -tc'a | brother) -cǎ/-ahǎ |

| | |
|----------------------------------|------------------------------|
| brown, yellow -tθó/-tsó | crippled leg xal tθ'an? |
| bulge, swell up -li | cry -tré (∅) |
| burn -k'á?, -k'ín, -k'ín (∅) | cup tçytiá |
| butcher -t'ú | cut, scrape -t'í (∅) |
| butterfly nenohot'é | dance -dzá (∅) |
| buttocks -tθ'átθ'ai? | dancehouse tc'aradzajé |
| buy -kot | dark tç |
| 'C' se | daughter: man speaker -tçí? |
| candle xwajdak'á? | woman speaker -edzçí? |
| Old John word çíak'á? | day drin |
| canoe tr'í/kinú | dead: adj -tçç (±) |
| small tr'itsál | adj -ðát |
| canvasback duck t'aví | verb -ðat (∅) |
| caribou: general vadzai | December tc'atsál |
| 2nd bull dazó | deep tiçxít |
| young bull dazotsó | devil tr'andú |
| cow with calf tc'ayat'ók | differ -djá |
| caribou skin house neviá? | dipnet tçitin |
| carry: Class I -'ak (∅) | dirt: frozen çu? ohotán |
| in arms -lia (±) | dirt house kón? |
| on back (pack) -çwa (∅) | dirty: adj çaj |
| cat nindjijú | verb -çaj (∅) |
| cave kitc'a'an | dish k'it |
| chest -drítsi? | dive -tθai |
| child tr'inín | do: also, to want -'in |
| young one -gí | doctor dindjicinilí |
| chin -nídi? | dog çaj |
| choke -dak | : possessed form -lik |
| church tr'agihíjé | don't -cç? /-neç |
| claw, nail -gaj | door k'int'evia'/devia'/dor |
| clothing gótc'a | down, downward tc'íjak (AVK) |
| cloud jek'ó | k'íjak (FTYK) |
| coat nerátsu | drag -líl (∅) |
| cold adj -k'ó | dragnet detç'á |
| verb -k'ó | dragonfly tç'atr'an? |
| come, return -dík, ---, -dík (±) | dream -lia (∅) |
| cone deládzal | dress, undress -jí (±) |
| cook -tc'a, -tc'a, -- (±) | drink -ní, -ní?, -ndja (d) |
| copulate -'in | dry -gaj/dacú |
| cough -kó (∅) | meat nilígaj |
| count -tcá | duck dats'an |
| cow 'ak'í | dull -gót |
| coyote jotsál | dust çuatr'ai |
| cranberry: bush náttat | eagle: bald tθ'aktr'atsín |
| swamp détr'a'djak | golden tçíjin |
| crawl -'á (±) | ears -dze? |
| crazy -xi | East k'índak |
| creek: mountain k'andjík | eat -'a, -'al, -'a (∅) |
| valley k'ç | egg tçáyo? |

