

26 Chukchee (Paleo-Siberian)

IRINA A. MURAVYOVA

1 Introduction

Chukchee is a Paleo-Siberian language of the Chukchee–Kamchatkan stock, spoken by about 12,000 people living in the Far East of Russia, on the Chukotka peninsula and in some adjacent regions. Chukchee is considered a synthetic agglutinative language of the prefixal-suffixal type (Skorik 1961: 81). Chukchee has the following parts of speech: nouns, participles, adjectives, pronouns, numerals, verbs, adverbs, and also postpositions, particles, conjunctions and interjections. The syntactic and semantic functions of the major parts of speech are expressed chiefly by bound affixes (suffixes, prefixes, circumfixes), sometimes by derivational affixes (e.g. adjectivization with nouns), more rarely by analytic constructions (with nominal postpositions and auxiliary verbs). A special means of expressing grammatical functions is incorporation. (See appendix at end of chapter for abbreviations used only in this chapter.)

Chukchee words can reach considerable length. The root generally occupies a position in the middle of the word. The length of Chukchee words is increased by incorporation of a variety of types of element (see Skorik 1961, 1977):

ga-ŋəron-wetʔat-arma-qaa-ta
COM-three-butt-strong-reindeer-COM
'with three butting strong reindeer'.

Chukchee has a great variety of phonological and morphological processes that change considerably the shape of the original morphs. In order to understand the examples given below, the following changes should be taken into account (for more detailed rules see Bogoras 1922, Skorik 1961, Kenstowicz 1979):

- (1) Numerous consonant assimilations and dissimilations.
- (2) Vowel harmony. When *i, u, e* (recessive vowels) come together in one word with *e, o, a* (dominant vowels), the recessive vowels change into the corresponding dominant ones: *ga-reqoka-ma* (<*ga-riquke-ma*) 'with a polar fox'. Some morphemes having only *ə* (or no vowels at all) also cause this change, cf. *reqoka-lgən* 'polar fox (abs. sg.)'; we will mark such morphemes with an asterisk: *-lgən(*)*.
- (3) Epenthetic processes. An epenthetic schwa is introduced to break up inadmissible consonant clusters: *n-ə-wucq-ə-qin* (<*n-wucq-qin*) 'dark' (but with other morphemes *ə* may be a part of the original morph). In word forms we will attach the epenthetic *ə* to the previous morph or to a one-consonant morph: *nə-wucqə-qin*.
- (4) Deletion processes. Most noun stems and some nominal affixes lose the final vowel in word-final position. We will write such vowels in brackets: *-in(e)*, 'adjectival suffix'. When two vowels come together, one of them is elided (except in reduplications and incorporatives): *g-iw-lin* (<*ge-iw-lin*) '/he/ said'.

2 Inflection

2.1 Nouns

Nouns are usually inflected for case and number, and in some situations (see section 2.1.2) for person and number. Nouns are not inflected when they are incorporated (see section 2.1.3).

2.1.1 Case-number marking on nouns Chukchee has two numbers (sg., pl.), and nine principal cases: absolutive (nominative), ergative (ergative-instrumental), locative, dative (dative-directional), ablative, orientative, comitative-1, comitative-2 (or 'accompanying' case) and designative. The absolutive serves to express the grammatical subject of an intransitive verb and the grammatical object of a transitive verb. The ergative expresses the subject of a transitive verb and the instrument of an action. The orientative is used to express an object regarded as a point of orientation. The comitative-2 expresses the dependent comitative relation, with one of the participants playing a less active role (e.g. 'a bear with its cubs'). The comitative relation can also be expressed by means of the postposition *reen* 'together' (see section 2.8). The designative is used to express the subject-complement and object-complement.

Case and number markers are fused, and form two main patterns: pattern 1 and pattern 2. These are used to form three 'declensions' (Skorik 1961: 155), which reflect the difference between proper versus common nouns and human versus non-human nouns. These types are: (1) non-human common nouns (the 1st declension), pattern 1; (2) proper nouns (including names of domestic

Table 26.1 Noun declensions

	Pattern 1		Pattern 2	
	sg.	pl.	sg.	pl.
1 absolutive	-Ø,-n/-nə, lgən(*)/-lənən/-tlənən R, -ŋə	-t/-ti	=pattern 1	-ənti
2 ergative	-e/-te	-əne	-ərək	
3 locative	-k/-kə	-əne	-ərək	
4 dative	-gtə/-etə(*)	-əna	-ərəkə(*)	
5 ablative	-jɣə/-gəpə/-əpə(*)	=pattern 1	-ərgəpə(*)	
6 orientative	-gjit	-gjit	-ərgjit	
7 comitative-1	ge- . . . -e/-te	—	—	
8 comitative-2	ga- . . . -ma	ga- . . . -ma	ga- . . . -ərəma	
9 designative	-u/-nu	-ənu	-ənu	

The choice of the variants separated with '/' depends on the phonological type of the stem final (a vowel, a single consonant, a two-consonant cluster; see Skorik 1961).

Comitative-2 has plural forms only in the 3rd declension.

animals) and some kinship terms, pattern 2, with the obligatory expression of the singular/plural opposition; (3) all other common nouns (the 3rd declension), pattern 1 in the singular and pattern 2 in the plural, with the singular/plural opposition being expressed here optionally (i.e. the speaker may choose to use only pattern 1). These are illustrated in table 26.1.

