GALICE ATHAPASKAN: A GRAMMATICAL SKETCH

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1. Galice Athapaskan was spoken in southwestern Oregon on Galice Creek, a branch of the upper Rogue River. The language is now extinct; the last known speaker, Hoxie Simmons, died a few years ago. Our record of Galice comes mainly from a large body of texts (as yet unpublished) collected by Melville Jacobs in 1933–34. With characteristic kindness, Jacobs gave me access to these texts and in 1956, I spent about two months with Hoxie Simmons and added to the corpus a good deal of lexical and grammatical data. The present sketch is based on materials from Jacobs' texts and on the additional materials collected by me in 1956.

Galice belongs to the Pacific division of the Athapaskan stock. Within that group, Galice is a member of the Oregon division.[1]

2. Galice has the following stops: voiceless lenis b, d, g, gʷ, and ʔ; voiceless fortis (with slight aspiration) t, k, and kʷ; and glottalized t', k', and k'ʷ. The one bilabial is b; d, t, and t' are apico-alveolars; g, k, and k', velars; gʷ, kʷ, and k'ʷ, labialized velars; and ʔ is faucal.

All the stops occur as stem initials, and all except t' may begin a prefix. Only d, g, and ʔ may terminate a stem. In this position d, g, and ʔ tend to be unreleased.

There are six affricates: voiceless lenis dz and dž, voiceless fortis tš, and glottalized ts', tš', and t'ł. All occur as stem initials but only ts', tš, and tš' may begin a prefix. None are found as stem finals.

Nasal stops, both voiced, are m (bilabial) and n (alveolar). Both occur as stem and prefix initials but only n is found as a stem final.

Galice has one spirant, faucal h; three sibilants, alveolar s and z, and blade-alveolar š; and two laterals, spiranted alveolar ł and voiced alveolar l. All of these consonants occur as prefix initials, all except z and h as stem initials, and all except z as stem finals.

Glides: voiceless bilabial W, voiced bilabial w, and voiced palatal y. All occur as stem and prefix initials; none occur in the stem-final position.

There are a number of consonant clusters; in all of these, one member is the glottal stop. The cluster ʔw is the only one to begin a stem; the rest, mʔ, nʔ, ʔs, ʔš, and ʔł occur only as stem finals.

Vowels: high front i ([ɪ] except in clusters where it is [i]), mid-front e ([ɛ] in all positions), low central or back a (the variation appears to be free), and high back rounded o (lowered [u] except in clusters where it is more like a raised [o]).

Vowel clusters: ii, ee, aa, oo, ei, ea, ai, ao, and oi. The identical clusters (ii, ee, aa, oo) are pronounced as long vowels; /ee/, however, varies freely between [ɛɛ] and [ɛi], the latter quite distinct phonetically from the cluster [ɛi]. In the remaining clusters the vowels have approximately equal sonority.

Nasalization may accompany all vowels and identical vowel clusters except e and ee.

Other vowel clusters are apparently never accompanied by nasalization.

3. The morphemes of Galice fall into four major classes: stems, prefixes, postpositions, and enclitics. Stems generally begin with a consonant (there are a few with vocalic initials) and may terminate in a vowel, a consonant, or a consonant cluster. The stem syllabic is a single vowel or a cluster of two vowels. Following is a sampling of the more common stem shapes

ʔee *grave*, ʔag *fog*, banʔ *flies (insects)*, -dadee *hate (someone)*, -badeʔ *house*, -baiʔ *stomach*, -ʔaaʔł *chew* (perfective stem), -ʔǫǫdee *brother's son*, -baageʔ *wife of deceased brother*. Some exceptional stem types are represented by -ʔwaa *lie log-like*, šdal *wood rat*, -daai[2] *eye*, and -dast'eʔ *body*.