| | | | |
|-------------------------------|-----------------------------|------------------------------|-----------------------|
| eight | nik'idq | flint | kivitr'í |
| eight o'clock | et'ák | float | -tca |
| empty | -dji' (±) | flour | tu tr'á'a |
| excrement | tr'a'a'; trin' | flow: fast | -t'ai |
| eye | -(ní)nde' | slowly | -'ok (±) |
| fall: Class I | -n'áí (Ø) | fly: verb | -t'e (Ø) |
| Class II | -ya (Ø) | fog: high | tc'átan |
| Class III | -n'áí (Ø) | ice | tc'átr'aí |
| Class IV | -n'áí (Ø) | foggy | netc'agwahé |
| Class V | -ndak (1) | food | ci |
| Class VI | -t'ít | fool, deceive | -xe (±) |
| fall forward | -yó'; -yó'; -ðái | foot bone | ca |
| family | fámli | for | -endjít |
| far | nijít; nijít | forehead | -nínts'at |
| fast | xán | forest, timber | ts'iví |
| fat: noun | tc'ik'é | forty | fórdi |
| adj (person) | -t'áí | four | dq; for |
| adj (animal) | 'ak'i | fowl | daj |
| father | -ti' | fox | negq |
| father-in-law (wife's father) | -yeyan | Friday | drint'e dji'ónli' |
| fear | -dját (1); -'é | friend | -dja |
| feather | tsu | from | -ts'an |
| wing feather | tc'ít'e | freeze | -tán (1) |
| February | vegwá.ðat | Ft. Yukon Flats | gutcá; gwitcá |
| feed | -'a (±) | gall | -t'ó' |
| feet | -kwai' | gather | -dji |
| few | -tsál | give: general | -'e |
| verb | -tsal | Class I | -'áí, --, -'áí (±) |
| fight | -xw'áí (±); -g'áí; -xón (±) | Class III | -tcí, -tsit (±) |
| -ðat (±) | | give birth | -'i |
| find out | --, -tia | glacier | git |
| finish | -ndjik | glacier deposit (flour-like) | yetcalu' |
| fire | ak'an | go: one person | -há, -jí, -há (AVK) |
| campfire | kón'za' | -ha, -ji, -ha | (FTYK) |
| make a fire | -k'i (±) | several | -'o, -tc'íl, -'al (Ø) |
| firewood, logs | tra | imperative | xán |
| fish: noun | úuk | god | díti' k'egwá.ðat |
| verb | -'ín, --, -'ia | gold | ler'ádátsik |
| fish egg | áik'y' | good | adj -z'í |
| fish line | dj'át-t'á | verb | -z'í (Ø) |
| fish net | tc'ivia | goose: white fronted | détc'a |
| fish (small ocean) | trelúk | grandfather | -tsí |
| fish spear | tc'édaj | grandmother | -tsú |
| fish tail | úút'í | grandson: man speaker | -tcí |
| fish trap | det'á | woman speaker | -tcí |
| five | dji'ónli'; 'i'ákónli' | grass | t'ó |
| faí | | grasshopper | tc'ahasík |
| flat: grassy place | t'ótca'át | grassy open place | t'ókát |
| Ft. Yukon area | gutcá; gwitcá | gravel | kít'ak |
| flesh | -t'áí | green | -t'ó |

grey avé
 grind -ho
 grindstone kiníki?
 ground nán
 ground hog ts'é
 growl -yon (Ø)
 gull, Bonaparte's kiaṛṛáí
 gun dínk'e
 gunpowder dink'ékon
 hair -ye?
 hand -(nán)dli?
 hang: one object -tsit (‡)
 several objects -?il (1)
 hate -?e
 have -?i,--, -?ia (Ø) (FTYK)
 -?í (AVK)
 hawk tc'axwétcints'ik
 he jík
 head -ki?
 hear -tθ'ak, -k'í, -tθ'ák (Ø)
 heart -dri?
 heavy -dí
 verb -di (Ø)
 here dzṛ
 hers vé-
 hide, verb -?í (1)
 hill tai
 hip -nát'it
 hip region -tʔi?
 his (hers, its) vé-
 hit: with open hand --, -t'an
 (‡)
 with fist -got
 hold -tṛ (‡)
 hook (fish) djaṛ; tcal
 horn, antlers tc'ídji
 hornet tc'edzits'ík
 horse ṛṛitc'ó
 horsefly tʔ'u
 hot, warm (object) -ṛá
 verb (object) -ṛa (Ø)
 verb (person) -ṛa (Ø)
 hot spring tcṛninṛaxṛilṛáí
 house jé
 housepost djinṛú
 how níts'ṛ?
 hungry hángri
 hunt -ṛi, -ṛi, -ṛi (1)
 hurt hirt
 husband -kṛṛ?

I cí
 ice ṛú
 ice crystal snow tcaíya?
 ice on creek, thin tanya
 Indian dindjijú
 inside -jit
 intestine: large -ts'ik
 small -nindo'gu?
 iron kí; djitsí
 Isaac aízík
 island (of timber) ndjú
 its vé-
 jackfish iltín (FTYK), altín (AVK)
 ?altín (AVK)
 James jémis
 January tc'ándja
 jaw -nitθ'an
 John jan
 July vananets'antc'ṛjṛ
 jump -tʔ'ák
 June vanantc'íyo
 kick -ṛák
 kidney -tr'ó
 kill: (sing) --, -xwṛṛ (‡)
 (plural) --, -ṛat (‡)
 kindling wood ṛíc
 knee -got
 knife cí
 know -ndai,--, -ndai (d)
 lake ván
 lake fish neyán
 last year hecín; læsyir
 laugh: verb -dla
 leaf tc'át'an?
 leave a remainder -nṛ
 left side tʔ'ots'ṛṛ?
 leg -ṛwa?
 lesser yellowlegs dí
 license laisen
 lick -t'ok (d)
 lie on back -t'ái (d)
 lie down --, -?e, -?é (‡)
 -?ṛṛ
 lie: tell falsehood -ts'it (Ø)
 lift -ndji
 light -drí
 light, day drín
 lightweight -dzík (Ø)
 lips -(ndé)va?
 listen --, -k'í (‡)