The absolutive singular shows great variety in exponence. The markers are distributed morphologically, and are listed here according to their productivity. The most frequent markers are -Ø (the zero ending) and -n. Nominal stems taking the zero ending undergo various phonological changes (see section 1). Examples are *ajkol-Ø* (<*ajkola-Ø*) 'bedding (abs. sg.)'; *qepəl-Ø* (<*qepəl-Ø*) 'ball (abs. sg.)'; *məran-lənən* 'mosquito (abs. sg.)'; *nelg-ət* 'hides (abs. pl.)'; *qəpl-e* 'by a ball (erg.)'; *emnuŋ-kə* 'in the tundra (loc.)'; *jara-gtə* 'to the house (dat.)'; *kajŋ-epə* 'from a brown bear (abl.)'; *gətgə-gjet* 'orienting towards a lake'; *ge-tumg-e* 'with a friend (com.1)'; *ga-melgar-ma* 'with a gun (com.2)'; *Tutun-Ø* 'Tutun (proper noun, abs. sg.)'; *Tutun-əne* 'Tutun (erg. sg.)'; *Tutun-ənu* 'in the role of Tutun (desg. sg.)'; *Tutun-ərək* 'at the Tutuns' (loc. pl.); *Toton-ərəkə* 'to the Tutuns (dat. pl.)'.

Some stems form the absolutive singular by means of reduplication (indicated in table 26.1 as 'R'). Reduplication consists in repeating the first closed syllable of the root: that is, CVC (including CəC) and VC; so: *nute-nut* 'country' (stem *nute-*); *qulgə-qul* 'fish-scale' (stem *qulg-*); *jəŋe-jəŋ* 'mist' (stem *jəŋe-*); *ele-el* 'summer'.

Finally, there is a vocative form expressed by prolonging the last vowel and/or by adding a special ending, *-j*: *ɲewʔeen!* ‘hey, wife! (voc.)’, *Kopaa-j!* ‘hey, Kopa! (proper name, voc.)’.

2.1.2 Person–number marking on nouns A noun is marked for person and number when it is used as complement in the copular construction (‘I am a reindeer-breeder’), as appositional attribute to an absolutive or ergative pronoun (‘We reindeer-breeders went to the herd’) or as addressee (‘Hey you, reindeer-breeders!’).

Person and number markers are fused to give the following patterns:

person	sg.	pl.
1	-jgəm/-igəm/-egəm	-muri
2	-jgət/-igət/-egət	-turi
3	= absolutive singular	= absolutive plural

Note: In the singular the choice between the morphs with *-j* and a vowel depends on the phonological shape of the stem and on vowel harmony. The endings for the first and second person originated from the corresponding personal pronouns (see section 2.4.1). Since the third person forms are homonymous with the case forms, they may be treated as non-person forms. Examples: *epe-jgəm* ‘me, grandfather (1sg.)’; *ɲinɲej-igət* ‘thou, the boy (2sg.)’; *ənpənacgə-more* ‘we old men (1pl.)’; *ənpənacgət* ‘they, the old men (3pl. = abs. pl.)’.

2.1.3 Noun incorporation Depending on the semantics, the dependent noun may be incorporated into a verbal or a nominal form without any category marking. In Chukchee the incorporated stem always precedes the head stem, and the whole compound is marked according to the grammatical class of the head, with prefixes preceding the incorporated stem.

When the head is a verb, the subject noun (with non-agentive, or unaccusative verbs), the direct object noun and the oblique object noun can be incorporated:

- (1) (a) *tirkə-tir Ø-amecat-Ø-gʔe.*
sun-ABS.SG 3SG.S-appear-AOR-3SG.S
 ‘The sun appeared.’
- (b) *Ø-terk-amecat-Ø-gʔe.*
3SG.S-sun-appear-AOR-3SG.S
 ‘The sun appeared.’ (Lit. ‘/It/ sun-appeared.’)
- (2) (a) *gəm-nan walə-Ø tə-mne-Ø-gʔen.*
I-ERG knife-ABS:SG 1SG.S-sharpen-AOR-3SG.O
 ‘I sharpened the knife.’

- (b) *gəm-Ø tə-wala-mna-Ø-gʔak.*
I-ABS 1SG.S-knife-sharpen-AOR-1SG.S
 'I sharpened the knife.' (Lit. 'I knife-sharpened.')
- (3) (a) *ŋinqeʃ-Ø gətɡ-etə Ø-qət-Ø-gʔi.*
boy-ABS:SG lake-DAT 3SG.S-go-AOR-3SG.S
 'The boy went to the lake.'
- (b) *ŋinqeʃ-Ø Ø-gətɡə-lqət-Ø-gʔi.*
boy-ABS:SG 3SG.S-lake-go-AOR-3SG.S
 'The boy went to the lake.' (Lit. 'The boy lake-went.')

When the head is a noun, the attribute noun may be incorporated (without the relational adjective suffix; cf. section 2.3.3):

- (4) (a) *ŋinqeʃ-in-Ø ewirʔ-ən*
boy-POSS-3SG clothes-ABS:SG
 'a/the boy's clothes'
- (b) *ŋinqeʃ-ewirʔ-ən*
boy-clothes-ABS:SG
 'a/the boy's clothes'

2.2 Participles

Participles, or 'participle-nouns' (Skorik 1961: 155), are considered a separate part of speech in Chukchee. All participles have the suffix *-lʔ* (with *-n* in the absolutive singular), and are derived from noun, adjective and verb stems: *milger-Ø* 'a gun', *milgerə-lʔ-ən* 'the one having a gun'; *nə-gtiŋ-qin* 'beautiful', *gətiŋə-lʔ-ən* 'the one who is beautiful'; *iwini-k* 'to hunt', *iwini-lʔ-ən* 'the one who hunts, a hunter'.