Prefixes are of two varieties: derivational prefixes and grammatical prefixes. The former variety, when combined with a stem, makes up a word base. Thus, the verb base da- ... -ʔaš, -ʔąą, -ʔał *bring a round object back* contains the derivational prefix da- *back* and the stem -ʔaš, -ʔąą, -ʔał *handle a round object*.[3] Nearly all derivational prefixes have the shapes cv: e.g., ts'e- *(take it) out*.

Grammatical prefixes (e.g. prefixes denoting pronouns, number, aspect, etc.) are fewer in number than derivationals but exhibit a greater variety of shapes. Illustrations will be found in the discussions to follow.

Postpositions always occur in combination with a pronominal prefix which functions as the goal of the postposition. Examples b-aa- *for his benefit*, š-gan- *(talk) about me*, ša-ł- *in company with me*, bi-ts'anʔ- *to, toward him*. Enclitics have shapes very like those of stems: -tee, future tense, -k'eh *like, similar to*, -adeʔ *if*.

Words in Galice may consist of a single free base or of a base combined with one or more grammatical prefixes. Postpositions and enclitics may be regarded as semi-words—that is, as forms, like the articles and prepositions of English that rarely or never occur independently but nearly always in combination with another (and free) form. At the opposite extreme are compounds: forms made up of two or more words combined (often in an altered shape) into a single unit.

There are three major word classes in Galice: nouns, verbs, and particles. Nouns are subject to only one inflection, the possessive. Verbs are inflected for person and number only (neuter verbs) or for person, number, and aspect (active and passive verbs). Particles—which include forms that function as adverbs, adjectives, numerals, and connectives—are not inflected at all.

4. The possessive of the noun is formed by adding a pronoun prefix to the noun base: laadeʔ *salmon basket*, š-laadeʔ *my salmon basket*. The prefixes of the possessive paradigm are given in Table I.

Examples are:

š-: š-ts'eh *my sinew*; š-aasee *my cousin*; š-ịịsas *my nose*.

n-,d-: n-ts'eh *your sinew*; d-aasee *your cousin*; n-ịịsas *your nose*.

wa-, b-, m-: wa-ts'eh *his sinew*; b-aasee *his cousin*; m-ịịsas *his nose*. 'His' in these examples means 'his, her, or its'. In some nouns, the 3rd. p. prefix wa- alternates with a zero prefix and the shape of the base is altered: wa-gaaneʔ or gʷaaneʔ *his arm*, wa-ganyoʔ or gʷanyoʔ *his claw*, wa-kąąk'aiʔ or kʷąąk'aiʔ *his rib*, wa-keʔ or kʷeʔ *his foot, his tracks*, wa-k'eeyoo or k'ʷeeyoo *his brother-in-law*, wa-ʔah or ʔwah *his wife*. The altered bases also occur in the 3rd. p. pl. together with the prefix: e.g., hoo-gʷaaneʔ *their arm*.

doo-, daw-, naw-: doo-ts'eh *our, your, sinew*; daw-aasee *our, your, cousin*; naw-ịịsas *our, your, nose*.

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[2] In sequences of three vowels, as in this example, the last vowel is syllabic; thus, daa-i (the hyphen separates syllables).

[3] Bases frequently have more than one stem allomorph. In the examples cited here and elsewhere, the first allomorph (of verb bases) is used in the imperfective paradigm, the second in the perfective, and the third in the progressive.

TABLE I

Person	Stems beginning with:		
	Consonant	Oral vowel	Nasal vowel
Sg. 1	š-	š-	š-
Sg. 2	n-	d-	n-
Sg. 3	wa-	b-	m-
Pl. 1, 2	doo-	daw-	haw-
Pl. 3	hoo-	hoob-	hoom-
Indef. A	tš'a-	—	—
Indef. B	Wa-	—	—
Recip.	ł-	—	—

hoo-, hoob-, hoom-: hoo-ts'eh *their sinew*; hoob-aasee *their cousin*; hoom-ịịsas *their nose*.

tš'a- is apparently an indefinite pronoun that refers to some animal or to animals in general: tš'a-de? (*animals'*) *horns*, tš'a-ni? *a deerhead mask used in ceremonies* (literally: *some* [*animal's*] *face*), tš'a-geese? *eggs* (*implicitly of animals*), tš'a-ke? (*animal's*) *foot, tracks of* (*animals*), tš'a-wa? *body hair* (*of animals*), tš'a-sa?ł *liver* (*of animals*), tš'a-san? *meat, especially venison* (literally: [*animals'*] *flesh*), tš'a-sąą *brains* (*of an animal*).