liver -ðat
 live -tc'i; -tc'a
 logs tra
 long: adj -ndjá
 verb -ndja (Ø)
 long time níyuk
 loon dedzəɬ
 louse jí?
 lunch drindlán tc'ara'a
 lungs -driɬt'ok
 lynx nindjí
 macaroni géywa?
 maggot dəɬgú?
 make -tsi, { -tsəɬ } { -tsia } (ɬ)
 { -tsi } { -tca }
 (FTYK)
 -tsi, { -tsəɬ } { -tsia } (AVK)
 { -tsi } { -tca }
 mama mama
 man dindjí
 many -li; -lə
 March tc'ijinrí
 May gulurí
 maybe dúlə?; -dji; ja
 meadow gorəci; gwə.ci
 meat nilí
 milk -ma?
 mink tcidzú
 mocassins gwitrá
 Monday drintɬ'é
 money lerə
 month cenán
 moon cə
 moose: general dindjík
 young bull djaɬxók
 third largest didjí
 fourth largest djago
 young cow xadétsik
 more, much tc'andá
 morning van
 mosquito k'í; k'idjól (FTYK)
 tc'í; tc'idjól (AVK)
 moss niá?
 mother nə'ə
 mother-in-law (wife's
 mother) -ótr'i
 mountain dða
 mouse datsó
 mouth -yít
 mucus dindjítɬ'u?
 much gwintɬ'ó
 mud ɬuttc'ánt'at

muscle, upper thigh -tsia?
 muskrat dzán
 my cé-
 name: noun -óri?
 verb -ri (perf)
 narrow -ts'ík
 navel -djokit
 near nagón; -yəɬ
 neck -k'ó
 needle: small tcatsál
 for moose skin tc'aratθá
 for beads nagəɬtcatsál;
 nagəɬdjatsál; nagəɬθatsál
 needles: of tree ágat
 nephew -ejí
 nest tc'at'ó
 new -djit
 next year gwitɬ'e xaí
 niece -dju
 night tɔ
 nine vontsanegónzaizetín
 nipple -t'óktsi
 no akwa; nɔ; no?
 North uét'i?
 Northern flicker tcá
 Northern lights yekáí
 nose -nintsí
 not -kwa
 November divirí
 now djuk
 ocean tɔtɔcó
 October vadzairí
 old: adj -dját
 verb -djat (Ø)
 old man tc'ándja?
 old person dədji?; deətc'i
 on (top of) -kat
 once djiɬák; ?iɬák
 one djiɬák; ?iɬák
 one person djiɬé
 open -xal(ɬ); oben
 or or
 other way tc'itcuk
 otter tra
 our dí-
 pack -kai (ɬ)
 paddle: noun təɬtsál
 verb -kwa (Ø)
 papa baba
 paper lekévar
 pay -kot
 pencil detɬátəɬ

