

# On Lexical Affixes in Chukchi

Tokusu KUREBITO

Institute for the Study of Languages and Cultures of Asia and Africa  
Tokyo University of Foreign Studies

## 0. Introduction

Chukchi<sup>1</sup>, belonging to the Chukchi-Kamchatkan language family, is spoken by about 10,000 people living mainly on the Chukotka Peninsula and its adjacent areas in the Far Northeast of Siberia (Russia). In order to form denominative verbs, Chukchi makes use of a number of verbal affixes. They will be referred to here as lexical affixes, because they express substantive concrete verbal meanings that in other languages would occur as independent words, such as 'to make', 'to go to do something', 'to get', 'to take off'<sup>2</sup>.

The main purpose of this paper is to describe the function of these lexical affixes and the relationship between them and their corresponding free-standing verbs with similar meanings. The data is based on my fieldwork on the Western dialect collected starting from 1992<sup>3</sup> onwards.

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<sup>1</sup> Chukchi is divided into two main dialects: the Eastern dialect spoken by the Maritime Chukchi and the Western dialect spoken by the Tundra Chukchi, although the difference between the two dialects is very slight.

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<sup>2</sup> The term 'lexical affix' has been associated with 'Mosan' languages in the northwest coast of North America. However, the lexical affixes of Chukchi differ from those of Mosan languages in that the latter are nominal in nature.

<sup>3</sup> The data cited in the present paper were obtained by me in the summers of 1992-1995 and the winter of 1997 in the village of Rytkuchi, and Subdivision No.2 Sovhoz Pevek in Chaunskij Raion, in the spring of 1996 in Saint Petersburg, and in the winter and summer of 1997, 1998 and 1999 in Magadan, and the winter of 2000 in the village of Pytkuchi, and summer of 2000 in Anadyr'. My fieldwork was partly supported by grants for the projects 'Urgent Linguistic Fieldwork of the North Pacific Rim' (#07041013), 'Urgent linguistic Fieldwork of the Pacific Rim' (#10041021), and 'Urgently Needed Research on Chukchi in Far Northern Siberia' (#12039216) from the Japanese Ministry of Education, Science, Sport and Culture. I would like to thank the Chukchi people for sharing their valuable knowledge of Chukchi with me. I would especially like to express thanks to my language consultants, Mrs. Geutval' Klavdia Ivanovna, late Mrs. Tunel Lina Grigor'jevna, Mrs. Antol'gyn Ljudmila Alekseevna, Mrs. Jevur Valentina Alekseevna, Ms. Kutgeut Larisa Mixajlovna, and Kergitval' Antonina Nikolajevna. I very much appreciated the Government of the Chukchi Autonomous Region permission to do permit fieldwork in this Region from 1997. I am also grateful to the director of the Department of Culture of Chaun district of Chukchi Autonomous Region, Mr. Oskin Anatoli Aleksandrivic, for all his advice and help of my travel in this district.

The lexical affixes in Chukchi have been described to some extent in previous studies (Bogoras 1922:812-813, 821, 1937:XLVI, and Skorik 1977:219-223). However, lexical affixes and free-standing verbs have often been confused and their mutual relationship has not yet been fully elucidated. This paper shows that they should be clearly differentiated from each other, since although lexical affixes and their corresponding free-standing verbs which incorporate a nominal stem behave quite similarly, nonetheless they function suppletively to each other both syntactically and pragmatically.

Before turning to a closer discussion of the lexical affixes, I will begin section 1 with a few remarks about the morphophonemics, morphology and syntax of Chukchi relevant to the examples used in this paper.

## 1. Grammatical notes

### 1.1. Morphophonemics<sup>4</sup>

(1) Vowel harmony. One of the most important morphophonemic phenomena in Chukchi is its strict dominant/recessive type of vowel harmony, where all the vowels but the /ə/ are divided into two groups, one dominant vowels /e, o, a/, and the recessive vowels /i, u, e/. A word must contain either all dominant vowels or all recessive vowels. If a word contains a morpheme with dominant vowels, then all morphemes with recessive vowels in that word change to their corresponding dominant ones, whether they are stems or affixes (*ya-milyer-ma* > *ya-melyar-ma* 'with a gun').

(2) Insertion of schwa. Two-consonant clusters in word initial and final positions and three-consonant clusters in word medial position (unless the third consonant is ʔ) usually insert an epenthetic schwa to break up the clusters (i.e. *miry-ə-n* 'grandfather', *otkosʔ-ə-nto-k* 'escape from a trap').

(3) Vowel deletion. When two vowels come together at morpheme boundary, one of them is elided (i.e. *e-ikwisi-ke* > *ikwisi-ke* 'do not drink').

(4) Other morphophonemic phenomena include word-final vowel deletion, word-initial and final consonant deletion, and various consonant changes, such as assimilations, dissimilations, alternations and metathesis.