Wa- is also an indefinite pronoun but one that appears to refer to humans: Wa-ta? *someone's father*, Wa-dast'e? *someone's body*, Wa-ke? *someone's foot, tracks* (cf. tš'a-ke?, above), Wa-saane? *someone's excrement*, Wa-sąą *someone's brains* (cf. tš'a-sąą, above).

ł-: ł-k'eeyoo *each other's brother-in-law*.

5. Noun bases may consist of a single stem morpheme (simple bases), an apparent, but unanalyzable, sequence of morphemes (complex bases), a verb form or verbal phrase (nominalized verbs), and compounds. The four types are briefly illustrated below.

Simple nouns: ban? *flies* (*insects*), bah *enemy or hostile warriors*, dał *blood*, too *water* (*in nature*), river, t'aas *cottonwood tree*, goo *worm, maggot*, kai *winter, year*. A number of simple nouns appear only in the possessive; the base is not a free form: -ii?ee *son*,

-?ah *wife*, -bai? *stomach*, -da? *mouth*, -ni? *face*. Nearly all the noun bases in this category denote kin terms or body parts (of men, animals, and plants).

Complex nouns: in these the last syllable is assumed to be a stem. Some complex nouns, however, may represent nominalized verbs (the form no longer used as a verb) or compounds made up of stems no longer used independently. Examples are: dzišł?ee *sweat house*, hadal?aa *warrior*, kašdabaa *morning*, dalbai *knife*, t'aamiš *hat*, taaldaš *Galice Indians*, daštšoh *grouse*, desdei *man*, tšanti? *flint*. Complex nouns denoting kin terms and body parts appear only in the possessive: -dast'e? *body*, -desade? *husband*, -kast'ei? *lungs*.

Nominalized verbs: only a few of these are found in my data. Examples are: tš'aniłdaš *round dance* (= *he dances the round dance*), šeekee taa?ał?a? *ceremonial bathing of a newborn child* (= *he puts a child in the water*), taadnił *soup or mush, especially acorn mush* (= [*a soup*] *is made*), daaWadkaa *war* (= *fighting goes on*). In some nominalized verbs, there is a relative enclitic: tšabaayo yałts'ǫǫsa *humming bird* (tšabaayo *flowers*; yałts'ǫǫs *he sucks them*; -a, *relative one who*).

Compounds are combinations of two (rarely, three) noun bases of any of the categories already described. Examples are: man?-da? *smoke hole* (= *house* [*its*] *mouth*), nan?dei-si?, *place* (*in the east* ?) *where all peoples originated* (= *earth* [*its*] *head*), t'łoh-dadei *Umpqua Indians* (= *grass people*), łeeadnii-dadei, *tribal name* (łeeadnii *where waters flow together* [a nominalized verb] plus dadei *people*).

The bases of many nouns (mainly the simple nouns) have two shapes, one used in the absolute form, the other in the possessive. The alternations are not predictable. Examples are: man? *house*, š-bade? *my house*; st'e? *blanket*, š-ast'e? *my blanket*; ts'ad *money*, š-ts'ade? *my money*; šan *song*, wa-šade? *his song*.

Number is not ordinarily marked in the noun. A few nouns, all of which are kin

terms, have a plural, marked by the enclitics -yoo or -kee: š-aasee *my cousin*, š-aasee-yoo *my cousins*; biiʔee *his son*, b-iiʔee-kee *his sons*; š-k'eeyoo *my brother-in-law*, š-k'eeyoo-yoo *my brothers-in-law*.

