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An Outline of Valency-Reducing Operations in Chukchi

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This paper is an exploration of the valency-reducing operations in Chukchi. Our purpose is to deepen our theoretical understanding of the voice system in Chukchi, focusing on the morphological processes that mark the relationship between intransitive verbs and transitive verbs: the antipassive, the reflexive and the anticausative.

In Chukchi, noun incorporation is also related to valency-reducing operations. When an object is incorporated into the verb stem, the number of core arguments the verb takes is reduced by one, and the verb is detransitivized. So, we will also briefly introduce object incorporation in Chukchi.

Key words: Chukchi, transitive, intransitive, antipassive, anticausative, reflexive, object incorporation

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1. Introduction

Chukchi, belonging to the Chukchi-Kamchatkan language family, is spoken by about 6400 people living mainly on Chukotka and its adjacent areas in far northeast Siberia, of the Russian Federation.

In the present paper, I will examine the valency-reducing operations in Chukchi, that is to say to outline the relationship between intransitive and transitive verbs. Data are from my
fieldwork on Chukchi.

The valency-increasing operation is more than a valency-reducing operation. The morphological causative not only applies to intransitive verbs, but also applies to transitive verbs. Besides transitive formation from intransitive verbs, there are two ways to increase valency: the morphological causative and the analytic causative. The morphological causative is the most productive.

Previous studies have described and discussed the antipassive, such as Nedjalkov (1979) and Kozinsky et al. (1993), but little substantial work has been done on the anticausative so far. I have described the valency-increasing operations in detail, but only briefly touched upon valency-reducing operations (Kurebito 2008a and 2008b).

Chukchi has valency-reducing derivations as well as valency-increasing ones. There are three types of valency-reducing derivations in Chukchi: the antipassive, the reflexive, and the anticausative. These forms are derived by adding the prefix ine- (its allomorphs are ine-/-ena-), and the suffixes -tku (its allomorphs are -tku/-tko), -twa and -et (its allomorphs are -et/-at) to a transitive verb stem.

2. Chukchi as a polysynthetic language

Chukchi is an absolutive-ergative language. The subject of an intransitive verb and the direct object of a transitive verb take the absolutive case, while the subject of a transitive verb takes the ergative case. Chukchi does not have a distinct ergative marker. The instrumental case marker has the same form as the ergative case marker.

Intransitive verbs in Chukchi agree with the subject (S), and transitive verbs agree with the subject (S/A) and object (O/IO) 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.

Chukchi is a polysynthetic language, structurally very complex. Two or more word stems can combine into one word, or many affixes may occur in a single word. Sometimes a word in Chukchi may be the functional equivalent of a whole sentence in another language. See the following two examples.

(1) t-ə-kuk-iməl-nilu-y?ek-Ø
   1SG.S E-pot-water-wash-1SG.S-PAST
   ‘I washed out the pot with water.’

(2) n-ə-lye-ra-ŋaw-ə-n-rayt-an-ŋ-ə-gen
   IMPF-E-very-want-woman-E-TR-go home-TR-want-E-3SG.S
   ‘He really wants to bring the woman home.’

In (1), the transitive object kuk ‘cookpot’ and the instrument iməl ‘water’ are incorporated into the transitive verb nilu ‘wash’. This incorporative complex verb is inflectable as an intransitive. (2) also has the core argument reduced, with the whole complex word inflectable as an intransitive. But it’s structure is different from (1): to the basic verb stem rayt ‘go home’.
the circumfix r-...-an (< r-...-at) is added, and the transitive verb ‘to bring’ is derived, with the object noun ɣaw ‘woman’ incorporated into the new transitive verb. Moreover, the lexical circumfix ra-...-γ ‘to want’ is added to this incorporative complex word.

In Chukchi, there are some affixes which express substantive concrete verbal meanings, such as the circumfix ra-...-γ ‘to want’ above, that in other languages would occur as independent words. In the following example, -ɣarke ‘gather’ functions as a free-standing verb.

(3) łaγe-wdej-ɣarke-lget-ʔet-Ø
very-grass-gather-much-3SG.S-PAST
‘They gathered a lot of grass.’