<sup>4</sup> The phonemic inventory of the Western dialect of Chukchi is as follows.

consonants: /p, t, k, q, ʔ, s, ʃ, w, j, r, l, m, n, ŋ/

short vowels: /i, e, a, ə, o, u/

long vowels: /ii, ee, aa, oo, uu/

## 1.2. Morphology and syntax

Chukchi makes use of a number of different types of morphological processes: affixation by suffixes, prefixes and circumfixes; various kinds of incorporation including that of the modifier into the head noun and noun incorporation into the verb; reduplication<sup>5</sup>; conversion; suppletion<sup>6</sup>; and internal modification.

The main nominal categories in Chukchi are number and case. The numbers distinguished are singular and plural. Chukchi has a rich system of nominal cases including absolutive, ergative, dative, locative, instrumental, ablative, allative, orientative, comitative, associative, and designative. Case marking in the syntax follows an ergative pattern: the transitive subject always takes the ergative case, while the direct object and the intransitive subject always take the absolutive case. Chukchi also has a number of valency alternations, where a noun in the oblique case is raised to the direct object. In the transitive objective type of noun incorporation, the verb is detransitivized and the subject which is marked by the ergative case in the transitive construction is promoted to subject and is marked by the absolutive case.

Intransitive verbs in Chukchi agree with the subject and transitive verbs agree with the subject and object in person and number. Agreement is shown by prefixes, suffixes and circumfixes which may indicate person, number, and mood, as well as subject and object features.

Word order in Chukchi is rather free although the subject is generally followed by its verb, the object may stand either before or after its verb; modifiers may also occur freely either before or after the head noun.

## 2. Behavioral characteristics of lexical affixes

### 2.1. Confusion between lexical affixes and free-standing verbs

Before enumerating the lexical affixes and describing their morphosyntactic behavior, I would like to refer to one point that has arisen from previous studies on lexical affixes.

Denominative verbs formed by lexical affixes are apparently much like noun incorporation, a process of productively combining noun stem(s) and a verb stem into a single verb complex (See Section 3). Thus in the previous studies, there has been some confusion between them. For example, both Bogoras (1922:812-813, 821, 1937:XLVI) and Skorik (1977:219:223) described the elements *-jp* 'to put on

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<sup>5</sup> Reduplication in Chukchi is interestingly used to form absolutive singular, contrary to its general usage to express distributive plural, for example, *wərwar* 'a leaf', *tintin* 'a piece of ice', *kelikel* 'a book'.

<sup>6</sup> Suppletion is used to differentiate between transitive and intransitive verbs, for example, *ru* (trans.) vs. *qametwa* (intrans.) 'to eat', *əpat* (trans.) vs. *uwi* (intrans.) 'to boil'.

clothing’, *-twa* ‘to be’ as suffixes. But the following examples, where these elements appear independently without nominal stems, clearly show that they are not suffixes but free-standing verb stems.

- (1) *t-ə-jp-yʔan-Ø* *irʔ-ə-n*  
 1SG.SBJ-E-put on-E-3SG.OBJ-AOR skin coat-E-ABS.SG  
 ‘I put on the skin coat.’
- (2) *miŋkə n-ə-twa-tore*  
 where IMPF-E-to be-2PL.SBJ  
 ‘Where are you?’

A diametrically opposite problem also occurs, that is when lexical affixes have been misinterpreted as free-standing verb stems, possibly because they are all based on the data by Bogoras (1917). We agree with Mithun (1984) that ‘Bogoras never justifies his distinction between these ‘derivational suffixes’ and incorporating V [verb:TK] stems. It is likely that these suffixes are simply old V roots which, in the modern language, never occur without an IN [incorporated noun:TK]’. However, both Mithun (1984:861) and Gerdtz (1998:87) while quoting Bogoras (1917) on Koryak, a genetically related language to Chukchi, misinterpreted *-nta* and *-ntat* incorporating verb stems. The following example in (3) *-ntet* (an allomorph of *-ntat*) is a derivational morpheme, which must be attached to a nominal stem in Chukchi.

- (3) *wəlyil* *quly-ə-ntet-yʔi-Ø*  
 white birch(ABS.SG) bark-E-peel off-3SG.SBJ-AOR  
 ‘The white birch’s bark peeled off.’

Although such examples have been referred to as noun incorporation, *-ntet* must be attached to some nominal stem and can never stand alone (For further details of this and others affixes see Section 2.2.).

## 2.2. Lexical affixes and their morphosyntactic behavior

In this section, I will enumerate the Chukchi lexical affixes so far collected and describe their morphosyntactic behavior. Chukchi lexical affixes are almost all suffixes, with the exception of one circumfix *te-...-ŋ/ta-...-ŋ* ‘to make’. They are all ‘pure’ affixes, etymologically unrelated to free-standing verbs. They can be classified into two semantic types, what we might call ‘affected patient affixes’ and ‘initiator affixes’. When the former are added to a nominal stem indicating a notional object,

they derive an intransitive verb (there are only two exceptions), and when the latter are added to a nominal stem indicating an intransitive subject, they also derive an intransitive verb.