6. A Galice verb form is made up of a stem preceded by one or more grammatical prefixes and zero, one or more derivational prefixes. The order of the prefixes relative to the stem is as follows.

Positions 1 and 2 are filled, if at all, by a pronoun prefix plus a postposition; neither occurs without the other.

Position 3 is filled, if at all, by one or more derivational prefixes.

Position 4 is filled only in the third person plural, which is formed by adding hi- (or ha-) to the third singular.

Position 5 may, in intransitive verbs, be filled by the pronominal ho-, which refers to a place or time. In transitive verbs, an object pronoun prefix apparently fills this position. Since there are no verbs in the corpus which include both ho- and an object pronoun, the order of these relative to each other cannot be determined.

Position 6 is filled, if at all, by a derivational prefix. A verb base may have no derivational prefixes, one or more in position 3, one in position 6, or one each in positions 3 and 6.

Position 7 is filled by an aspectival prefix. If the position is not filled, the verb form belongs to the zero-imperfective.

Position 8 is filled by a subject pronoun prefix, other than the ho- of position 5. If position 8 is not filled, the verb form is in the third person singular or plural.

Position 9 is filled by one of the classifiers ł-, l-, or d-. Verbs lacking a prefix in this position belong to the zero-class.

Position 10 is filled by a stem allomorph.

7. Postpositions always occur in combination with a pronominal prefix, although, as noted in Table II, the prefix may be a zero morph. It is also evident from Table

TABLE II

Person	A	B	C	D
Sg. 1	š-	ša-	š-	š-
Sg. 2	n-	da-	d-	n-
Sg. 3	zero	ba-	b-	m-
Sg. 3a	zero	ya-	y-	y-
Pl. 1, 2	doo-	dawa-	daw-	naw-
Pl. 3	hoo-	hooba-	hoo-b-	hoo-m-
Pl. 3a	hoo-	hoo-ya-	hoo-y-	hoo-y-
Reflexive	da-	—	—	—
Reciprocal	ł-	ła-	—	—
Indefinite	—	—	tš'	—

II that most of these prefixes are like those employed with nouns and those (discussed in **8**) that appear in position 5 of the verb.

Each of the pronominal prefixes listed in Table II has two or more allomorphs. The allomorphs listed in column A occur before postpositions that have the shape cv or cvc, those in column B before the postposition ł- *in company with*, those in column C before postpositions that have the shape v or vv, and those in column D before postpositions that are made up of nasalized vowels. Where a dash occurs, there is no evidence of the prefix concerned occurring in the indicated position.

Examples are:

Sg. 1: š-tš'anʔ-yasšił *he shouted at (toward) me*, ša-ł-Waldad *he told a story to me*, š-aa-lał *he dreams about me*, š-ąą-lał *you dream about me*.

Sg. 2: n-tš'anʔ-yasšił *he shouted at you*, da-ł-Waldad *he told a story to you*, d-aa-šlał *I dream about you*, n-ęę-lsįʔ *he is related to you*.

Sg. 3 is used when the subject of the verb is other than third person, sg. 3a when the subject of the verb is also third person. Under condition A, this distinction is not maintained: tš'an-daadašyaš *I go in to him*, tš'anʔ-daniiyaš *you go in to him*, tš'anʔ-daadaš *he goes in to him*.

Under condition B: ba-ł-Wašdad *I told a story to him*, ya-ł-Waldad *he told a story to him*.

Conditions C, D: b-aa-šlał *I dream about him*, m-ąą-lał *you dream about him*, y-aa-lał

he dreams about him; b-aa-saŝlaɫ *I have dreamed about him*, m-aa-sįį-laɫ *you have dreamed about him* (m- by reason of the nasalized vowel of the following prefix), y-aa-s-laɫ *he has dreamed about him*.

