

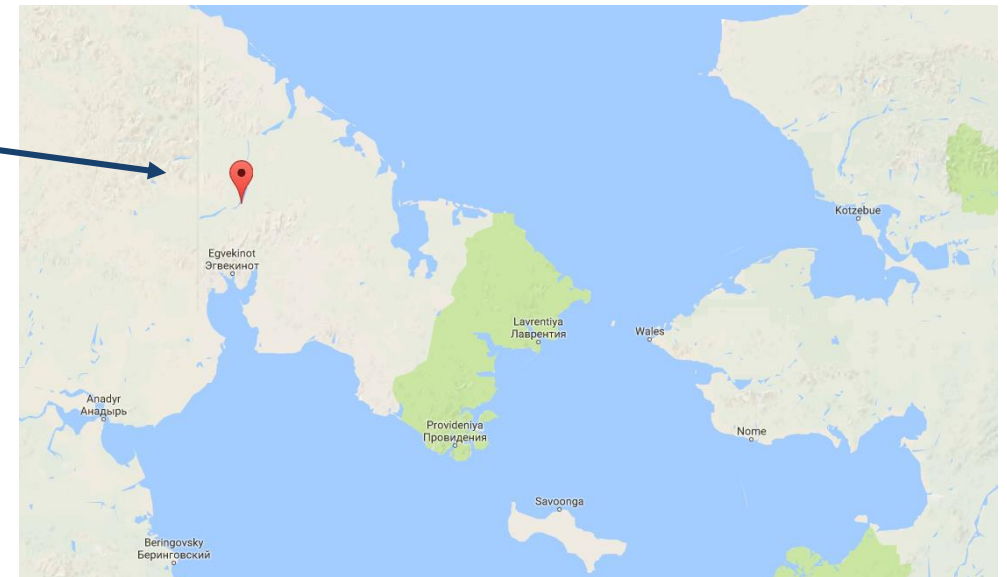
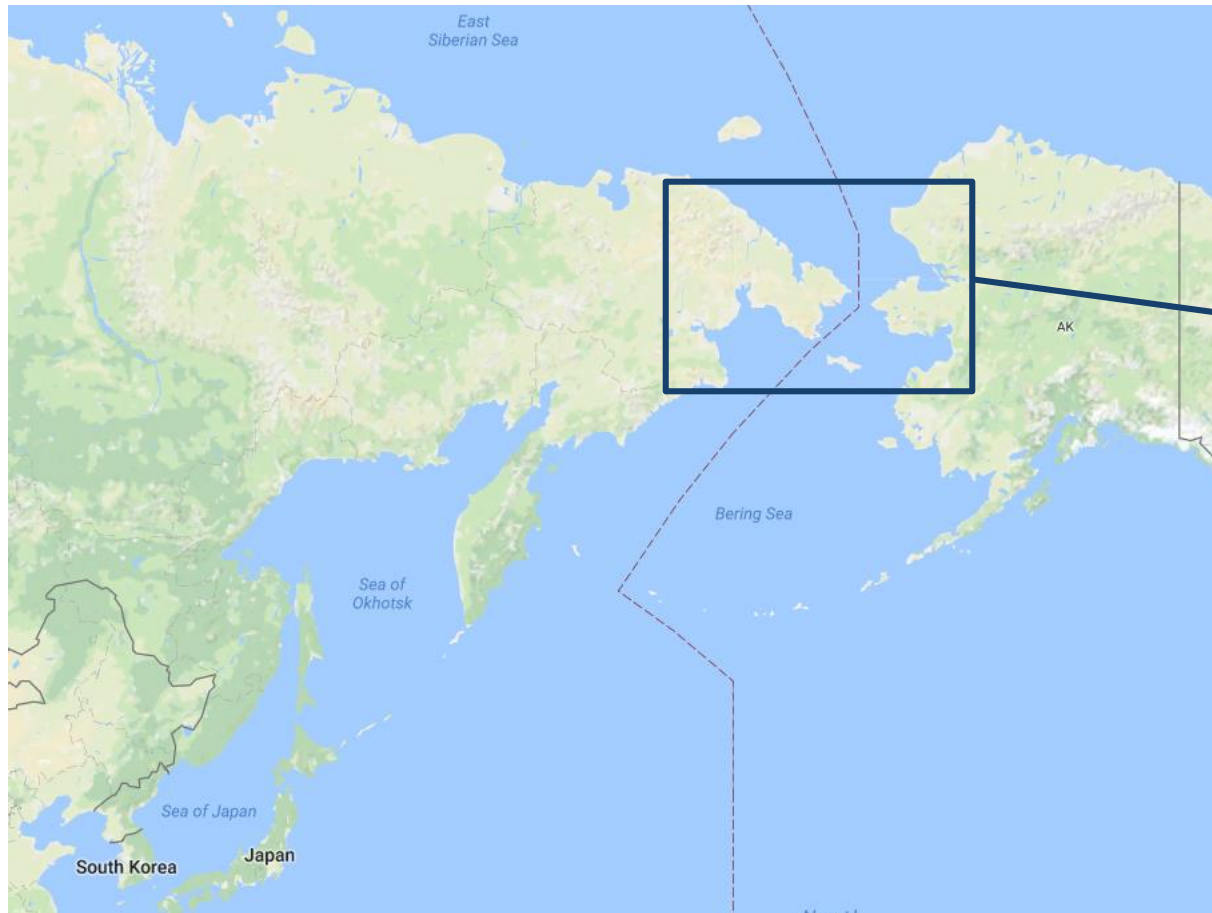
WORD IN POLYSYNTHESIS: CHUKCHI