3. Verb classes

Chukchi has three classes of verbs: intransitive verbs, which are inflectable only as intransitives, but can be used transitively when they take valency-increasing morphological marking (e.g., jolqet ‘sleep’); transitive verbs, which are inflectable only as transitives, but can be used intransitively when they take valency-reducing morphological marking (e.g., piri ‘catch’); and ambitransitives (or labile verbs), which are inflectable either way, and can be used as transitives and intransitives without morphological change (e.g., mle ‘break’). (4) and (5) are examples of verbs that have been made intransitive/transitive by the addition of morphological marking.

(4) ɣingej ats-œ-γe-Ø
boy.(ABS.SG) hide-3SG.S-PAST
‘The boy hid.’

(5) ɣingej t-œ-γ-atse-γat-γan-Ø
boy.(ABS.SG) 1SG.S-TR-hide-1SG.O-PAST
‘I made the boy hide.’

Chukchi does not have a benefactive marker. But intransitive verbs can be used as transitive verbs when they have to express a beneficiary meaning. Compare the following two sentences.

(6) ʔallʔa puture-γi-Ø
mother.(ABS.SG) sing-3SG.S-PAST
‘The mother sang a song’

(7) ʔallʔa-ta puture-ni-Ø nenena
mother-ERG dance-3SG.S/3SG.O-PAST child.(ABS.SG)
‘The mother danced for the child.’

In (6), puture ‘dance’ is an intransitive verb, but if the speaker needs to express a benefi-


The verb is used in a beneficiary meaning such as (7), the verb can be inflected as a transitive.

What must be noted is that not all intransitive verbs can be inflected as transitives to express a beneficiary meaning. So we must determine what kind of intransitive verbs can express beneficiary meaning and what kind of intransitive verbs can not express a beneficiary meaning.

See the examples of intransitive and transitive verb in Table 1 above.

Note that Chukchi has suppletive verb pairs which are synonymous. Their only difference is that one stem is transitive and the other is intransitive. Examples are listed in Table 1 above. For example, *gametwa* ‘eat (intr)’ vs. *ru* ‘eat (tr)’, *ikwisi* ‘drink (intr)’ vs. *pl* ‘drink (tr)’, *qt* ‘go (intr)’ vs. *jt* ‘go (tr)’, *wanye* ‘saw (intr)’ vs. *tni* ‘saw (tr)’, and *uwi* ‘boil (intr)’ vs. *apati* ‘boil (boil)’ are all synonymous, differing only in transitivity. These suppletive verbs cannot change their transitivity by adding morphological affixes as shown in the following two examples (8) and (9).

(8) *q-ə-gametwa-ye*

IMPR.2SG-E-eat-2SG.S  
‘You eat.’

(9) *q-ə-nu-wən*

IMPR.2SG-E-eat-2SG.S/3SG.O  
‘You eat it.’

Table 2 shows a group of ambitransitive verbs in Chukchi. As we mentioned above, Chukchi transitive verbs and intransitive verbs are inflected differently from each other. So, these ambitransitive verbs can be identified as transitive or intransitive by their inflectional affixes.

The following two examples of the ambitransitive verb *mle* ‘break’ show this verb
### Table 2

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<th>Ambitransitive (labile) verbs</th>
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inflected as an intransitive in (10), and inflected as a transitive in (11).

(10) **ott-ə-lyən mle-γʔi-Ø**  
     stick-E-ABS.SG break-3SG.S-PAST  
     ‘The stick broke.’

(11) **t-ə-mle-γʔen-Ø ott-ə-lyən**  
     1SG.S-EN-break-3SG.O-PAST stick-E-ABS.SG  
     ‘I broke the stick.’

According to Kozinsksy et al. (1988: 660), the ambitransitive (labile) verbs comprise about 15% (ca. 300 items) of the Chukchi verbal lexicon.