### 2.2.1. Affected patient affixes

The following sets A to H refer to transitive type lexical affixes, which are the most common in Chukchi. Although these lexical affixes are semantically affected patient affixes, they derive intransitive denominative verbs in their conjugations, with the exception being *-təwa* meaning ‘to take off’ and *-tw* meaning ‘to cut off, to scrape off’ which derives transitive denominative verbs.

#### A. *te-...-ŋ/ta-...-ŋ*<sup>7</sup> ‘to make’

<i>te-lili-ŋ</i>	‘to make mittens’
<i>te-pisy-ə-ŋ</i>	‘to make food’
<i>t-irʔə-ŋ</i> <sup>8</sup>	‘to make a skin coat’
<i>te-kʔeli-ŋ</i>	‘to make a cap’
<i>t-ewirʔə-ŋ</i>	‘to make clothes’
<i>ta-ra-ŋ</i>	‘to build a Chukchi house’
<i>t-orw-ə-ŋ</i>	‘to make a sledge’

- (4) *alləy-ə-n*                      *yəm-əkə*    *t-orw-ə-ŋ-yʔe-Ø*  
 father-E-ABS.SG    I-DAT    make-sledge-E-make-3SG.SBJ-AOR  
 ‘Father made me a sledge.’

- (5) *q-ə-te-pisy-ə-ŋ-yi*  
 IMPER.2SG.SBJ-E-make-food-E-make-2SG.SBJ.PF  
 ‘You make the food.’

#### B. *-u/-o* ‘to eat, to drink’

<i>erʔ-u</i>	‘to eat meat’
<i>ʔeqiml-u</i>	‘to drink liquor’
<i>wʔej-u</i>	‘(reindeer) to eat grass’
<i>ajy-o</i>	‘to eat brains’

<sup>7</sup> Bogoras suggests that the lexical affix *te-...-ŋ/ta-...-ŋ* may be originally related to the independent verb *tejkək* ‘to make’, but he did not show the basis for his argument (Bogoras 1922:821). There is insufficient evidence to decide if it developed from the verb *tejkək*.

<sup>8</sup> The final vowel *e/a* of *te-/ta-* is deleted when followed by a stem which begins with a vowel to avoid the vowel sequence.

- saj-o*<sup>9</sup> ‘to drink tea’  
*kawkaw-o* ‘to eat bread’  
*kəkwatʔol-o* ‘to eat dried meat’
- (6) *n-ə-ʔeqiml-u-lʔet-qin*  
 IMPF-E-liquor-drink-heavily-3SG.SBJ  
 ‘(S)he drinks (liquor) heavily.’
- (7) *n-ə-kəkwatʔol-o-jyəm*  
 IMPF-E-dried meat-eat-1SG.SBJ  
 ‘I am eating the dried meat.’
- C. *-yərki/-yərke* ‘to gather, to catch’  
*uu-yərki* ‘to gather firewood’  
*wʔej-yərki* ‘to gather grass’  
*uunʔ-yərki* ‘to gather berries’  
*pʔoŋ-yərke* ‘to gather mushrooms’  
*qaa-yərke*<sup>10</sup> ‘to catch reindeer (for sledge)’
- (8) *ləyi-wʔej-yərki-lʔet-yʔet-Ø*  
 very-grass-gather-much-3PL.SBJ-AOR  
 ‘They gathered a lot of grass.’
- (9) *t-ə-pʔoŋ-yərke-yʔak-Ø*  
 1SG.SBJ-E-mushroom-gather-1SG.SBJ-AOR  
 ‘I gathered mushrooms.’
- D. *-ŋətt* ‘to catch, to get (something by hunting)’  
*yənniy-ŋətt* ‘to get a wild animal (by hunting)’  
*ʔiy-ŋətt* ‘to get a wolf (by hunting)’  
*meməl-ŋətt* ‘to catch a seal’  
*əlwe-ŋətt* ‘to get a wild reindeer (by hunting)’  
*reqok-ŋətt* ‘to get a polar fox (by hunting)’

<sup>9</sup> *saj-o* ‘to drink tea’ is a denominative verb derived from a loanword from Russian *čaj* ‘tea’.

<sup>10</sup> *qaa* ‘reindeer’ is an allomorph of *qora*.

- (10) *ally-ə-n*                      *əlwe-ɣətt-ə-sqik-wʔi-Ø*<sup>11</sup>  
 father-E-ABS.SG    wild reindeer-get-E-to go to-3SG.SBJ-AOR  
 ‘Father went to get (by hunting) a wild reindeer.’
- (11) *kənte-ɣənniy-ɣətt-ə-yʔi-Ø*  
 skillfully-wild animal-get-E-3SG.SBJ-AOR  
 ‘(S)he got (by hunting) a wild animal very skillfully.’