Polina Kasyanova, Alexey Vinyar, Oleg Volkov

TyLex, 09/03/2017

Outline

- Word in Chukchi
- Polysynthesis in Chukchi
- Incorporation into verbs and nouns
- Non-configurationality in NP
- Lexical affixation



Data was collected in 2016-2017 during fieldtrips to Amguema, Chukotka AO



Data was collected in 2016-2017 during fieldtrips to Amguema, Chukotka AO

Phonological Word in Chukchi

- Vowel harmony: two sets of vowels and <ə>
- If a root or an affix contains a «+» vowel, all vowels in a phonological word switch to «+»

-	e	i	u
+	a	e	o

(1) a. *tipʔejɲe-k*
sing-INF
'to sing'

b. *tepʔajɲa-ɲɲo-k*
sing-INCH-INF
'to begin to sing'

(2) a. *jara-ɲə*
house-ABS.SG
'The house broke.'

ɣe-simet-ɬin
PF-break-PF.3SG

b. *ɣa-ra-semat-ɬen*
PF-house-break-PF.3SG
'The house broke'

Grammatical Word in Chukchi

- Different inflectional paradigms for nouns and verbs
- BUT: verbs can be marked with cases → boundary between categories is vague

(3) a. *simetə-k*
break-LOC
'After breaking...'

b. *ye-simet-~~t~~in*
PF-break-PF.3SG
'It broke.'

(4) a. *maraw*
war.ABS
'war'

b. *ya-maraw-~~t~~en*
PF-make.war-PF.3SG
'He fought.'

c. *marawə-k*
war/make.war-LOC
'After the war...'

Grammatical Word in Chukchi

- Different inflectional paradigms for nouns and verbs
- BUT: verbs can be marked with cases → boundary between categories is vague
- Circumfixes:

(5) *ya-ta-ra-ŋ-ten*

PF-MAKE-house-MAKE-PF.3SG

‘He built a house.’

Polysynthesis in Chukchi: Head Marking

- Pronominal cross-reference: prefix is for S/A, suffix is for S/O

(6) a. *tə-tipʔejŋə-yʔe-k*

1SG.S/A-sing-TH-1SG.S

'I began to sing'.

b. *tə-tʔu-yət*

1SG.S/A-see-2SG.O

'I saw you'.

Polysynthesis in Chukchi: Head Marking

- Pronominal cross-reference: prefix is for S/A, suffix is for S/O

(6) a. *tə-tipʔejŋə-yʔe-k*

1SG.S/A-sing-TH-1SG.S

'I began to sing'.

b. *tə-tʔu-yət*

1SG.S/A-see-2SG.O

'I saw you'.