| | |
|--|-------------------------------------|
| penis -bo | right side cits'aí |
| boy's penis -dádzal | ripe díniri? |
| people gutc'in; gwitc'in | river han |
| person dindji | road, trail tǎi gwíndjík |
| piedmont varǎi | robin ǎu |
| piedmont creek (Arctic Village) varǎik'ǒ | root xai |
| pierce -tǒai | rope tǎ'a |
| pile -kwaí | rotten -já |
| pintail duck tc'irindjá | round -'é; -yo; -dlaí |
| pipe ts'edíki? | rub -t'aí |
| pitch djitǎ'u? | run -gál, -gál, -gál (1) (AVK) |
| play -'ín | -gal, -gal, -gal (FTYK) |
| plover ca'aí | saliva -rik |
| pocket tsét'it | salmon: king ǎuktǒ |
| pond lily kalt'ú | winter dog netǎí |
| porcupine ts'it | salmonberry nákal |
| portage ǒetá | salt lesíl |
| power -t'aí | sand nedǒák |
| pray -ndji | Saturday drintǎ'e ník'itík |
| ptarmigan, rock dak'ia | say -niǎ, -niǎ, -niǎ? (AVK) |
| pull -ndak | -ndja, -na, -ndja (FTYK) |
| push -di | scar cat t-nǎi |
| put: to handle Class I-'ǎi (ǎ) | scrape (with bone) -tǒ'ai |
| Class II -tin (ǎ) | scratch -trat |
| Class III -tcǎ (ǎ) | seagull vǎ |
| Class IV -kǎi (ǎ) | seal: animal nedjúk |
| Class V -tsu (ǎ) | see, look -'ín, -'iaǎ?, -'ia (ǎ) |
| Class VI -li | seeds vándi? |
| (customary forms) | sell tc'ókot átsi |
| Class I -'ak (ǒ) | semen -negwǎhǎi |
| Class II -tcǎ? | September dindjikrí |
| Class III -tc'i (ǎ) | seven ts'ats'ahets'inekwaǎi; seven |
| Class IV -kat (ǒ) | sew -kai (ǎ) |
| Class V -tca (ǎ) | shallow -gón |
| Class VI -ǎi (ǎ) | shaman vat'í'i; tc'unt'ahat'ínt'ai; |
| rabbit gé | daján |
| rain atsin | sharp -nín; djínín |
| verb -tsín | sheefish ǎ |
| rainbow cévia? | sheep diví |
| raven, crow détr'a? | shirt: light djiji'ík |
| red -tsík | heavy ts'at'ík |
| verb -tsik (ǒ) | shoes datcan gwitrá; tan gwitrá |
| return -dík, --, -dík (ǎ) | shoot (with): gun -k'é (ǎ) |
| revenge -tsǎi (ǎ) | arrow -dak |
| rib tsik | short: adj -gón |
| rice datsótrin?; rais | verb -gon (ǒ) |
| ride in canoe -kwa | shout, yell -rál |
| | shrew dlotǒá; dlogwatǒá |

| | | | |
|--------------------------|----------------------|---------------------|---------------------|
| sick, hurt | -ts'ík, -ts'ik | spoon | spuntsál; cpuntsál |
| side | -ts'áí | springtime | cín |
| sinew in wrist | -dzirétí'a? | spruce | ts'iví |
| sing | -dlí | squeeze | -di (∅) |
| sister: older | -edjí | squirrel: red | dlák |
| younger | -dju | ground | tθá |
| sister-in-law (wife's | | stab | -gót; -kok (‡) |
| sister) | -xwaí | stand: (moment.) | -ðat |
| sit | -di?, -di, -dia (∅) | (continuative) | -ðát |
| six | nik'itík | star | sá? |
| skin, hide | -ða?; nínða? | steep place | gwídlan |
| sky | jekát | step on | -?u |
| slave | u.ndjík | stick: of wood | datcán |
| sleep | -tcí (‡) | stick: verb | -t'an (∅) |
| slow | cu? | stomach | -vat |
| small: adj | -tsál | stone, rock | kí (FTYK) tci(AVK) |
| verb | -tsal | store | tc'arokotjé; |
| suffix | -jú | tc'aroxwejé | |
| smell | -tsin (‡) | straight | -?é; -?a? |
| smoke | ‡át | strangle | -ndjí |
| smooth | -xwaí; -táí | stump | datcán |
| sneeze | -?ó (‡) | sucker fish | dets'át |
| snow | já | suck | -k'u |
| wet | denátto; daántto | sugar | súgaj?; cúgaj? |
| verb | -ci | summer | cín |
| on spruce bough | déja? | sun | cé |
| drift | tsít | sunset | netc'a?a'ai |
| snowshoes | ?ai | Sunday | drínjit |
| soak | -tcá | swallow | -nde |
| soap | daíi? | sweat | tr'ínða |
| something | k'edjí | sweet: adj | -kaí |
| sometime | nak'ódji? | adj | -t'ai |
| someone's | dí- | verb | -t'ai (∅) |
| son: man speaker | -índji? | swell up, bulge | -li |
| woman speaker | -jú | swim: animal | -via? |
| son-in-law (man speaker) | | person | -vík |
| -tcíkaí? (woman | | table | voka'a |
| speaker) | -deniá | tail | tcítisi? |
| sore: noun | hatc'ák'it | take back | -djik |
| South | uéndji? | talk | -hi, -he?, -hia (∅) |
| sparrow | ne.k'ík | tape record | teibrigón |
| speak | -ndak, --, -ndak (‡) | tape recorder | teibrigordah |
| spear: verb | -got (∅) | teach: object sing. | -tan, -tín, |
| spider | gudedrí; gwidedrí | -tca (1) | |
| spill | -tcá; -k'ít; -t‡at | object plural | -tán |
| spit | -ré | each other | -tiq? |
| split | -t'áí (‡) | tea | ledí |
| spoiled | -t‡it | teapot | ledítiá |