### 4. Object incorporation and valency change

As we mentioned above, the noun incorporative formation is very productive in Chukchi. Object incorporation is the most frequent type. When an object is incorporated into the verb stem, losing the status of a syntactic argument, the number of core arguments the verb takes is reduced by one, and the whole incorporative complex predicate takes an intransitive marker. Compare the following transitive sentence (12a) and intransitive sentence (12b).

(12a) **ʔətt-e piri-nin-Ø melota-lyən**  
     dog-ERG catch-3SG.S/3SG.O-PAST hare-ABS.SG  
     ‘The dog caught the hare.’

(12b) **ʔətt-ə-n milute-piri-γʔi-Ø**  
     dog-E-ABS.SG hare-catch-3SG.S-PAST  
     ‘The dog caught a hare.’

In (12a), the object *melota* ‘hare’ takes the absolutive case, while the subject ʔətt ‘dog’ takes the ergative case. But in (12b), the object *milute* ‘hare’ is incorporated into the verb *piri* ‘catch’. So the valency has changed, and the verbal complex is inflected as an intransitive. Compare the following two causative sentences.
(13a) ɲingej  t-ə-n-terya-k-wʔan-Ø
boy.(ABS.SG) 1SG.S-E-CAUS-cry-E-CAUS-3SG.O-PAST
‘I made the boy cry.’

(13b) t-ə-ŋenqaj-ə-n-terya-k-wʔak-Ø ¹
1SG.S-E-boy-E-CAUS-cry-E-CAUS-1SG.S-PAST
‘I made a boy cry.’

In (13a), the direct object (causee) ɲingej ‘boy’ is not incorporated into the verb stem terya ‘cry’. In contrast, in (13b), the direct object (causee) ŋenqaj ‘boy’ is incorporated into the verb stem terya ‘cry’. So, the number of core arguments is reduced, and the verbal complex is inflected as an intransitive.

If a ditransitive verb takes both a direct and an indirect object, only the direct object can be incorporated into the verb, in which case the logical indirect object is promoted to direct object. Thus, the valency does not change in this situation. See the following pair.

(14a) ʔallʔat-a  nanan-ytə ⁵ jəl-nin-Ø  miməl
mother-ERG  child-DAT  give-3SG.S/3SG.O-PAST  water.(ABS.SG)
‘Mother gave the water to the child.’

(14b) ʔallʔat-a  neneno  miməl-ə-jəl-nin-Ø
mother-ERG  child.(ABS.SG)  water-E-give-3SG.S/3SG.O-PAST
‘Mother gave some water to the child.’

These two examples are both transitive sentences. In (14a), the three-place verb jəl ‘give’ takes the direct object miməl ‘water’, which is marked by the absolutive case, and the indirect object nananə ‘child’, which is marked by the dative case. In contrast, in (14b) the direct object miməl ‘water’ is incorporated into the verb stem jəl ‘give’, and the indirect object nananə (< neneno) ‘child’ is promoted to the direct object, which we know because it is marked by the absolutive case. In (14b), although one core argument (direct object) is reduced, another core argument (indirect object) is left. Thus, the valency does not change in (14b).

Note that, also in possessive incorporation, the head noun is incorporated, while the modifier is left out of the incorporative complex, and is marked by absolutive case, being raised to object. So the valency does not change. Compare the following two examples (15a) and (15b).

(15a) neneno-in  məny-ə-t  t-ə-ytew-net-Ø
child-POSSESS  hand-E-ABS.PL  1SG.S-E-wipe-3PL.O-PAST
‘I wiped the child’s hands.’

(15b) t-ə-məny-ə-ytak-wʔan-Ø
1SG.S-E-hand-E-wipe-3SG.O-PAST  neneno  child.(ABS.SG)
‘I wiped a child’s hands.’
5. Valency-reducing operations

Chukchi does not have passives, but there are three types of valency-reducing operations: the antipassive, the reflexive and the anticausative. These are formed by adding the prefix in(e) -, the suffix -tku, the suffix -twa and the suffix -et to a transitive verb stem. We will demonstrate the details below.

5.1. Antipassive

Antipassive is most common in Chukchi. There are two ways to mark antipassive: the prefix -in(e) and the suffix -tku. See the examples in Table 3 below.