Pl. 1, 2: doo-tš'anʔ-yasiŝŝiɫ *I shouted at you (pl.)*, doo-tš'anʔ-yasįįŝiɫ *you shouted at us*, dawa-ɫ-Waldad *he told a story to us, you (pl.)*, daw-aa-laɫ *he dreams about us, you (pl.)*, naw-ąą-laɫ *you dream about us*.

Pl. 3, 3a: These prefixes are obviously combinations of hoo-, plural, and the sg. 3, 3a prefixes: hoo-ts'anʔ-daadaŝyas *I go in to them*, hoo-tš'anʔ-daadaŝ *he goes in to them*; hoo-ba-ɫ-Waŝdad *I tell a story to them*, hoo-ya-ɫ-Waldad *he told a story to them*; hoo-b-aa-ŝlaɫ *I dream about them*, hoo-y-aa-laɫ *he dreams about them*, hoo-m-ąąlaɫ *you dream about them*, hoo-y-ee-lsįʔ *he is related to them*.

Reflexive: here we find the prefix only under condition A: da-tš'anʔ-dadaat'aa *he talks to himself*.

Reciprocal: found only under conditions A and B: ɫ-gaa-ts'odnii *they give help to each other*, ɫa-ɫ-Waldad *they tell stories to each other*.

Indefinite: found only under condition C: tš'-aa-saŝlaɫ *I dream about someone*.

8. The object prefixes are listed in Table III; it will be noted that they differ in shape depending on what morphemes follow and/or precede them. There are four possible positions: A, before a prefix consisting of a consonant alone, or before a stem initial consonant; B, before a prefix cv-, or between two prefixes cv-; C, before a prefix beginning with an oral vowel; D, before a prefix beginning with a nasal vowel, or one which consists of nasality alone.

Examples are:

Sg. 1 (prefixes are separated from each other and the stem by hyphens): de-ŝa-ɫ-ʔįį *he sees me*, ŝa-ɫ-tał *he kicks me*, te-ŝa-ʔaŝ *he leaves me*, ti-š-gįį-ʔąą *he has left me*, daa-š-oʔo-l-bee *you (pl.) bathe me*, daa-šį-ɫ-bee *you bathe me* (the nasalization of šį- is the mark of the sg. 2 subject prefix; see 10).

Sg. 2: da-ɫ-tał *he kicks you*, de-da-ɫ-ʔįį *he sees you*, te-da-ʔaŝ *he leaves you*, ti-n-gįį-ʔąą *he has left you*, daa-d-i-l-bee *we bathe you*.

Sg. 3: When the subject of the verb is other than third person, the third person object is unmarked: de-š-ɫ-ʔįį *I see him*, nį-ɫ-ʔįį *you see him*, di-i-l-ʔįį *we see him*, d-oʔo-l-ʔįį *you (pl.) see him*.

Sg. 3a (Prefixes for the third person object when the subject is also third person): ya-ɫ-tał *he kicks him*, de-ya-ɫ-ʔįį *he sees him*. Under condition B, the 3a prefix is zero when it begins the verb and is followed by a prefix of position 6: ta-ɫ-bas *he rolls it*. When, however, the 3a prefix is preceded by a prefix of position 3 and followed by a cv- prefix, the 3a prefix is i-: na-i-nį-ɫ-ʔaʔ *he has brought him back*, ha-i-te-s-laa *he has begun to win it*. The 3a prefix is y- when followed by a vowel: ti-y-įį-ʔąą *he has left him*.

Pl. 1, 2 are expressed by the same morpheme. dawa-š-tał *I kick you (pl.)*, dee-dawa-ɫ-ʔįį *he looks at us, you (pl.)*, daa-doo-s-i-l-beʔ *we have bathed you (pl.)*, te-daw-i-t'aš *we leave you (pl.)*, te-naw-įį-ʔąą *he has left us, you (pl.)*.