E. *-yili / -yele* ‘to search for, to look for’

<i>pisɣ-ə-yili</i>	‘to search for food’
<i>uunʔə-yili</i>	‘to search for berries’
<i>əlwe-yili</i>	‘to look for a wild reindeer’
<i>ɣənniy-yili</i>	‘to look for a wild animal’
<i>rey-yili</i>	‘to search for a feed, bait’
<i>taʔa-yele</i>	‘to search for tobacco’
<i>roolqəl-yele</i>	‘to search for edible things’

- (12) *alləy-ə-n*                      *rey-yili-yʔi-Ø*  
 father-E-ABS.SG    feed-search for-3SG.SBJ-AOR  
*mət-ra-jalyət-yʔa*  
 1PL.SBJ-FUT-move camp-1PL.SBJ.PF  
 ‘Father goes out to search for new pasture(s). Then we will move the camp after him’

F. *-nye / -nya* ‘to get’

<i>ɣelwəlʔ-ə-nye</i>	‘to get a reindeer herd’
<i>kʔeli-nye</i>	‘to get a cap’
<i>jarar-ə-nya</i>	‘to get a tambourine’
<i>wala-nya</i>	‘to get a knife’
<i>jara-nya</i>	‘to get a Chukchi house’
<i>kətwatʔol-ə-nya</i>	‘to get dried meat’

- (13) *allʔa-Ø*                      *kʔeli-nye-yʔi-Ø*  
 mother-ERG    cap-get-3SG.SBJ-AOR  
 ‘Mother got a cap’

<sup>11</sup> Chukchi also has a small number of lexical verbal affixes that can be added to the verb stem. In this example, the suffix *-sqik* is an allomorph of *-sqiw* ‘go to something’.

G. *-təwa* ‘to take off’

<i>psek-təwa</i> <sup>12</sup>	‘to take off a boot’
<i>məsək-w-ə-təwa</i>	‘to take off a shirt’
<i>qonay-təwa</i>	‘to take off trousers’
<i>ket-təwa</i>	‘to take off underclothes’
<i>wesoy-təwa</i>	‘to take off earmuffs’

(14) *t-ə-psek-təwa-rkən*  
1SG.SBJ-E-boot-take off-PRES  
‘I’m taking off my boots.’

(15) *tor-ket-təwa-ɣʔe-Ø*  
new-underclothes-take off-3SG.SBJ-AOR  
‘She takes off the new underclothes.’

*-təwa* sometimes being added to a nominal stem, derives transitive verbs as in (16).

(16) *q-ə-ket-təwa-ɣən*  
IMPER.2SG.SBJ-E-underclothes-take off-2SG.SBJ/3SG.OBJ.PF  
*nenenə*  
child(AB S.SG)  
‘Take off the child’s underclothes.’

H. *-tw*: 1) ‘to take off’, 2) ‘to cut off, to drop, to scrape’

*-tw* has two meanings: ‘to take off’ and ‘to cut off’. When it means ‘to take off’, there is no difference in meaning with the above mentioned suffix *-təwa*, and it also derives intransitive denominative verbs as in (17), (18).

<i>irʔ-ə-tw</i>	‘to take off a skin coat’
<i>kʔeli-tw</i>	‘to take off a cap’
<i>wətəsy-ə-wt</i>	‘to take off an overcoat’
<i>ukkensi-tw</i>	‘to take off a raincoat’
<i>məsək-w-ə-tw</i>	‘to take off a shirt’
<i>pamja-tw</i>	‘to take off socks’

<sup>12</sup> *psek* is an allomorph of *plek* ‘boot’.



- (17) *t-irʔ-ə-tw-ə-rkən*  
 1SG.SBJ-skin coat-E-take off-E-PRES  
 ‘I am taking off my skin coat.’
- (18) *ɲinqeɟ*                      *kʔeli-tw-ə-ɣʔi-Ø*  
 boy(ABS.SG)              cat-take off-E-3SG.SBJ-AOR  
 ‘The boy takes off his a cap.’

On the other hand, when it means ‘to cut off, to drop, to scrape’, it derives transitive denominative verbs as in (19), (20).

- |                  |  |
|------------------|--|
| <i>retem-tw</i>  | ‘to take the cover off of a Chukchi house’ |
| <i>lewt-ə-tw</i> | ‘to cut off a head’                        |
| <i>nely-ə-tw</i> | ‘to skin’                                  |
| <i>quly-ə-tw</i> | ‘to strip the bark from a tree’            |
| <i>təly-ə-tw</i> | ‘to scrape off scales’                     |
- (19) *ne-lewt-ə-tw-ə-net-Ø*                      *ənn-ə-t*  
 3PL.SBJ-head-E-cut off-E-3PL.OBJ-AOR      fish-E-ABS.PL  
 ‘They cut off fish heads.’
- (20) *q-ə-nely-ə-tw-ə-ɣən*  
 IMPER.2SG.SBJ-E-skin-E-flay-E-2SG.SBJ/3SG.OBJ.PF  
 ‘Flay a(the) reindeer carcass.’