Participles are inflected like nouns, but, unlike nouns, they may be used as attributes without any possessive or relative markers (cf. section 2.3.3): *milgerə-lʔ-ən ənpənacg-ən* 'the old man (abs. sg.) having a gun (abs. sg.)'. When the head is an oblique case form, participles, like adjectives (see section 2.3.3), may be either external or incorporated, depending on whether they are emphasized or not. When a participle is emphasized, it is expressed as a free word and agrees with its head in case and number; but, unlike an adjective, it has all the case forms without any restrictions: *milgerə-lʔ-etə ənpənacg-etə* 'to the old man (dat.) having a gun (dat.)'; compare the variant with incorporation *melgarə-lʔ-ənpənacg-etə* 'to the gun-having-old-man (dat.)'. When a participle has no head noun, it is used like an ordinary noun.

Negative participles are marked with *e-...kəlʔ[-in(e)]*, with the last part used only with the third person and in the absolutive: *e-milger-kəlʔin* 'the one who has no gun (3sg.)'. The circumfix *e-...-ke* is identical to that found with

verbs (section 2.6.2) and when affixed to a noun stem gives the meaning ‘without, lacking’.

Some participles have the marker *-c?* (which originated from *l?* by virtue of the historical alternation *l/c*): *mətləŋen* ‘five’, *mətləŋə-c?-ən* ‘a “five” (figure)’.

2.3 Adjectives

2.3.1 General remarks Adjectives in Chukchee form a peculiar grammatical class. Like other languages, Chukchee distinguishes between qualitative and non-qualitative (relational) adjectives, and these two classes have different morphological markers. In some grammars (e.g. Skorik 1961) qualitative adjectives are treated as separate parts of speech, ‘words denoting quality state’. On the other hand, as non-qualitative adjectives are usually denominal, they are often treated as noun forms (Bogoras 1922, Skorik 1961). None the less, these two classes have very much in common, in both morphological and syntactic properties, so we will consider them as subclasses of one and the same part of speech.

All adjectives have markers that end in *-in(e)*, with the final vowel being lost in word-final position. Qualitative adjectives are marked with *n- . . . [-qin(e)]*, with the suffixal part *-qin(e)* used only for the third person (so it may be treated as a person marker): *n-erme-qin* ‘strong’. Qualitative adjectives lose this marker when they are incorporated (see below).

Non-qualitative adjectives are usually denominal. The majority of them subdivide into two large groups:

- (1) possessive adjectives marked with *-in(e)* for nouns following pattern 1, *-ənin(e)* for singular nouns following pattern 2, *-ərgin(e)* for plural nouns following pattern 2 (see section 2.1.1): *uttu-ut* ‘stick’, *utt-in* ‘wooden’, *Tutun* (proper noun) *Tutun-ənin* ‘belonging to Tutun, Tutun’s’, *ənpənacŋ-ən* ‘an old man’, *ənpənacŋ-ərgen* ‘belonging to the old men’;
- (2) relational adjectives marked with *-kin(e)*: *aŋqa-n* ‘sea’, *aŋqa-ken* ‘related to the sea’ (as in ‘a sea bird’), *Tutun* (proper noun), *Tutun-kin* ‘related to Tutun’.

Adjectives of these two groups do not lose their markers when they are incorporated (see below).

A further group of non-qualitative adjectives is marked with *ge- . . . [-lin(e)]* (with the suffixal part used only for the third person), used to describe the possessor of an object expressed by the nominal stem: *pojg-ən* ‘a spear’ – *ga-pojgə-len* ‘the one supplied with a spear’.

When adjectives are not incorporated, they are usually marked for person and number, and in some instances for case and number.

2.3.2 *Person and number marking on adjectives* The adjectival person-number markers are almost identical to their nominal counterparts (cf. section 2.1.2):

person	sg.	pl.
1	-jgəm/-igəm/-egəm	-muri
2	-jgət/-igət/-egət	-turi
3	-∅	-t

The third-person markers are homonymous with the nominal number markers. In some types of adjectives they are combined with the suffixal part of the circumfixes, forming the following pairs of endings for the third person: *-qin-∅/ -qine-t*, *-lin-∅/ -line-t*.

When used predicatively, adjectives always agree in person and number with the subject (there are no copular verbs in Chukchee): *ətlon-∅ n-erme-qin-∅* 'he /is/ strong', *ətr-i n-erme-qine-t* 'they /are/ strong', *mur-i emnuŋ-kine-muri* 'we /are/ from the tundra', *gəm-∅ ga-poŋg-egəm* 'I /am/ supplied with a spear'. When adjectives are used as attributes, the first- and second-person markers appear only in the situations when the head noun is marked for person and number: *mur-i emnuŋ-kine-muri nəmətwalʔə-muri* 'We /are/ tundra (rel., 1pl.) dwellers (1pl.)'. In all other situations the third-person forms are used.

2.3.3 *Case-number marking on adjectives and adjective incorporation*

When an adjective is used attributively and the head noun is an absolutive case noun phrase (i.e. intransitive subject or object), the adjective is usually external and, as a rule, agrees in number with the head noun: *n-ilgə-qin-∅ qora-ŋə* 'a white (3sg.) reindeer (abs. sg.)' versus *n-ilgə-qine-t qora-t* 'white (3pl.) reindeer (abs. pl.)'. Possessive adjectives may not agree in number with the head noun: *ŋinqeŋ-in-∅ jelʔo-∅* 'the boy's (poss., 3sg.) uncle (abs. sg.)' versus *ŋinqeŋ-in-∅ jelʔo-nte* 'the boy's uncles (abs. pl.)'. In some cases attribute adjectives are incorporated without any obvious restrictions: *elgə-koŋŋ-ən* 'white mug'.

When the head noun is not an absolutive case noun phrase, the adjective is usually incorporated. In this case a qualitative adjective loses its marker, but a relational adjective preserves its suffix: *n-ilgə-qin-∅ qora-ŋə* 'a white reindeer (abs. sg.)' versus *elgə-qora-ta* 'by a white reindeer (erg.)'; *aŋqa-kena-t galga-t* 'sea birds (abs. pl.)' versus *aŋqa-kena-galga-ta* 'by sea birds (erg.)'. Possessive adjectives are incorporated more rarely than other types of adjectives.