Reflexive: nii-da-š-l-t'as *I cut myself*, nii-dį-l-t'as *you cut yourself*, nii-di-i-l-t'as *we cut ourselves*, nii-d-oʔo-l-t'as *you (pl.) cut yourselves*.

Reciprocal: kaa-ɫa-l-yiš *they ambush each other*, kaa-ɫ-i-l-yiš *we ambush each other*.

Indefinite: tš'a-š-ʔaɫ *I chew something*, tš'a-ʔaɫ *he chews something*, tš'a-da-gaŝ *he*

TABLE III

OBJECT PRONOUN PREFIXES

Position:	A	B	C	D
Sg. 1	ŝa-	š-	š-	ŝi-
Sg. 2	da-	n-	d-	—
Sg. 3	zero	zero	zero	zero
Sg. 3a	ya-	zero/i-	y-	—
Pl. 1, 2	dawa-	doo-	daw-	naw-
Reflexive	da-	—	di-/d-	di-
Reciprocal	ɫa-	—	ɫ-	—
Indefinite	tš'a-	tš'a-	tš'-	tš'i-, tš'ą-

puts some burden down, tš'-i-t'ał *we chew something*. When tš'a- precedes the nasalization that marks the second person singular, it alters to tš'i-: tš'į-ʔał *you chew things*. Before a nasalized vowel tš'a- becomes tš'ą-: tš'ąą-į-beł *he has trapped something* (the lengthening of the vowel of tš'ą- is explained in **11**).

9. Verbs are grouped into four classes which are named as follows: zero-class (no prefix in position 9), ł-class (ł- or l- in position 9), d-class (d- in position 9), and l-class (l- in position 9). Examples follow:

Zero-class (all examples are cited in the sg. 3rd of the imperfective paradigm): daa-gʷaʔs *he crawls around*, ta-bas *it rolls*, yaa-ya-ʔaš *he picks it (a round object) up*, daa-ya-gee *he carries it (a burden) around*.

ł-class (l- occurs in the first and second persons pl., ł- in all other persons): daš-ł-bad *I boil it*, nį-ł-bad *you boil it*, da-ł-bad *he boils it*, ha-da-ł-bad *they boil it*, but, d-i-l-bad *we boil it* and d-oʔo-l-bad *you (pl.) boil it*. Some ł-class verbs are transitives derived from zero-class intransitives: cf. ta-bas *it rolls* and ta-ł-bas *he rolls it*; da-man *it is full* and da-ł-man *he fills it*. However, not all transitives have the ł-classifier and some ł-class verbs are intransitive: ha-de-ł-ts'eʔ *they sit*, ya-ya-ł-gas *they fly away*, daʔ-de-ł-kaʔ *it is cloudy*.

d-class: da-d-nii *he makes a noise*, daa-da-d-gaš *he peers in*, ta-d-nii *he drinks it*, da-i-da-d-gaš *he carries it (a burden) back*. All passives derived from zero-class transitives have the d- classifier: cf. k'ʷe-ya-sad *he breaks it* with k'ʷe-d-sad *it is being broken* and taa-ya-nił *he makes an (acorn) soup* with taa-d-nił *an (acorn) soup is made*. It is clear, however, from the examples cited above that d-class verbs may also be both transitive and intransitive.

l-class verbs: daa-da-l-niš *he works*, yaa-l-t'amʔ *he jumps*, ya-l-kad *he swallows it*. All passives derived from ł-class transitives have the l-classifier: cf. da-i-ł-man *he fills it* and da-l-man *it is being filled*; tš'a-s-ł-yoł *he has*

blown things away and tš'a-s-l-yoł *things have been blow away*. As the preceding examples demonstrate, however, l-class verbs, like d-class verbs, may also be intransitive and transitive.

10. There are four subject pronoun prefixes in position 8: one each for the first and second persons singular and plural. The third person is unmarked. These prefixes, together with the third person plural (marked in position 4) and the impersonal (marked in position 5) are listed and illustrated below.