### 2.2.2. Initiator affixes

A few lexical affixes added to notional subject to derive intransitive verbs are given bellow with examples.

- I. *-ɲəta* ‘to go to do something’
- |                                |                                       |
|--------------------------------|---------------------------------------|
| <i>oonʔə-nta</i> <sup>13</sup> | ‘to go to pick berries’               |
| <i>qora-nta</i>                | ‘to go to drive back a reindeer home’ |
| <i>meml-ə-nta</i>              | ‘to go to bring water’                |
| <i>pʔoɲ-ɲəta</i>               | ‘to go to pick mushrooms’             |
| <i>watam-ɲəta</i>              | ‘to go to pick reindeer moss’         |

<sup>13</sup> *-ɲəta* changes to *-nta* when it follows a vowel.

- (21) *t-ə-ra-meml-ə-nta-yʔa*  
 1SG.SBJ-E-FUT-water-E-go draw-1SG.SBJ.PF  
 ‘I will go to draw water.’
- (22) *ya-pʔoŋ-ŋəta-len*  
 PERF-mushroom-go pick-3SG.SBJ  
 ‘(S)he went to pick mushrooms.’

J. *-ture/-tore* ‘to come untied’

- |                      |                              |
|----------------------|------------------------------|
| <i>ŋily-ə-ture</i>   | ‘a strap becomes untied’     |
| <i>pənit-ture</i>    | ‘a string comes untied’      |
| <i>lewt-ə-ture</i>   | ‘to recover from a hangover’ |
| <i>kəttel-ture</i>   | ‘braids become untied’       |
| <i>utkusʔ-ə-ture</i> | ‘to get free from a trap’    |
- (23) *t-ə-lewt-ə-ture-yʔek-Ø*  
 1SG.SBJ-E-head-E-untied-1SG.SBJ-AOR  
 ‘I recovered from a hangover.’
- (24) *ŋewəsqet*                      *kəttel-ture-yʔi-Ø*  
 woman(ABS.SG)      braids-become untied-3SG.SBJ-AOR  
 ‘The woman’s braids became untied.’

K. *-ntet/-ntat* ‘to slip off, to break away, to fall off, to undo’

- |                      |  |
|----------------------|--|
| <i>yutily-ə-ntet</i> | ‘to get off the leash’                   |
| <i>mumkəl-ə-ntet</i> | ‘to lose a button’                       |
| <i>wiluly-ə-ntet</i> | ‘the falling off of an earring’          |
| <i>qooly-ə-ntat</i>  | ‘the breaking away of the harness’       |
| <i>rənn-ə-ntat</i>   | ‘the shredding of horns (of a reindeer)’ |
| <i>wann-ə-ntat</i>   | ‘the falling off of a tooth’             |
- (25) *ʔəttʔ-ə-n*                      *yutily-ə-ntet-yʔi-Ø*  
 dog-E-ABS.SG      leash-E-slip-3SG.SBJ-AOR  
 ‘The dog got off from the leash.’
- (26) *t-ə-wann-ə-ntat-yʔe-Ø*  
 1SG.SBJ-E-tooth-E-fall out-1SG.SBJ-AOR  
 ‘My tooth fell off.’

### 3. Noun incorporation

In Chukchi, in order to express the relationship between argument and predicate, besides making use of lexical affixes, noun incorporation is also used as a productive process, and in fact is one of the most important morphosyntactic processes in the language, thus Chukchi is characterized typologically as an 'incorporating language' (Skorik 1961:95, Zhukova 1965:156)<sup>14</sup>.

In Chukchi, there are various types of noun incorporation: besides the objective and intransitive subjective types which are the most popular, there are also a number of adjunct incorporation types, that is, instrumental, comitative, locational, directional, predicate subjective and predicate objective types. The transitive subjective type such as seen in Ainu (Sato 1992:196-197) is not observed in Chukchi. Although, according to Sapir (1911:275), animate nouns do not seem to be incorporated as often as inanimate nouns, they may also be incorporated in Chukchi. A few examples of loanword incorporation are also observed.

The incorporative process is not limited to a single noun. Multiple incorporation is also common, such as those of attributive noun complexes, possessive noun phrases, relational noun phrase, and two noun stems which have different syntactic relationships with the verb stem.

An incorporated noun stem always precedes an incorporated verb stem.

Noun incorporation always has its corresponding analytical forms which appear as free-standing nouns, unincorporated into the verb stem. Although a clear line is not always easy to draw between them, a few pragmatic differences, for example, that of general activity (noun incorporation) and specific activity (analytical form) can be observed.

Of these various types of noun incorporation, I will describe here only the transitive objective and intransitive subjective types which are relevant for the following discussion on the correspondence between denominative verbs and noun incorporation in Section 4<sup>15</sup>.