- BUT: not in all paradigms, perfect and stative have only one slot

Polysynthesis in Chukchi: Dependent Marking

- Rather big case system (\approx 10 cases)
 - Core cases: ergative and absolutive
 - Equative, dative and a set of locative cases
- Possessive marker on the dependent constituent

(7) *ninqej-in* *qepət*
boy-POSS ball.ABS.SG
'a boy's ball'

Polysynthesis in Chukchi: Dependent Marking

- Rather big case system (≈ 10 cases)
 - Core cases: ergative and absolutive
 - Equative, dative and a set of locative cases
- Possessive marker on the dependent constituent

(7) *ninqej-in* *qepət*
boy-POSS ball.ABS.SG
'a boy's ball'

- BUT: extensive pro-drop and incorporation → **holophrasis**

Polysynthesis in Chukchi: Template

- Valency operations:
 - only causative
 - applicatives are not attested
 - antipassive is extremely rare
- Transitive verbs cannot be causativised

Polysynthesis in Chukchi: Template

<i>teŋ-</i>	<i>ɬyi-</i>	<i>re-</i>	<i>ine-</i>	<i>n-</i>	—	<i>-et</i> <i>-ew</i>	<i>-tku</i>	<i>-ŋ</i>	<i>-tku</i>	<i>-rʔu</i> <i>-jw</i>	<i>-ɬʔet</i>	<i>-ŋŋo</i> <i>-pɬətku</i>
INTS	INTS	DESID	AP	CS	STEM	TH	AP	DESID	ITER	COLL	DUR	INCH COMPL

[Dunn 1999: 254]

(8) a. *tepʔajŋə-pɬətko-ŋŋo-ɣʔe*
 sing-COMPL-INCH-TH-2/3SG.S
 ‘He began to finish singing.’

b. **tepʔajŋə-ŋŋo-pɬətko-ɣʔe*
 sing-INCH-COMPL-TH-2/3SG.S

Polysynthesis in Chukchi: Layered

(9) a. *jətqə-n*

dream-ABS.SG

'a dream' [N]

Polysynthesis in Chukchi: Layered

(9) a. *jətqə-n*

dream-ABS.SG

'a dream' [N]

b. *nə-jətq-et-qin*

ST-dream-VB-ST.3SG

'He is sleeping.' [N → V]

Polysynthesis in Chukchi: Layered

(9) a. *jətqə-n*

dream-ABS.SG

'a dream' [N]

b. *nə-jətq-et-qin*

ST-dream-VB-ST.3SG

'He is sleeping.' [N → V]

c. *jətq-et-qej*

dream-VB-DIM

'Hey, little sleepy-head!' [N → V → N]

Polysynthesis in Chukchi: Layered

(9) b. *nə-jətq-et-qin*

ST-dream-VB-ST.3SG

‘He is sleeping.’ [N → V]

c. *jətq-et-qej*

dream-VB-DIM

‘Hey, little sleepy-head!’ [N → V → N]

d. *nə-jətq-et-qe.et-qin*

ST-dream-VB-DIM.VB-ST.3SG

‘The small one is sleeping.’ [N → V → N → V]

Polysynthesis in Chukchi: Layered

(10) a. *nə-jətq-et-qine-qej jet-γʔ-i*

ST-dream-VB-ST.3SG-DIM come-TH-2/3.SG.S

‘A small heavy sleeper came.’ [N → V.INFL → N]

b. *nə-jətq-et-qine-qej-iyət*

ST-dream-VB-ST.3SG-DIM-NP.2SG

‘You are a small heavy sleeper.’ [N → V.INFL → N.PRED]

- Inflectional affixes may intervene between derivational ones (rare!)

POLYSYNTHESIS IN CHUKCHI: INCORPORATION

Contents

- Typology of Noun Incorporation
- Object Incorporation
- Intransitive Subject Incorporation
- Oblique and Adjunct Incorporation
- Verb and Adverb Incorporation
- Incorporation into Nouns
- Complex Incorporation

POLYSYNTHESIS IN CHUKCHI: INCORPORATION

Chapter 1: Typology of NI and Chukchi data

Typology of Noun Incorporation

- [Mithun 1984] – four types of NI
 - Type I – lexical compounding
 - Type II – case manipulation
 - Type III – discourse structure manipulation
 - Type IV – classificatory
- The implicational development hierarchy:

Language has Type X → It also has Type (X-1)

Type I - Lexical Compounding

- Transitivity-decreasing
- Unspecific, indefinite, syntactically and semantically inert
- Denotes nameworthy events
- Often lexicalized

(11) *ɲewə-nju-γʔ-i*

woman-pasture.herd.at.night-TH-2/3SG.s

‘To work for the bride’s family to marry the bride.’