In an antipassive (intransitive) sentence, the subject is in the absolutive case, while the object is in an oblique case (instrumental, locative or dative). See the transitive sentences and the corresponding antipassive sentences below.

(16a) tuny-e rəlwen-nin-Ø nely-ə-n
friend-ERG burn-3SG.S/3SG.O-PAST skin=E-ABS.SG
‘The friend burned the skin.’

(16b) tunyətum ine-nlwet-ɣi-Ø nely-e
friend.(ABS.SG) AP-burn-3SG.S-PAST skin-INS
‘The friend burned a skin.’

(17a) əlly-e konʔu-nin-Ø peswaaq
father-ERG catch-3SG.S/3SG.O-PAST female.reindeer.(ABS.SG)
‘The father caught the female reindeer.’

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<tr>
<th>Transitive</th>
<th>Antipassive</th>
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<tr>
<td>ejmiit</td>
<td>in-ejmi</td>
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<td>rlwet</td>
<td>ine-rlwet</td>
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<tr>
<td>piri</td>
<td>ine-piri</td>
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<tr>
<td>ʔemem</td>
<td>ine-ʔemem</td>
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<tr>
<td>ʔəʔu</td>
<td>ine-ʔəʔu</td>
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<tr>
<td>knʔu</td>
<td>ine-knʔu</td>
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<tr>
<td>penr</td>
<td>penr-tku</td>
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<tr>
<td>tenti</td>
<td>tenti-tku</td>
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<tr>
<td>iltyew</td>
<td>iltyew-tku</td>
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<tr>
<td>pelo</td>
<td>pelo-tku</td>
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<tr>
<td>kpl</td>
<td>kpl-tku</td>
</tr>
<tr>
<td>ukwet</td>
<td>ukwet-tku</td>
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<tr>
<td>swi</td>
<td>swi-tku</td>
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</tbody>
</table>
Although (16a) and (17a), which are transitive sentences, and (16b) and (17b) which are antipassive sentences with ine- are similar in meaning, there are a few pragmatic differences: the most obvious difference is that the transitive has a definite meaning and the antipassive has an indefinite meaning. Why these two example marked by different case marking is a yet unsettled question.

In the following pair of examples, the transitive sentences are in (18a), (19a) and the corresponding antipassive sentences are found in (18b), (19b) with -tko. There are also a few pragmatic differences between the transitive sentence and the antipassive sentence as for the antibassive with in(e)-.

(18a) ?att?-e penr-ə-nen-Ø melot-ə-ɣən
  dog-ERG rush-3SG.3SG.Ø-PAST hare-ABS.SG
  ‘The dog rushed the hare.’

(18b) ?att?-ə-n penr-ə-tko-ɣə-Ø melot-ə-yə
  dog-ABS.SG rush-AP-3SG.3SG-PAST hare-DAT
  ‘The dog rushed to a hare.’

(19a) qora-ta tenti-nin-Ø rewəmrew
reindeer-ERG tread-3SG.Ø-PAST stone.(ABS.SG)
  ‘The reindeer trod on the stone.’

(19b) qora-ŋə tenti-tku-ɣi-Ø rewəm-ə-k
reindeer-ABS.SG tread-AP-3SG-PAST stone-LOC
  ‘The reindeer trod on stone.’

In Chukchi, the causative formation can use the circumfix te-...-ŋ⁰, etymologically related to ‘make’. The use of this circumfix as a causative marker is semantically parallel the English analytic causative ‘make’ and French ‘faire’. However, this circumfix cannot be added to a transitive verb stem directly. Note that te-...-ŋ must be added after the transitive prefix r- is first added to the intransitive verb stem. For example, wakʔo ‘sit down’ vs. te-r-wakʔo-ŋ ‘make to sit down’, jilqet ‘sleep’ vs. te-r-jilqet-ŋ ‘make to sleep’.

It is interesting that there is another antipassive in Chukchi. Thus antipassive marker in(e)- and the causative marker te-...-ŋ are added to the intransitive verb stem. This antipasive functions causatively but is not as strong as the normal causative. See Table 4 for some examples of the causative formation and the antipassive formation.