#### 3.1. Transitive object

The transitive objective type of noun incorporation is the most common in

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<sup>14</sup> But the productivity of Chukchi noun incorporation is not always understood accurately; for example, Comrie (1981:250) indicates that while this syntactic device is very common in traditional tales, it is much less frequent in current writing, and virtually absent in translations from Russian, i.e. incorporation seems to be on the wane in the modern language. However, according to my observation, noun incorporation is still used productively in Chukchi.

<sup>15</sup> For further details of noun incorporation in the Western dialect of Chukchi, see Kurebito (1998a).

Chukchi. As indicated in Section 1, Chukchi has a valency alternation in which an oblique-case-marked nominal is raised to a direct object and thus given the absolutive case. So, when the object is incorporated, the whole incorporative verb complex becomes intransitive and the subject, which has been marked with the ergative case in the corresponding analytical forms, is raised to the absolutive.

In the following, (a) are examples of noun incorporations and (b) are corresponding analytical forms.

- (27a) *əlləy-ə-n*                      *ɲekk-ɪmti-ɣʔi-∅*  
 father-E-ABS.SG    daughter-carry on the back-3SG.SBJ-AOR  
 ‘The father carried his daughter on his back.’

- (27b) *əlləy-e*                      *ɪmti-nin-∅*  
 father-ERG    carry on the back-3SG.SBJ/3SG.OBJ-AOR  
*ɲekkək*  
 daughter(ABS.SG)  
 ‘The father carried his daughter on his back.’

- (28a) *əllʔa-ta*                      *nenenə*                      *miməl-jəl-nin-∅*  
 mother-ERG    child (ABS.SG)    water-give-3SG.SBJ/3SG.OBJ-AOR  
 ‘The mother gave water to the child.’

- (28b) *əllʔa-ta*                      *nanana-ɣtə*<sup>16</sup>    *jəl-nin-∅*  
 mother-ERG    child-DAT    give-3SG.SBJ/3SG.OBJ-AOR  
*miməl*  
 water(ABS.SG)  
 ‘The mother gave water to the child.’

### 3.2. Intransitive subject

The intransitive subjective type of noun incorporation is far less frequent than the transitive objective type. Most incorporated nouns are non-agentive, denoting things such as natural phenomena.

The examples in (a) below indicate noun incorporation, while the examples in (b) are their corresponding analytical forms.

<sup>16</sup> In this word, the noun stem *nenene* ‘child’ is a recessive morpheme, while the following suffix *-ɣtə* is a dominant morpheme, resulting in a change from *nenene* to *nanana*.

- (29a) *emnuŋ-kə n-ə-penjoly-ə-nlat-qen*  
 tundra-LOC IMPF-E-fire-E-burn-3SG.SBJ  
 ‘In the tundra a fire is (often) burning.’
- (29b) *ŋanqen penjoly-ə-n n-ə-nlet-qin*  
 there fire-E-ABS.SG IMPF-E-burn-3SG.SBJ  
 ‘The fire is burning over there.’
- (30a) *elə-paa-yʔe-Ø*  
 rain-stop-3SG.SBJ-AOR  
 ‘The rain has stopped.’
- (30b) *iliil paa-yʔe-Ø*  
 rain(ABS.SG) stop-3SG.SBJ-AOR  
 ‘The rain is stopping.’

#### 4. Correspondence between lexical affixes and free-standing verbs

Most of the Chukchi lexical affixes enumerated in the preceding section have corresponding free-standing verbs with similar meanings. However, sometimes there is no one to one correspondence. For example, the suffix *-tw* corresponds to free-standing verbs *jət* ‘to take’, *swi* ‘to cut off’ and *ell* ‘to scrape’.

Lexical affixes	Free-standing verbs	
<i>te-...-ŋ / ta-...-ŋ</i>	<i>tej</i>	‘to make’
<i>-u / -o</i>	<i>ru</i>	‘to eat’
<i>-yili / -yele</i>	<i>lqərir</i>	‘to look for’
<i>-nŋe / -nŋa</i>	<i>rku</i>	‘to get’
<i>-təwa</i>	<i>jət</i>	‘to take off’
<i>-tw</i>		‘to take off, to cut off, to scrape off’
—	<i>jət</i>	‘to take off’
—	<i>swi</i>	‘to cut off’
—	<i>ell</i>	‘to scrape off’
<i>-ŋəta</i>	<i>jət</i>	‘to go to’
<i>-ture / -tora</i>	<i>ŋəto</i>	‘to escape’
<i>-ntet / -ntat</i>	<i>ŋət</i>	‘to fall off’

Between the lexical affixes and their corresponding free-standing verbs, the following correspondences can be observed.

1) When denominative verbs are formed by lexical affixes, their corresponding free-standing verbs cannot incorporate nominal stems. And only analytical forms are permissible.

The following example of the denominative verb formed by the lexical suffix *-a* (31a) is illustrative.