Type II - Manipulation of Case

- Another NP can assume ('Raising') the vacated role (receive case and 'trigger agreement')
- Compare nominal case marking and verbal person-number indexing in (a) and (b):

(12) IO Raising

a. <i>ətʔa-ta</i>	<i>ritqə-jit-ni-n</i>	<i>ɲeekək-∅</i>	
mother-ERG	porridge-give-3SG.A.3.O-3SG.O	daughter-ABS.SG	
b. <i>ətʔa-∅</i>	<i>ritqə-jit-γʔ-i</i>	<i>ɲaaka-γtə</i>	
mother-ABS.SG	porridge-give-TH-2/3SG.S	daughter-DAT	
c. <i>ətʔa-ta</i>	<i>ritqrit</i>	<i>jit-ni-n</i>	<i>ɲaaka-γtə</i>
mother-ERG	porridge.ABS.SG	give-3SG.A.3.O-3SG.O	daughter-DAT

'Mother gave (the/a) porridge to the daughter'.

Type II – Object Incorporation

(13) What is raised?

- a. *ekke-ne* *ətʰəɣə-n* *ʔattʔə-n-qametw-aw-ne-n*
son-ERG father-ABS.SG dog-TR-eat-CS-3SG.A.3.O-3SG.O

Type II – Object Incorporation

(13) What is raised?

- a. *ekke-ne atʔəyən ʔattʔə-n-qametw-aw-ne-n*
son-ERG father-ABS.SG dog-TR-eat-CS-3SG.A.3.O-3SG.O
- b. *ekke-ne ʔattʔə-qey-ti rə-qametw-aw-ne-na-t atʔəy-in*
son-ERG dog-DIM-ABS.PL TR-eat-CS-3SG.A.3.O-3SG.O-PL father-POSS
- ‘Son fed father’s dogs’.

Type II – Object Incorporation

(14) What is raised?

- a. *ekke-ne atʔəyən ʔattʔən-qametw-aw-ne-n*
son-ERG father-ABS.SG dog-TR-eat-CS-3SG.A.3.O-3SG.O

Type II – Object Incorporation

(14) What is raised?

- a. *ekke-ne atʔəyən ʔattʔə-n-qametw-aw-ne-n*
son-ERG father-ABS.SG dog-TR-eat-CS-3SG.A.3.O-3SG.O
- b. *ekke-ne ʔattʔə-qey-ti rə-qametw-aw-ne-na-t atʔəy-in*
son-ERG dog-DIM-ABS.PL TR-eat-CS-3SG.A.3.O-3SG.O-PL father-POSS
- ‘Son fed father’s dogs’.

Type II – Object Incorporation

(15) Not all IOs can be raised

- | | | | | |
|----|-----------------|----------------------------|------------------|------------------|
| a. | <i>atʔa-ta</i> | <i>pan-ne-n</i> | <i>ʔintɪŋ</i> | <i>kuke-saku</i> |
| | mother-ERG | cook-3SG.A.3.O-3SG.O | heart.ABS.SG | pot-IN.LOC |
| b. | <i>atʔa-∅</i> | <i>ʔentɪn-pat-ɣʔ-e</i> | <i>kuke-saku</i> | |
| | mother-ABS.SG | heart-cook-TH-2/3SG.S | pot-IN.LOC | |
| c. | <i>*atʔa-ta</i> | <i>ʔentɪn-pan-ne-n</i> | <i>kuke-ŋə</i> | |
| | mother-ERG | heart-cook-3SG.A.3.O-3SG.O | pot-ABS.SG | |
- ‘Mother cooked (the/a) heart in the pot.’

Intransitive Subject Incorporation

- Natural objects/phenomena – impersonal (16b) or ‘adjunct-raising’ (16c)

(16) ‘Natural force’

a. *weemə-t* *ye-rʔite-tin* *nute-k*
river-ABS.PL PF-run-PF.3SG land-LOC

b. *ye-weem-rʔite-tin* *nute-k*
PF-river-run-PF.3SG land-LOC

c. *nutenut* *ye-weem-rʔite-tin*
tundra.ABS.SG PF-river-run-PF.3SG

‘The ice on the rivers in the tundra have started to melt (lit. ran).’

- Is it Type II or Type I?

Intransitive Subject Incorporation

- Other nouns (Only ‘Patient-like’ Subjects (see, however, [Polinsky 1990])) – obligatory raising (compare (17) and (18))

(17) Location raising

- a. *nəmnəmə-k* *jara-t* *ye-simet-rʔu-ʔine-t*
village-LOC house-ABS.PL PF-break-DISTR-PF.3PL-PL
- b. *nəmnəm-∅* *ya-ra-semat-rʔo-ʔen*
village-ABS.SG PF-house-break-DISTR-PF.3SG
‘In the village, a house has been broken’.