Sg. 1, š- in all occurrences: taa-š-baš *I wade*, da-š-ł-bad *I boil it*, ta-š-d-naa *I drink it*, ts'e-š-l-dad *I run outside*.

Sg. 2 is marked by nasalization of the vowel of the preceding prefix. In the case of some prefixes, the consonant and vowel may also be altered. Examples are: tąą-baš *you wade*, nį-ł-bad *you boil it* (nį- < da- plus nasalization), tą-d-naa *you drink it*, ts'į-l-dad *you run outside* (ts'į- < ts'e- plus nasalization).

Sg. 3, unmarked: taa-baš *he wades*, da-ł-bad *he boils it*, ta-d-naa *he drinks it*, ts'e-l-dad *he runs outside*.

Pl. 1, id- (in zero-class verbs), i- (in ł-, d-, and l- class verbs): ta-id-baš *we wade*, d-i-l-bad *we boil it*, ta-i-d-naa *we drink it*, ts'-i-l-dad *we run outside*.

Pl. 2, oʔo- (when preceded by any aspectival prefix or by a prefix of position 6), ʔa-, ʔe-, and ʔo- (when preceded, respectively, by position 3 prefixes that end with the vowels a, e, and o): d-oʔo-yan *you (pl.) sing*, taa-ʔa-baš *you (pl.) wade*, ts'e-ʔe-l-dad *you (pl.) run outside*, do-ʔo-l-dad *you (pl.) run against someone*.

Pl. 3, like the sg. 3, is unmarked in position 8. It has, however, a prefix ha- (for intransitive verbs) and hii- (for transitive verbs). This prefix appears in position 4: see-ha-dał *they (pl.) go up (over a ridge)*, hii-da-ł-bad *they boil it*.

The impersonal prefix ho- (position 5):

ho-s-l-ʔįʔ *it becomes daylight*, hǫ-sał (*weather*) *is hot* (hǫ < ho- plus ni- of position 6).

11. There are seven verb paradigms in Galice: zero-imperfective, ʔa- imperfective, n- imperfective, n- perfective, g- perfective, s- perfective, and progressive. No verb base is conjugated in all seven. Active and passive verb bases are conjugated in three paradigms: one of the three imperfectives, one of the three perfectives, and the progressive. The choice of imperfective and perfective paradigms is in part governed by the derivational prefixes present in the verb base but is unpredictable for verb bases that include no derivational prefixes. Neuter verb bases are conjugated in only one paradigm: this may be the zero-imperfective or one of the three perfective paradigms, but the choice is in general unpredictable.

The zero-imperfective has no marker in position 8 and is employed only for verb bases that contain at least one derivational prefix. Examples, verb base ts'e- ... -l-dad *run outside*: sg. 1. ts'e-š-l-dad, sg. 2. ts'į-l-dad, sg. 3. ts'e-l-dad, pl. 1. ts'-i-l-dad, pl. 2. ts'e-ʔe-l-dad.

The ʔa- imperfective has the prefix ʔa-, i-, or ʔ- in position 8. It is employed when the verb base lacks derivational prefixes. Example, verb base -seh *cry, weep*: sg. 1. ʔa-š-seh, sg. 2. ʔį-seh, sg. 3. ʔa-seh, pl. 1. ʔ-id-seh, pl. 2. ʔ-oʔo-seh. In transitive verb bases the ʔa- imperfective prefix, in verb forms requiring an object pronoun prefix, is replaced by the pronominal prefix. Example, verb base -yąą *eat* (*it*): sg. 1. ʔa-š-yąą, sg. 2. ʔį-yąą, pl. 1. ʔ-id-yąą, pl. 2. ʔ-oʔo-yąą (in all the preceding forms, the 3rd p. pronoun object is zero; see §8), sg. 3, ya-yąą (with pronoun object prefix ya-).