- (31a) *q-ə-kawkaw-o-ye*  
 IMPER.2SG.SBJ-E-bread-eat-2SG.SBJ.PF  
 ‘Eat bread.’

The analytical is formed by the corresponding free-standing verb *nu* (an allomorph of *ru*) (31b).

- (31b) *q-ə-nu-γən* *kawkaw*  
 IMPER.2SG.SBJ-E-eat-2SG.SBJ/3SG.OBJ.PF bread(ABS.SG)  
 ‘Eat the bread.’

Noun incorporation is not permitted in (31c) as *no* ‘to eat’ (an allomorph of *ru*) is a free-standing verb and cannot incorporate.

- (31c) \**q-ə-kawkaw-no-ye*  
 IMPER.2SG.SBJ-E-bread-eat-2SG.SBJ.PF

Note that the lexical suffix *-o* is notionally transitive but that the whole denominative verb is intransitive in its conjugation. This morphosyntactic behavior interestingly corresponds to that of the transitive objective type of noun incorporation. Also note that the pragmatic difference between (31a) and (31b) is just the same as that between noun incorporation and analytical form, that is, general activity vs. particular activity.

Therefore, denominative verbs are both syntactically and pragmatically equivalent to noun incorporation. In noun incorporation the whole incorporating verb complex becomes intransitive and the subject which has been marked with the ergative case in the corresponding analytical form is raised to the absolutive as seen in the following examples of noun incorporation in (32a). Compare this with the corresponding analytical form in (32b) whose verb is transitive in conjugation and hence the subject is case-marked ergative.

- (32a) *yəm t-utt-ə-mle-yʔek-Ø*  
 I(ABS) 1SG.SBJ-stick-E-break-1SG.SBJ-AOR  
 ‘I broke a stick.’
- (32b) *yəm-nan t-ə-mle-yʔen-Ø ott-ə-lyən*  
 I-ERG 1SG.SBJ-E-break-3SG.OBJ-AOR stick-E-ABS.SG  
 ‘I broke the stick.’

From these two examples it seems clear why noun incorporation is not permissible when its corresponding denominative is formed: they are in complementary distribution.

In the following examples from (33) to (38), the remaining denominative verbs are given in (a), their corresponding analytical forms with free-standing verbs in (b), and ungrammatical noun incorporations are given in (c).

- (33a) *əllon qora-nta-yʔe-Ø*  
 (S)he(ABS) reindeer-to go to drive-3SG.SBJ-AOR  
 ‘(S)he went to drive the reindeer back home.’
- (33b) *ə-nan jən-nenat-Ø qora-t*  
 (S)he-ERG to go to drive-3SG.SBJ/3PL.OBJ-AOR reindeer-ABS.PL  
 ‘(S)he went to drive the reindeer back home.’
- (33c) \**əllon qora-jət-yʔe-Ø*  
 (S)he(ABS) reindeer-to go to drive-3SG.SBJ-AOR
- (34a) *t-ə-ra-nja-yʔak-Ø*  
 1SG.SBJ-Chukchi house-get-1sg.SBJ-AOR  
 ‘I got a Chukchi house.’
- (34b) *t-ə-rku-yʔen-Ø jara-ŋə*  
 1SG.SBJ-E-get-3SG.OBJ-AOR Chukchi house-ABS.SG  
 ‘I got a Chukchi house.’
- (34c) \**t-ə-ra-rko-yʔak-Ø*  
 1SG.SBJ-E-Chukchi house-get-1SG.SBJ-AOR
- (35a) *t-ə-psek-təwa-rkən*  
 1SG.SBJ-E-boot-take off-PRES  
 ‘I take off my boots.’

- (35b) *t-ə-ɣt-ə-rkən-et*<sup>17</sup> *plek-ə-t*  
 1SG.SBJ-E-take off-E-PRES-3PL.OBJ boot-E-ABS.PL  
 ‘I take off my boots.’
- (35c) \**t-ə-psak-jt-ə-rk-ə-net*  
 1SG.SBJ-E-boot-take off-E-PRES-E-3PL.OBJ
- (36a) *allon* *psek-təwa-ɣʔe-Ø*  
 (S)he(ABS) boot-take off-3SG.SBJ-AOR  
 ‘(S)he took off her/his boot.’
- (36b) *ə-nan* *jən-ninet-Ø* *plek-ə-t*  
 (S)he-ERG take off-3SG.SBJ/3PL.OBJ-AOR boot-E-ABS.PL  
 ‘(S)he took off her/his boots.’
- (36c) \**allon* *pəlek-jət-ɣʔi-Ø*  
 (S)he(ABS) boot-take off- 3 SG.SBJ-AOR
- (37a) *t-ə-wiluly-ə-ntet-ɣʔek-Ø*  
 1SG.SBJ-E-earring-E-lost-1SG.SBJ-AOR  
 ‘My earring is lost.’
- (37b) *ɣəm-nin* *wiluly-ə-n* *ɣət-ɣʔi-Ø*  
 I-POSS earring-E-ABS.SG lost-3SG.SBJ-AOR  
 ‘My earring is lost.’
- (37c) \**t-ə-wiluly-ə-ɣət-ɣʔek-Ø*  
 1SG.SBJ-E-earring-E-lost-1SG.SBJ-AOR
- (38a) *əllʔa* *ɣəm-əkə* *t-irʔ-ə-ɣ-ɣʔi-Ø*  
 mother(ABS.SG) I-DAT make-skin coat-E-make-3SG.SBJ-AOR  
 ‘Mother made me a skin coat.’
- (38b) *əllʔa-ta* *ɣəm* *tejk-ə-nin-Ø*  
 mother-ERG I(ABS) make-E-3SG.SBJ/3SG.OBJ-AOR  
*irʔ-ə-n*  
 skin coat-E-ABS.SG  
 ‘Mother made me the skin coat.’
- (38c) \**əllʔa-ta* *ɣəm-əkə* *irʔ-ə-tejk-ə-ɣʔi-Ø*  
 mother-ERG I-DAT skin coat-E-make-E-3SG.SBJ-AOR