In the comitative-1 and comitative-2 forms, where there is a prefix, incorporation is obligatory: *nə-teŋ-qin-∅ tumgə-tum* 'a good friend (abs. sg.)' versus *ga-taŋ-tomgə-ma* 'with a good friend (com. 2)'. But if the case form has no prefix and the adjective is emphasized, it may be expressed as an external attribute. In such situations the adjective may be marked for case and number with the endings of pattern 1 (see section 2.1.1). This is more typical for relational

adjectives and for the ergative and locative cases; possessive adjectives are not marked for case: *nə-mejəŋ-qine-k ʔətʷ-ək* ‘in the big (loc.) boat (loc.)’, *emnuŋ-kine-k nəmnəm-ək* ‘in the tundra (loc.) settlement (loc.)’, *ənpənacg-en-Ø qora-ta* ‘by the old man’s reindeer (erg.)’.

When an adjective is used without a head noun, it is marked like an ordinary noun: *n-ilgə-qine-te* ‘by the white one (erg.)’, *epe-nine-k* ‘at Grandpa’s (loc.)’, *amnoŋ-kena-gtə* ‘to the one from the tundra (dat.)’.

2.3.4 Degrees of comparison The comparative degree can be expressed by means of an analytic construction consisting of the adverbial form marked with *-ŋ(*)* and a participle of the auxiliary verb ‘to be’: *n-erme-qin* ‘strong’, *arma-ŋ wa-lʔ-ən* ‘stronger’ (lit. ‘being stronger’). The superlative degree is expressed by means of the prefix *ənan-* attached to a participle marked with *-cʔ-* (see section 2.2): *nə-mejəŋ-qin* ‘big’, *ənan-majŋə-cʔ-ən* ‘the biggest’.

2.4 Pronouns

2.4.1 Personal pronouns Free pronouns for the first, second and third person, both singular and plural, occur in Chukchee. All personal pronouns are inflected for case. They cannot be incorporated. Personal pronouns follow pattern 1 (see section 2.1.1), but there is some divergence from the nominal case system as regards both realization and the set of cases.

The 1/2/3 person and singular/plural oppositions are expressed by different pronominal stems:

person	sg.	pl.
1	gəm-	mur-
2	gən-	tur-
3	ən-	ər-

These morphs are found only in the locative; in other cases the stems undergo various alternations. The absolutive singular is marked with *-Ø*, the absolutive plural with the pronominal pluralizer *-i*. Irregular absolutives are: *gət-Ø* ‘thou’, *ətlon-Ø* ‘(s)he, it’, *ətr-i* ‘they’ (>*ərr-i* with geminated *r*). The ergative is marked with the pronominal marker *-nan*. In the ergative the second singular and third singular stems are reduced to *gə-* and *ə-* respectively, while the plural stems are augmented with *-gə*. Instead of the dative-directional case, the pronouns have two different cases: the dative, marked with *-ə(*)*, and the directional, marked with *-gtə*. In the dative, comitative-1, comitative-2 and designative cases all the stems are augmented with *-ək* (with variant *-əg*); in the directional, ablative and orientative they are augmented with *-əke*. Examples: *gə-nan* ‘thou (erg.)’, *torgə-nan* ‘you (erg.)’, *gəm-ək* ‘at my place (loc.)’, *gəmək-ə* ‘to me (dat.)’, *morəka-gtə* ‘to us (dir.)’, *ənəka-jpə* ‘from him (abl.)’, *gəməke-gjit*

'according to me, like me (orient.)', *g-ərək-e* 'with them (com.1)', *ga-gənəg-ma* 'together with thee (com.2)', *turək-u* 'as you (desg.)'.

2.4.2 Possessive pronouns Like nouns, personal pronouns have two types of adjectival derivatives:

- (1) possessive pronouns proper, derived by adding *-nin(e)* to the singular pronominal stems (the 2sg. and 3sg. stems are shortened as in the ergative), and *-gin(e)* to the plural stems: *gə-nin* 'thy (3sg.)', *ər-gin* 'their (3sg.)';
- (2) relational pronouns, derived by adding the suffix *-kin(e)* to the stem base augmented with *-əke*: *ənəke-kin* 'related to him (3sg.)', *murəke-kin* 'related to us (3sg.)'.

These derivatives are used like other adjectives (see section 2.3). When incorporated, possessive pronouns may preserve the possessive marker, but alongside this a special incorporative stem augmented with *-ək* may be used: *gəmək-kupre-te/gəm-nine-kupre-te* 'by my net (erg.)'.

2.4.3 Interrogative pronouns The principal interrogative pronouns correspond to 'who?' and 'what?'. When they express a person or an object, they are inflected like nouns (see section 2.1). The pronoun 'what?' follows pattern 1, with *rʔenut-∅* in the absolutive singular, *rʔenute-t* in the absolutive plural. In all other cases the stem *req-* is used, with the phonologically regular alternant *rʔe-* when *-q* would occupy syllable-final position: *req-ək* 'in what place? (loc.)', *ga-rʔa-ma* 'with what? (com.2)'. The pronoun 'who?' follows pattern 2, with *məjin-∅* in the absolutive singular and the stem *mik-* used in the absolutive plural and all other cases: *mik-ənti* 'who? (abs. pl.)'; *mik-əne* 'who? (erg.)'; *mek-əna* 'to whom? (dat.)'; *mik-ərək* 'at whom? (loc. pl.)'.