In the following examples, (20a) and (21a) in an antipassive (intransitive) sentence, the subject is in the absolutive case, while the object is in an oblique case. See the transitive sentences (20a) and (21a) and the corresponding antipassive sentences which function causa-
tively in (20b) and (21b), respectively.

(20a) allʔa-ta  te-n-waŋe-y-nen-Ø  ʔeekək
mother-ERG   CAUS-TR-SEW-CAUS-3SG.S/3SG.O-PAST   daughter.(ABS.SG)
‘The mother made her daughter (to) sew.’

(20b) allʔa  te-en-a-waŋe-ŋ-ʔe-Ø  ʔaaka-ʔtə
mother.(ABS.SG)  CAUS-AP-TR-SEW-CAUS-3SG.S-PAST   daughter-DAT
‘The mother had her daughter (to) sew.’

(21a) allʔe  te-n-jen-ŋ-a-rk-a-nin-Ø  ʔekə
father-ERG   CAUS-TR-come-CAUS-E-PRES-3SG.S/3SG.O   son.(ABS.SG)
‘The father makes his son come.’

(21b) allʔe-ŋ-a  t-ine-n-jen-ŋ-a-rkən  akka-ʔtə
‘The father had his son come.’

5.2. Reflexive
An other type of valency-reducing derivation is the canonical reflexive. The reflexive is formed by adding the suffix -et and -tku to a transitive verb stem, just as with the antipassive construction. See examples in Table 5.

An example of a transitive sentence is seen in (22a), with its corresponding reflexive sentence in (22b), with the added morpheme -tku.

(22a) t-a-lpiw-y?en-Ø  otto-ləən
1SG.S-E-cut-3SG.O-PAST   WOOD-E-ABS.SG
‘I cut the wood.’

(22b) t-a-lpiw-tku-y?ek-Ø
1SG.S-E-cut-REFL-1SG.S-PAST
‘I cut myself.’
5.3. Anticausative

Another type of valency-reducing derivation is the anticausative. These forms are derived by adding the prefix -ine (its allomorphs are -ine/-ena), and the suffixes -tku (its allomorphs are -tku/-tko), -twa and -et (its allomorphs are -et/-at) to a transitive verb stem, see Table 6 below.

Originally, -twa is a free-standing verb and means ‘to be’. The following example clearly shows that this is not a suffix but a free-standing verb.

(23) minŋka n-ŋ-twa-tore
    where impi-ŋ-be-2PL.s
    ‘Where are you (PL)?’

The following examples, (24a) and (25a) are transitive sentences. In contrast, in (24b) and (25b), the agent is removed from the structure and the sentences become intransitive.

(24a) əllʔa-ta  uwi-rk-ŋ-nin  annee
       mother-ERG   boil-PRES-E-3SG.s/3SG.o   fish.(ABS.SG)
       ‘The mother in cooking the fish.’

(24b) annee  owe-twa-rk-ŋ-n
       fish.(ABS.SG)   boil-AC-PRES-E-3SG.s
       ‘The fish is cooked.’

Table 6

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<thead>
<tr>
<th>Transitive</th>
<th>Anticausative</th>
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<tbody>
<tr>
<td>jme</td>
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<tr>
<td>jl</td>
<td>‘give’</td>
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<td>rpʔaw</td>
<td>‘dry’</td>
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<td>piri</td>
<td>‘hold’</td>
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<td>ret</td>
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<td>jp</td>
<td>‘wear’</td>
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<td>pinŋku</td>
<td>‘put out’</td>
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Table 7

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<th>Transitive</th>
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<td>‘leave (intr)’</td>
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<td>elp</td>
<td>‘close’</td>
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<td>elp-</td>
<td>‘close (intr)’</td>
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<tr>
<td>tejuy</td>
<td>‘divide’</td>
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<tr>
<td>tejuy-</td>
<td>‘divide (intr)’</td>
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(25a) allenjut-e  jop-rk-ə-nen  yəm-nin  məsəkw-ə-n
younger.brother-ERG wear-PRES-E-3SG,S/3SG,O I-POSS shirt-E-ABS.SG
‘The younger brother is wearing my shirt.’