Intransitive Subject Incorporation

(18) Implied raised possessor

nəmnəmə-k ɣa-ra-semat-rʔo-ten

village-LOC PF-house-break-DISTR-PF.3SG

‘His/someone’s house has been broken in the village’.

- When S isn’t ‘affected’ – no Subject Incorporation [Nedjalkov 1978]

(19) **enaratʔə-n nə-ekke-jitket-qin*

neighbor-ABS.SG ST-son-sleep-ST.3SG

Expected meaning: ‘Neighbor’s son sleeps all the time’.

Transitive Subject Incorporation?

(20) *weem-rʔite-ni-n* *nəmnəm-∅*
river-run-3SG.A.3.O-3SG.O village-ABS.SG
'Here in the village, ice has started to melt'.

- Seems to be another case of raising (21), see [Nedjalkov 1982]

(21) **weem-e rʔite-ni-n* *nəmnəm-∅*
river-ERG run-3SG.A.3.O-3SG.O village-ABS.SG
Expected meaning: Idem.

Type III – ‘Discourse Structure Manipulation’

- Incorporation can background already established information
- The state of absolutive-marked referent is pragmatically relevant → ‘Raising’ is used to assert it [Polinskaja & Nedjalkov 1987]

... ənenata gətkaɾʼəsq = iŋ = a [ənan]
so hunting-knife = INTENSIFIER = INSTR 3S(abs.)

tengəyereg = nin ... Lewtə = lwi = nin
raise at = 3S:3S(aor.) head(inc.) = cut = 3S:3S(aor.)

qlawəl (BL, 154)

man(abs.)

‘Now, she threatened him with a hunting-knife...She cut the man’s head (= beheaded the man)’

Type III – ‘Discourse Structure Manipulation’

- NI helps to track topical referents by pronominal indexes:

(22)

- a. *ɲinqeɟ-e maɬe-ne-n aʔttʔə-qaj-∅ ənkʔam ɣəntek-wʔ-e*
boy-ERG stroke-3SG.A.3.O-3SG.O dog-DIM-NOM.SG and run.away-TH-2/3SG.S
‘The boy stroked the dog and (he/it) ran away’
- b. *ɲinqeɟ-∅ aʔttʔə-maɬe-ɣʔ-e ənkʔam ɣəntek-wʔ-e*
boy-NOM dog-stroke-TH-2/3SG.S and run.away-TH-2/3SG.S
‘The boy stroked (the/a) dog and (he/?it) ran away’.

Type III – ‘Discourse Structure Manipulation’

- Reference to IN is possible (when?) (23):

(23) *ninqej-∅ əʔttʔə-maʔe-γʔ-e ənkʔam tawtaw-an-ηηo-γʔe*
boy-NOM dog-stroke-TH-2/3SG.S and bark-VB-INCH-2/3SG.S
‘The boy stroked (the/a) dog and (ʔhe/it) started to bark’.

Is IV type absent?

- IV type – modifier stranding (24) & NP-doubling (25):

(24) Modifier stranding (Bininj Gun-Wok, [Evans 2003: 452])

bogen gabani-dulk-di

two 3UA-tree-stand.NP

'There are two trees there'.

(25) NP-doubling (Bininj Gun-Wok, [Evans 2003: 452])

minj na-ngale ka-rrulk-karrme man-dulk-djamun

NEG MA-who 3-tree-touch.NP VE-tree-sacred

'No-one can touch that sacred tree'.

Is IV type absent?

Nothing similar in our dialect (26)

(26) **n-ewitqə-qin wata-mna-γʔ-e*
ST-dull-ST.3SG knife-sharpen-TH-2/3SG.S
'He sharpened (a/the) dull knife'.

However, INs can be modified (27), (28), (29)

(27) *tə-wetətko-ŋetγə-tətpʔe-γʔa*
1SG.S/A-buy-rope-tear-TH
'The rope which I bought is torn'.

Is IV type absent?

(28) *awetqə-watə-mna-γʔ-e*

dull-knife-sharpen-TH-2/3SG.S

'He sharpened (a/the) dull knife'.

(29) *saj-koka-kayəɾajpə-n-təmne-k-wʔ-e*

tea-pot-cover-TR-loose-CS-TH-2/3SG.S

'He lost (a/the) cover of a tea pot'.

- Cross-linguistically, it's quite rare (INs in Type-III languages are 'roots').