When the pronoun 'what?' is used attributively, it is always incorporated: *rʔa-wagərg-ən* 'what kind of life? (abs. sg.)', *req-orw-ək* 'on what sledge? (loc.)'. Interrogative pronouns, like personal ones, have possessive and relational adjectival forms. Other interrogative words include *minka* 'where?', *miŋkəri* 'how', *məŋko* 'from where?', *tite* 'when?', *tʔer* 'how many, how much?'. Like other numerals, the word *tʔer* may be incorporated (see section 2.5). Interrogatives can be used as relative pronouns.

2.4.4 Demonstrative pronouns Demonstrative pronouns specify a variety of spatial parameters. The principal demonstratives are: *ŋotqen(a)-* 'this' (incorporated form *ŋutin-*), *ənqen(a)-* 'that' (incorporated form *əŋjin-*), *ŋanqen(a)-* 'that far away'. Other degrees of distance are expressed iconically on the basis of the demonstrative *ŋanqen(a)-*: *ŋaanqen(a)-*, *ŋooqen(a)-*, *gaanqen(a)-*. Certain other demonstratives are derived from demonstrative particles.

Demonstratives are used like other adjectives (see section 2.3).

2.5 Numerals

The native Chukchee terms are based on finger counting. There are only eight original non-compound numerals, all others being either synthetic or analytic compounds (the latter are followed by the word *parol* 'addition'). The basic system is illustrated below:

1	ənnen	11	məngətken ənnen parol
2	ɲireq	15	kəlgənken(*)
3	ɲəroq	16	kəlgənken ənnen parol
4	ɲəraq	20	qlikkin
5	mətləɲen(*)	21	qlikkin ənnen parol
6	ənnan-mətləɲen	26	qlikkin ənnan-mətləɲen parol
7	ɲerʔa-mətləɲen	30	qlikkin məngətken parol
8	ɲerʔo-mətləɲen	35	qlikkin kəlgənken parol
9	ɲerʔa-mətləɲen	40	ɲireq-qlikkin
	100	mətləɲ-qlekken	
	200	məngət-qlekken	
	300	kəlgən-qlekken	
	400	qlik-qlikkin	

Like adjectives, in appropriate situations cardinal numerals may be marked for person and number (in the plural only). The third-person plural form is marked with *-ərgeri*. With analytic compounds the person marker is attached to the last word: *mur-i qlikkin ɲireq parol-more* 'there are twenty-two of us' (lit. 'we /are/ twenty-two'); adjectival markers used with the numerals are omitted before person markers: *ətr-i ɲerʔamətləɲ-ərgare* 'there are seven (of them)' (*ɲerʔamətləɲ-en* 'seven').

When a cardinal numeral is used attributively, it is either external or incorporated. A numeral is always incorporated when the head noun is an oblique case form. Some numeral stems undergo phonological changes. With analytic compounds only the last word is incorporated; the comitative prefix *ge-* is attached to the first word, the suffixal part *-te/-ma* to the last word: *ɲəron-pojg-a* 'by three spears (erg.)', *ge-qlikkin ɲəroq parol-tomg-a* 'with twenty-three friends (com.1)'. Ordinal numerals are derived from the cardinal ones by means of the suffix *-qew*: *ənnen-qew* 'the first', *qlikkin ənnen parol-qaw* 'the twenty-first'. Ordinal numerals are used like adjectives. With the incorporated variant the rules are the same as with ordinal numerals: *ge-qlikkin ənnen parol-qaw-jatjol-a* 'with the twenty-first fox (com.1)'.

2.6 Verbs

2.6.1 Finite forms The following two morphological types of finite forms are found in Chukchee: canonical verbal forms and adjectival ones (see Skorik 1977).

2.6.1.1 Canonical verbal forms Canonical verbal forms express an action related to the moment of speech (see Nedjalkov 1993). They distinguish three principal moods: indicative, imperative and subjunctive. Each mood is characterized by an appropriate set of person–number markers; only the subjunctive mood has a separate marker, the prefix *-ʔ-*. Within each mood two classes of aspectual forms are distinguished: (1) imperfective forms marked with *-rk-* (*-rkən* in some grammars); (2) perfective forms that are not marked with *-rk-*, and thus have the zero marker. Additionally, there are forms expressing posteriority, or temporal sequence, marked with *re-* or *re- . . . -ŋ* (with morphophonemic suffixal variants *-n*, *-g*), that also distinguish imperfective/perfective forms. The posteriority forms are usually considered as future tenses of the indicative mood, but they can be also regarded as a separate mood.

The canonical verbal forms can be represented by the following tense–aspect–mood system (cf. also Nedjalkov 1993, Mel'čuk 1973, as well as discussion in Comrie 1979, 1980):

	indic. (non-fut.)	fut.	imper.	subjun.
impf.	∅- . . . -rk	re- . . . -rk	∅- . . . -rk	ʔ- . . . -rk
perf.	∅- . . . -∅	re- . . . -∅/-ŋ	-∅- . . . -∅	ʔ- . . . -∅

In the indicative mood the non-future imperfective forms are called Present (or Present-progressive), the perfective ones, Aorist; so in the examples given below we will mark *-rk-* as PRES, and *-∅(-ŋ-)* as AOR.

Besides tense–aspect–mood forms, there are also antipassive forms (see Kozinsky et al. 1988).

The usage and distribution of person–number markers used with canonical forms is complex. There are many zero affixes with different meanings, and many affixes are homonymous.

A canonical verbal form has a person–number prefix and a person–number suffix (including zero affixes) in word-initial and word-final positions respectively. An intransitive verb agrees in person and number with its grammatical subject; that is, it has a person–number circumfix. A transitive verb agrees in person and number with both its grammatical subject and grammatical object, so it is bi-personal: with some exceptions, it has a subject prefix and an object suffix. There are therefore two conjugational patterns, or two ‘conjugations’ (see Skorik 1977): one is for intransitives, the ‘subject’ conjugation, or pattern 1, the other is for transitives, the ‘subject–object’ conjugation, or pattern 2.