<sup>17</sup> *ɣt* is an allomorph of *jət* ‘take off’.



2) Some denominative verbs derived by lexical affixes parallel the corresponding noun incorporating verbs. Although their nuances are somewhat different, functions seem to be equivalent, as shown in (39a), (39b) and (40a), (40b).

- (39a) *jatjol utkusʔ-ə-ture-γʔi-∅*  
fox(ABS.SG) trap-E-to escape-3SG.SBJ-AOR  
‘The fox got free from a trap.’
- (39b) *jatjol otkosʔ-ə-nto-γʔe-∅*  
fox(ABS.SG) trap-E-to escape-3SG.SBJ-AOR  
‘The fox escaped from a trap.’
- (40a) *q-ə-təly-ə-tw-ə-γən*  
IMPER.2SG.SBJ-E-scale-E-scrape off-E-2SG.SBJ/3SG.OBJ.PF  
*ksaw*  
grayling(ABS.SG)  
‘Skin the grayling.’
- (40b) *q-ə-təly-all-ə-γən*  
IMPER.2SG.SBJ-E-scale-E-scrape off-E-2SG.SBJ/3SG.OBJ.PF  
*ksaw*  
grayling(ABS.SG)  
‘Scrape off the scales from the grayling.’

There are cases where a denominative verb (41a) and noun incorporation (41b) coexist too, the lexical suffix *-tw* and the free-standing verb *swi* both meaning ‘cut off’. In this case, some aspectual difference, that is, perfective vs. durative, can be observed between them. As mentioned above, *-tw* meaning ‘to cut off’ unexpectedly derives a transitive denominative verb. However, it is not clear for the moment if there is any correspondence between its unexpected conjugation and the coexistence of the denominative verb and noun incorporation.

- (41a) *ənneen ye-lewt-ə-tw-ə-lin*  
fish(ABS.SG) PERF-head-E-cut off-E-3SG.OBJ  
‘(S)he cut off a fish’s head.’
- (41b) *ənneen ye-lewt-ə-swi-lin*  
fish(ABS.SG) PERF-head-E-cut off-3SG.OBJ  
‘(S)he cut off a fish’s head.’

- (41c)    *ann-en*            *lewət*                    *ye-swi-lin*  
           fish-POSS        head(ABS.SG)        PERF-cut off-3SG.OBJ  
           ‘(S)he cut off the fish’s head.’

3) Some verbal ideas, for example, ‘to gather’ and ‘to catch, to hunt’ are expressed only by lexical affixes and have no corresponding free-standing verbs as in (8), (9), (10) and (11).

### 5. Final remarks

In this paper we have examined the semantic and pragmatic relationship between the lexical affixes and their corresponding free-standing verbs in Chukchi.

Up until now there has been limited investigation into the nature of Chukchi lexical affixes. Therefore, lexical affixes have not been clearly differentiated from free-standing verbs.

Our observations may be summarized as follows:

- 1) The affixed verbs behave quite similarly to the free-standing verbs in noun incorporation constructions.
- 2) The lexical affixes and corresponding free-standing verbs are in complementary distribution with each other.
- 3) In the word formation, the lexical affixation of denominative verbs is a distinctly different process from noun incorporation.

The data presented in this paper seem sufficient to provide a direction in this matter. Further data and analysis will definitely provide more insights and we hope that they will test the validity of own hypothesis.

### Abbreviations

ABS	absolutive	OBJ	object
AOR	aorist	PERF	perfect
DAT	dative	PF	perfective
E	epenthesis	PL	plural
ERG	ergative	POSS	possessive
FUT	future	PRES	present
IMPER	imperative	SBJ	subject
IMPF	imperfect	SG	singular
LOC	locative		

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