(25b) yəm-nin  məsəkw-ə-n  jop-ə-twa-rk-ə-n
I-POSS  shirt-E-ABS.SG  wear-E-AC-PRES-E-3SG,S
‘My shirt is being worn (by somebody).’

So far, we have found just three transitive verbs that may appear as anticausative verbs formed by adding the suffix -et. These are shown in Table 7.

See the following examples where (26b) and (27b) — as with (24b), and (25b) — the agent is removed from the structure and the sentences become intransitive.

(26a) t-ə-pela-y?en-Ø  ekək-Ø
1SG,S-E-leave-3SG,O-PAST  son-ABS.SG
‘I left the son.’

(26b) ekək-Ø  pela-t-y?e-Ø
son-ABS.SG  leave-AC-3SG,S-PAST
‘The son stayed.’

(27a) t-ejp-y?en-Ø  qeryəs?q-ə-n
1SG,S-close-3SG,O-PAST  window-E-ABS.SG
‘I closed the window.’

(27b) qeryəs?q-ə-n  ejp-et-y?i-Ø
window-E-ABS.SG  close-AC-3SG,S-PAST
‘The window closed.’

6. Final remarks

In this paper, I have examined the valency-reducing operations in Chukchi. Chukchi has valency-reducing derivations as well as valency-increasing ones. There are three valency-reducing derivations: antipassive, reflexive and anticausative. The antipassive appears to be unique in that it originates in the causative form while also retaining a weakened causative meaning.
The data presented in this paper seems sufficient to provide a direction in the study of voice in Chukchi. Through our study of valency-reduction in Chukchi, we can deepen our theoretical understanding of the voice system of Chukchi, and thus, increase our knowledge of morphosyntactic processes. Further data and analysis will definitely provide more insights.

Abbreviations

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<tr>
<th>Abbreviation</th>
<th>Meaning</th>
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<td>SG</td>
<td>singular</td>
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<td>TR</td>
<td>transitivizer</td>
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</table>

Notes

1) The phonemic inventory of Chukchi is as follows: Short vowels: /i, e, a, o, u, ʁ/, Long vowels: /ii, ee, aa, oo, uː/, Consonants: /p, t, k, q, ?, s, y, w, j, r, l, m, n, ʁ/. Chukchi has vowel harmony. Leaving aside the neutral vowel /ʁ/, the vowels can be divided into two groups on the basis of vowel harmony, by using the articulatory feature of high vs. low. In vowel harmony, the lower of a pair of vowels is ‘dominant’, and the higher of a pair of vowels is ‘recessive’, as seen here: Dominant vowels: /e, a, o, ee, aa, oo/, Recessive vowels: /i, e, u, ii, ee, uu/. If a word contains at least one morpheme with dominant vowels, then all morphemes with recessive vowels must be changed into the corresponding dominant ones (i.e., e > o, u > o), irrespective of whether they are root or affix (see Kurebito 2008a: 61–70 for details).

Morphophonological processes are also numerous, which create an environment for various assimilations, dissimilations and metatheses of consonants, as well as insertion and deletion of the neutral vowel ʁ at morphological boundaries.

2) Hereafter, I will use Subject to refer to Subject or Agent, and Object to refer to Direct Object or Indirect Object.

3) In this word, the absolutive marker -lyon is a dominant morpheme. So, the noun stem milute ‘hare’ following the vowel harmony rule, changes to the dominant morpheme melota.

4) In this word, the verb stem terya ‘cry’ is a dominant morpheme. So, following the vowel harmony rule, the morpheme yingej ‘boy’ changes to yenqaj.

5) In this word, the dative case -γo is a dominant morpheme. So, the noun stem neneq ‘child’ following the vowel harmony rule, changes to the dominant form nana.

6) For details, see Kurebito (2008b).

7) The transitive marker r- changes to n- when in medial position.

8) To avoid a vowel sequence, the e/a of -et/-ta- is deleted when affixed to a stem ending in a vowel.
References

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