The n- imperfective has the prefix da-, ni-, or d- in position 8, and is employed only when the verb base has at least one derivational prefix. Example, verb base tš'oo- ... -tah *shoot at* (*a target*): sg. 1. tš'oo-da-š-tah, sg. 2. tš'ǫǫ-nį-tah, sg. 3. tš'oo-da-tah, pl. 1. tš'oo-d-id-tah, pl. 2. tš'oo-d-oʔo-tah.

The n- perfective has the prefix di-, ni-, nį-, or d- in position 8. Example, verb base doo- (or noo-) ... -ł- ʔaʔ *put* (*a round object*) *down*: sg. 1. doo-di-š-ł-ʔaʔ, sg. 2. noo-nį-ł-ʔaʔ, sg. 3. no-i-nį-ł-ʔaʔ, pl. 1. doo-d-i-l-ʔaʔ, pl. 2. doo-d-oʔo-l-ʔaʔ.

The g- perfective, when the base contains no derivational prefixes, has the prefix gi-, gį- or g-. Example, verb base -ł-baš *shake* (*it*): sg. 1. gi-š-ł-baš, sg. 2. gį-ł-baš, sg. 3. gį-ł-baš, pl. 1. g-i-l-baš, pl. 2. g-oʔo-l-baš.

When the base has a derivational prefix, the prefix for the g-perfective is reduced to i-, į-, or zero, and the vowel of the derivational prefix is lengthened. Example, verb base da- ... -bad *crouch down*: sg. 1. daa-i-šbad (cf. sg. 1. ipf. da-š-bad), sg. 2. dąą-į-bad, sg. 3. dąą-į-bad, pl. 1. daa-id-bad, pl. 2. daa-ʔa-bad. (The only sign of the g-pf. in pl. 1. and 2 is the lengthening of the vowel of the derivational prefix; cf. pl. 1. ipf. d-id-bad and pl. 2. ipf. d-oʔo-bad). If, in a transitive verb form, an object pronoun prefix occurs, the g- perfective prefix assumes its full shape; e.g., cf. daa-i-š-ł-manʔ *I have filled it up* with da-i-gį-ł-manʔ *he has filled it up*.

The s- perfective, when the verb base lacks derivational prefixes, has the prefix sa-, si-, or s-. Example, verb base -tįį (*one or a few*) *are lying* (*down*): sg. 1. sa-š-tįį, sg. 2. sį-tįį, sg. 3. s-tįį, pl. 1. s-id-tįį; pl. 2. s-oʔo-tįį.

When the verb base has one or more derivational prefixes, the s- perfective prefix may be as noted above or more often, have the shapes zi-, s-, or z-. Example, verb base O-aa- ... -l-daoʔ *forget about* (*it*) (O = any object pronoun of position 1): sg.. 1 b-aa-sa-š-l-daoʔ, sg. 2. m-ąą-sį-l-daoʔ, sg. 3. y-aa-s-l-daoʔ, pl. 1. b-aa-s-i-l-daoʔ, pl. 2. b-aa-s-oʔo-l-daoʔ. Verb base naa- ... -dah *arise, get up*: sg. 1. naa-zi-š-dah, nąą-zį-dah, sg. 3. naa-s-dah, pl. 1. naa-z-id-dah, pl. 2. naa-z-oʔo-dah.

The progressive, when the verb base lacks a derivational prefix, has the prefix ga-,

gi-, or g-. Example, verb base -yił *grow*:
sg. 1. ga-š-yił, sg. 2. gi̜-yił, sg. 3. ga-yił,
pl. 1. g-id-yił, pl. 2. g-oʔo-yił.

When the verb base has a derivational
prefix, the progressive prefix reduces to a-,
i-, or zero, and the vowel of the derivational
prefix is lengthened. Example, verb base
da- (or na-) ... -dał *return, come back*: sg. 1.
daa-a-š-dał, sg. 2. na̜a̜-i̜-dał, sg. 3. daa-a-
dał, pl. 1. daa-id-dał, pl. 2. daa-ʔa-dał.