The following transitive forms diverge from the principle of subject–object marking given above: (1) where the subject is second-person singular or plural or third-person singular, the first-person singular object is expressed by means of the prefix *ine-* placed immediately before the stem; (2) with second-person subjects, the first-person plural object is expressed by means of the suffix *-tku* placed immediately after the stem. In these cases the verb is marked with a subject prefix and a subject suffix from pattern 1, as if it were intransitive. In

Table 26.2a Pattern 1: subject prefixes (intransitive conjugation)

	<i>indic.</i>	<i>fut.</i>	<i>imper.</i>	<i>subjunc.</i>
1sg.	t-	t-	m-	t-
2sg.			q-	n-
3sg.			n-	n-
1pl.	mət-	mət-	mən-	mən-
2pl.			q-	n-
3pl.			n-	n-

Table 26.2b Pattern 1: subject suffixes (intransitive conjugation)

	<i>indic.</i>		<i>fut.</i>		<i>imper.</i>		<i>subjunc.</i>	
	pres.	aor.	pres.	aor.	pres.	aor.	pres.	aor.
1sg.	-n	-(gʔe)k	-n	-gʔe	-n	-(gʔe)k	-n	-(gʔe)k
2sg.	-n	-gʔi	-n	-gʔe	-n	-gi	-n	-(gʔe)n
3sg.	-n	-gʔi	-n	-gʔe	-n	-(gʔe)n	-n	-(gʔe)n
1pl.	-n	-mæk	-n	-gʔe	-n	-mæk	-n	-mæk
2pl.	-tæk	-tæk	-tæk	-tæk	-tæk	-tæk	-tæk	-tæk
3pl.	-t	-(gʔe)t	-t	-t	-ənet	-ənet	-ənet	-ənet

The (gʔe) component may be omitted.

some verbal forms the connecting morph *-ni* is found before the final person–number marker; in some second-person imperative forms the connecting morph *-gə* is found in the same position.

For Chukchee person–number verbal markers see tables 26.2a, b, 26.3a, b. Subject circumfixes (pattern 1) are given here in two tables, because the distribution of the prefixal parts sometimes differs from that of the suffixal ones.

Examples:¹

mət-Ø-kətgəntan-Ø-mæk 1PL.S-INDIC-run-AOR-1PL.S	‘we ran’
Ø-ra-kətgəntan-nə-tæk 2PL.S-FUT-run-AOR-2PL.S	‘you will run’
t-ʔə-kətgəntatə-rk-ən 1SG.S-SUBJ-run-PRES-1SG.S	‘I would run’
mət-re-lʔu-tkə-ni-gət 1PL.S-FUT-see-PRES-CONN-2SG.O	‘we will see thee’

Table 26.3a Pattern 2: subject prefixes
(transitive conjugation)

	<i>indic.</i>	<i>fut.</i>	<i>imper.</i>	<i>subjun.</i>
1sg.	t-	t-	m-	t-
2sg.			ɣ-	n-
3sg.	∅-/ne-	∅-/ne-	n-/ʔən-	n-/nen-
1pl.	mət-	mət-	mən-	mən-
2pl.			ɣ-	n-
3pl.	ne-	ne-	ʔən-	nen-

Of the two variants separated by '/' the second one is used when the object outranks the subject on the following hierarchy: 1sg., pl > 2sg., pl. > 3sg. > 3pl. Otherwise the first variant is used (except in situations where the object is expressed by the prefix – see above).

Table 26.3b Pattern 2: object suffixes

	<i>sg.</i>	<i>pl.</i>
1	-gəm	-mək
2	-gət	-tək
3pres.	-n	-ənet/-ətka
aor.	-[gʔe]n	-[gʔe]net/-ətka

1 The (gʔe) component may be omitted.

2 The suffix -ətka is used when the subject is 2pl.

∅-∅-lʔu-tku-rkə-ni-tək
2PL.S-INDIC-see-1PL.O-PRES-CONN-2PL.S 'you see us'

ne-∅-lʔu-∅-mək
3SG.S-INDIC-see-AOR-1PL.O 'he saw us'

nə-∅-lʔu-∅-ni-n
3SG.S-IMPER-see-AOR-CONN-3SG.O 'let him see it'

2.6.1.2 Adjectival verb forms The adjectival forms denote an action not related to the moment of speech (see Nedjalkov 1993). They display the same imperfective/perfective opposition, but here it is expressed differently: (1) imperfective adjectival forms (= Imperfect-Present, or Imperfect) are marked with the circumfix *n- . . . [-qin(e)]*; (2) perfective adjectival forms (= Perfect) are marked with *ge- . . . [-lin(e)]* (the suffixal parts of both markers are used only

with the third person). These markers are identical with those of qualitative and non-qualitative adjectives respectively (see section 2.3.1).