| | |
|---------------------------------|----------------------------------|
| tear: verb -tc'á (Ø) | trousers θáɬ |
| tears: noun -nínđetçy | Tuesday drintɬ'é nekwaɬ |
| teeth -yo? | two, twice nekwaɬ |
| ten djiɬawatín; ?iɬawatín; | uncle: mother's brother |
| -tín | -e?í father's brother -tí |
| territory -nakát | upward k'ídak |
| testicles -yo? | urine íɬar |
| thank you masí?; masitcó; | vagina -tsan? |
| mací?; macitcó | vegetable gonjí |
| that:far away jík | veins -tsu? |
| right there yahá | very ɬiá |
| at that place ijik | vicinity -yaɬ |
| thaw -xwai (ɬ) | vomit -kwai; -djú |
| their gó- | wagon vitiégedjinedéda |
| them, they jiknaɬ | want, like -ðán, -ja?, -ðan (Ø) |
| there: far jík | want, do -?in |
| by you jík | wash -tcá (ɬ) |
| near you dzá; za; ó?at | water tçy; te- |
| they naxón | we dixón |
| thick: adj -tí | weave -tí'u |
| verb -tí | weasel utsaɬvín |
| thin didríl | Wednesday drintɬ'e tík |
| think -ðat | week drindetít |
| this dji | West uénin |
| three tík; trí | wet -trá (ɬ) |
| three times tík | what (thing) djídi |
| throw: Class I -tθak | what (did you say) de; déna; |
| Class II -xá (ɬ) | dénia; deńia; devainia |
| Class III -naɬ (ɬ) | when ndjindji? |
| Class IV -naɬ (ɬ) | where nídjuk |
| Class V -t'ak (d) | where -dji |
| Class VI -tɬit (ɬ) | whiskey kóntçy |
| -xi | whisper -dzit |
| thunder netán | white -gáɬ |
| Thursday drintɬ'edó | whitefish, round xáttai |
| tie: verb -tca (ɬ) | whiteman vanotɬít; ódjit |
| tire: verb -ndak | who dju; djúde |
| Titus taitas | why djai; djahai |
| to: the place -?an | wide -tcá |
| tobacco ts'édit | willow, small k'aitɬ'ák |
| toboggan tcavaɬ | willows in small group tr'aɬt'ók |
| tomorrow níka; níke | willow grouse tc'atál |
| tongue -kia? (FTYK) -tca? (AVK) | Wilson's snipe jeyá |
| toward dza | wind ?atr'ai |
| towel docó | wing tc'it'e |
| town kwaík'it | winter xai |
| trail tɬi | with: accompany dji? |
| trap fish -tin (ɬ) | instrumental ha |
| tree datcán | wolf jó |

wolverine nítra
 woman tr'índja
 woman, wife -ʔat
 wood datcán
 work -tr'ít
 worm gǘʔ; gǘ
 wrap up -t'ó
 yawn -tse (±)
 year xaí
 yell, shout -ɾál

yellow, brown -tsó; -tθó
 yeah yea
 yes aḥaʔ
 yesterday k'et'ai
 you: sing. nán
 plural naxón
 young: adj k'édjit
 verb -ða
 your: sing. né-
 plural nohó-

VI. Footnotes

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2. Kutchin spellings follow Sapir's notes except the following: for dɾ, tɾ, and tɾ' I have dr, tr, and tr'; for ɕ I have c; for ɣ, k̲, k̲', and x̲ before [+palatal] I have g, k, k', and x.

3. See III.3 for further discussion of phonological conditions.

4. Forms are given throughout this paper in the order of imperfective, perfective and future. (A single form, unless otherwise marked, is given in the perfective.) Two speakers gave both forms (-tsaḭ and -tsi) remaining consistent with themselves only in tone.

5. [ñ] precedes [ia] in AVK and may be considered phonetically conditioned.

6. Recall the difficulties in the synchronic analysis of these fricatives. I have chosen the voiceless alternant as the underlying form.

7. There is some variability in the presence of initial glottal stops.

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