The adjectival forms take the same set of standard person–number markers as adjectives (see section 2.3.2). When a verb is intransitive, only the standard suffixes are used, and the suffix always codes the grammatical subject: *nə-kətgəntat-egəm*, IMPF-run-1SG.S, ‘I run’. But when a verb is transitive, the prefix *ine-* and the suffix *-tku* are also used, and the standard person–number suffix may code either the subject or the object. With the Perfect forms the distribution is similar to the one observed for the canonical forms. When the object is expressed by means of *ine-* or *-tku*, the standard suffix codes the subject, but when there is no *ine-* or *-tku*, it codes the object. Examples are:

<i>g-ine-lʔu-jgət</i>	
<i>PERF-1SG.O-see-2SG.S</i>	‘thou saw me’
<i>ge-lʔu-tku-jgət</i>	
<i>PERF-see-1PL.O-2SG.S</i>	‘thou saw us’
<i>ge-lʔu-muri</i>	
<i>PERF-see-1PL.O</i>	‘he/they saw us’

With the Imperfect forms the distribution of *-tku* is the same, but the prefix *ine-* is used more widely:

<i>nə-lʔu-tku-jgət</i>	
<i>IMPF-see-1PL.O-2SG.S</i>	‘thou seest us’
<i>n-ine-lʔu-muri</i>	
<i>IMPF-2SG.O-see-1PL.S</i>	‘we see thee’

2.6.2 Non-finite forms The Chukchee verb has several non-finite forms. The infinitive is marked with *-k/-kə*: *imti-k* ‘to carry’, *migciret-ək* ‘to work’. The supine is marked with *-nwə*: *reŋa-nwə* ‘in order to fly’. Action nominals are marked with the suffix *-gərg(*)*: *təle-k* ‘to move’, *təle-gərg-ən* ‘movement’. Verbal participles (active) are marked with *-lʔ-* (see section 2.2): *təle-lʔ-ən* ‘the one who moves, walks’. Relativized verbs are marked with *-kin* (cf. section 2.3): *əpaw-ken kojŋ-ən* ‘mug for drinking’.

There is also a series of adverbial participles (‘gerunds’) with various meanings. Their markers are often identical with those of the case forms (see section 2.1.1 and Spencer 1991: 28–9): *piŋkutku-te* ‘(because of) having jumped’ (cf. Erg.-instr.), *reçqiw-ək* ‘having entered’ (cf. loc.), *rʔawo-jpə* ‘having killed a whale’ (cf. abl.), *ga-melgarətko-ma* ‘shooting at somebody’ (cf. com.2).

Negation with finite forms is expressed by means of the negative non-finite form marked with *e- . . . -ke*, which is sometimes accompanied by a negative particle and/or the auxiliary verb *it-ək* ‘to be’ for intransitives and *rət-ək* ‘to keep, to have’ for transitives in the appropriate form.

Negation with adverbial participles is expressed by means of *luŋ-...-e/-te*: *luŋ-tejk-e* ‘without doing anything’.

2.6.3 *Verb incorporation* A verb modifying another verb can be incorporated into the head verbal form, as in (5):

- (5) (a) *galga-t riŋe-te n-ekwet-qine-t.*
bird-ABS:PL fly-ADP IMPF-go-IMPF-3PL.S
 ‘The birds are going away, flying.’
- (b) *galga-t nə-riŋe-ekwet-qine-t.*
bird-ABS:PL IMPF-fly-go-IMPF-3PL.S
 ‘The birds are going away, flying.’ (Lit. ‘fly-going’)

There are also examples when a verb is incorporated into the head nominal form:

- (6) *tipʔejŋe-ŋewəcqet-∅ ənkə ga-twa-len-∅.*
sing-woman-ABS:SG there PERF-be-PERF-3SG.S
 ‘The singing woman was there.’

2.7 Adverbs

Adverbs with qualitative adjective stems are marked with the circumfix *n-...-ʔew* (cf. section 2.3): *nə-jəq-qin* ‘fast, rapid’, *nə-jəq-ʔew* ‘rapidly’. Other types of adverbs have various markers. The comparative degree is expressed with adverbs by means of the suffix *-ŋ(*)*: *jəq-əŋ* ‘more rapidly’. The superlative degree is expressed by means of the prefix *ənan-* added to the form marked with *-ŋ*: *ənan-jəq-əŋ* ‘most rapidly’.

In many instances an adverb modifying a verb is incorporated (without any inflections) into the head verb:

- (7) (a) *nə-tur-ʔew nə-tejkə-qine-t nelgə-t.*
ADV-new-ADV IMPF-make-IMPF-3PL.O hide-ABS:PL
 ‘/They/ dressed the hides all over again.’
- (b) *nə-tur-tejkə-qine-t nelgə-t.*
IMPF-new-make-IMPF-3PL.O hide-ABS:PL
 ‘/They/ dressed the hides all over again.’ (Lit. ‘newly-dressed’)

2.8 Postpositions

Nominal postpositions such as *qaca* ‘near’, *cəmcə* ‘close to’, *ʔəttʔəjoca* ‘in front of’, *rəmagtə* ‘behind’, and others are used in Chukchee together with the locative

form to specify the type of location: *gətg-ək qaca* ‘near the lake (loc.)’. Postpositions may have some case forms: *gətg-ək qaca-gtə* ‘to the place near (dat.) the lake (loc.)’. The postposition *reen* ‘together’ is used with the locative form to express the comitative meaning: *Rowt-əna reen* ‘together with Rowten (proper name, loc.)’.

3 Derivational morphology

Chukchee has a great number of derivational affixes, and the boundary between inflection and derivation is sometimes unclear. Some derivational affixes originated from nominal and verbal roots used as second parts of compounds.

3.1 Nouns

Some productive nominal suffixes are used to specify different types of location. These affixes may be attached to any appropriate stem, and the derivatives have all case forms: *kuke-ŋə* ‘cooking pot’, *kuke-cəku-n* ‘inside of cooking pot’; *miməl* ‘water’, *mimlə-cq-ən* ‘surface of water’; *wək-w-ən* ‘a stone’, *wək-wə-geŋ-Ø* ‘lower part of stone; place under a stone’.

Nouns may take the augmentative suffixes *-jŋ* and *-cŋ/-cəŋ* or the diminutive suffix *-qeŋ*: *wala-jŋ-ən* ‘big knife’, *meməl-qeŋ* ‘little seal’. Prefixally, *qeŋ-* is used to form the names of young of animals: *qeŋ-umqə* ‘bear cub’. Delimitative meaning is expressed by means of the prefix *em-*: *em-milute-t* ‘only hares’. The prefixes *emqən-* ‘every’ and *gemge-* ‘any’ are used as quantifiers: *emqən-ŋinqeŋ* ‘every boy’, *gemge-ŋewəcqet* ‘any woman’. Collective nouns are marked with *-giniw* or *-mk*: *ʔət-w-ʔət* ‘boat’, *ʔət-wə-giniw* ‘group of boats’; *ʔitu-ʔit* ‘goose’, *ʔitu-mk-ən* ‘flock of geese’.

Other affixes used to derive nouns from nouns are: *jocg-* ‘a receptacle’: *wala-jocg-ən* ‘knife sheath’; *-tʔul* ‘piece of’: *menigə-tʔul* ‘piece of cloth’; *-curm* ‘edge of’: *aŋqa-corm-ən* ‘seashore’; *-l(ə)qəl* ‘intended for’: *ewirʔə-lqəl* ‘material for clothes’; *-ret* ‘set of’: *lili-ret* ‘pair of mittens’; *-jan(w)* ‘place full of something’: *oonʔə-jan* ‘place full of berries’; *ləgi-* ‘true, original’: *ləgi-ewirʔ-ən* ‘true clothes (= Chukchee clothes)’; *təmŋe-* ‘ordinary’: *təmŋe-rərkə* ‘an ordinary walrus’; *ewən-* ‘the main’: *ewən-nəm* ‘the main settlement’; *e- . . . -ki* ‘without’: *e-gənnik-ki* ‘place/person without animals’ (cf. the negation circumfix for verbs, *e- . . . -ke*, section 2.6.2).

Some nominal stems are formed from nominal roots by means of reduplication: *nəmnəm* ‘settlement’ (stem *nəmnəm-*, root *nəm-*, cf. *nəmnəm-ək* ‘loc.’).

Nouns (and participles) can be derived from verb and adjective stems (see sections 2.2, 2.6.2). Instruments are derived from verbal stems by mean of the suffix *-inəŋ(e)*: *ejup-ək* ‘to prick’, *ejup-inəŋ* ‘awl’. Abstract nouns can be derived from nominal stems by means of *-gərg(*)* (cf. section 2.6.2): *nə-ketgu-qin* ‘strong’,

katgo-gərg-ən ‘strength, power’. In some cases nouns derived from verbs have no obvious affix, *tejŋet-ək* ‘to eat’, *tejŋet-∅* ‘food’.

3.2 Verbs

Causatives are marked with the prefix *r-/-n-*, in most cases accompanied by a suffixal component *-et*, *-ew* or *-ŋet* (*r-* is the word-initial allomorph, *-n-* is used in word-medial position): *ekwet-ək* ‘to go’, *r-ekwet-ew-ək* ‘to send’. Intransitives are marked with the prefix *-ine-* (sometimes accompanied by *-et*) or the suffix *-tku*: *rə-tenm-aw-ək* ‘to prepare smthg.’, *ine-n-tenm-aw-at-ək* ‘to be engaged in preparations’. Iterative meanings are expressed by *-tku*, *-l?et*, *-r?u*, *-j(i)w*, amongst other suffixes: *rii-k* ‘to touch’, *rii-tku-k* ‘to pull at’. Inceptives are formed by *-ŋŋo*: *wetgaw-ək* ‘to speak’, *wetgawə-ŋŋo-k* ‘to begin speaking’. Reciprocal meaning is expressed by *wəlg-*: *l?u-k* ‘to see’, *l?u-wəlg-ək* ‘to see each other’. Stativity is marked with *-twa*: *tenmaw-ək* ‘to prepare’, *tenmawə-twa-k* ‘to be preparing’. The suffix *-cqiw* means ‘to go to do something’: *gite-k* ‘to look at’, *gite-cqiw-ək* ‘to go to look at’.

Verbs can be derived from nouns by means of the suffixes *-tku*, *-et*, *-ew*, *-l?et*, *-r?u*, *-u*, amongst others. Examples: *walə* ‘knife’, *wala-tko-k* ‘to cut with a knife’; *alpəŋŋ-ən* ‘patch’, *alpəŋŋ-at-ək* ‘to patch’; *tumgə-tum* ‘friend’, *tumg-ew-ək* ‘to become friends’; *?ətw-?ət* ‘boat’, *?ətwə-l?et-ək* ‘to go out in a boat’; *piŋe-piŋ* ‘snowfall’, *piŋe-r?u-k* ‘to begin (of snowfall)’; *r?ew* ‘whale’, *r?ew-u-k* ‘to kill whales’; *tekicg-ən* ‘meat’, *tekicg-u-k* ‘to eat meat’.

Verbs are derived from adjective stems by means of the suffixes *-et*, *-ew* and *-twi*: *nə-wətrə-qin* ‘visible’, *wətr-et-ək* ‘to be visible’; *n-ilgə-qin* ‘white’, *ilg-ew-ək* ‘to appear white’; *nə-teŋ-qin* ‘good’, *teŋə-twi-k* ‘to become good’.

3.3 Compounds

Besides regular incorporation structures, Chukchee has a good many compounds with idiomatic meaning: *piŋ-wətr-ən* ‘flour’ (= ‘dust-looking’), *welwə-jeg-ət* ‘Canadian skis’ (lit. ‘raven-skis’).

Abbreviations

ADP	adverbial participle
ANT	antipassive
COM1/com.1	comitative-1
COM2/com.2	comitative-2
DESG/deg.	designative
DIR/dir.	directional

non-fut.	non-future
ORIENT/orient.	orientative
PART	participle
PERF/perf.	perfective
voc.	vocative

NOTE

- 1 The root of the verb is *kətgəntat-*. The alternation between the final /t/ and /n/ before a nasal is regular.