POLYSYNTHESIS IN CHUKCHI: INCORPORATION

Chapter 2: Other types of verbal incorporation

Oblique/Adjunct Incorporation

- Into intransitive verbs

(30) Instrument

- a. *n-uwiswe-qeet qept-e*
ST-play-ST.3PL ball-INS
- b. *nə-qept-uwiswe-qeet*
ST-ball-play-ST.3PL
'They played (the/a) ball'.

Oblique/Adjunct Incorporation

(31) Location

a. *nə-twa-qen sottaynə-k*
ST-be-ST.3SG hallway-LOC

b. *nə-sottaynə-twa-qen*
ST-hallway-be-ST.3SG
'He stayed in the hallway'.

Oblique/Adjunct Incorporation

(32) Goal

- a. *ninqej-∅ ekwet-γʔ-i jara-jpə kaʔetkora-ytə*
boy-ABS.SG depart-TH-2/3.SG.S house-ABL school-DAT
- b. *ninqej-∅ kaʔetkora-akwat-γʔ-e jara-jpə*
boy-ABS.SG school-depart-TH-2/3.SG.S house-ABL
'The boy went from home to school'.

(33) Source

- a. *ninqej-∅ pkir-γʔ-i jara-jpə kaʔetkora-ytə*
boy-ABS.SG arrive-2/3.SG.S house-ABL school-DAT
- b. *ninqej-∅ jara-pker-γʔ-e kaʔetkora-ytə*
boy-ABS.SG house-arrive-2/3.SG.S school-DAT
'The boy arrived from home to school'.

Oblique/Adjunct Incorporation

- Incorporated Oblique can be referential (34)

(34) *ajwe nenene-t ye-qept-uwiswet-tine-t ya-sarejpə-ten*
yesterday child-ABS.PL PF-ball-play-PF.3PL-PL PF-become.dirty-PF.3SG
'Yesterday children have played the ball and now it (ball) is dirty'.

- What does it mean for compounding/'true incorporation' debate?

Oblique/Adjunct Incorporation

- Transitive verbs

(35) Incorporated instrumental (Theme)

- a. *atʔəɣ-e* *ŋinqej-∅* *pənrə-ne-n* *taqʔ-a*
father-ERG boy-ABS.SG provide-3SG.A.3.O-3SG.O supplies-INS
- b. *atʔəɣ-e* *ŋinqej-∅* *taqʔa-ʔpənrə-ne-n*
father-ERG boy-ABS.SG supplies-provide-3SG.A.3.O-3SG.O
- c. **atʔəɣə-n* *ŋenqajə-ʔpənrə-ɣʔ-e* *taqʔ-a*
father-ABS.SG boy-provide-TH-2/3SG.S supplies-INS
'The father provided the boy with supplies'.

Oblique/Adjunct Incorporation

(36) Incorporated ablative (external possession)

a. *tumyatum ʔattʔa-qaj-a ɣatka-jpə ɣe-jyu-tin*
friend.ABS.SG dog-DIM-ERG leg-ABL PF-bite-PF.3SG

b. *tumyatum ʔattʔa-qaj-a ɣa-ɣatka-jyo-ten*
friend.ABS.SG dog-DIM-ERG PF-leg-bite-PF.3SG

d. **ʔattʔa-qaj ɣatka-jpə ɣe-tumyə-jyu-tin*
dog-DIM.NOM leg-ABL PF-friend-bit-PF.3SG

‘The dog has bitten friend by the leg’.

- What is crucial for incorporation? (Syntactic VS Semantic role)?

Incorporated Verbs

- Most productively – into verbs of motion

(37) Manner

- a. *yaʔya-t ekwetə-rkət riŋ-e*
bird-ABS.PL depart-IPFV.PL fly-INS
- b. *yaʔya-t riŋ-ekwetə-rkət*
bird-ABS.PL fly-depart-IPFV.PL
'Birds are going to fly away'.

- (38) *atʔəyə-n rʔite-petqəntet-yʔ-i*
father-ABS.SG ride.reindeer.in.a.race-return-TH-2/3SG.s
'Father returned on reindeer (in a race)'.

Incorporated Verbs

(39) Concomitant event

- a. *atʔəyə-n* *ya-saatə-nrə-kətyəntat-ʔen*
father-ABS.SG RES-lasso-hold-run-RES.3SG.S
- b. **atʔəyə-e* *ya-nrə-kətyəntat-ʔen* *saat*
father-ERG RES-hold-run-RES.3SG.A.3SG.O lasso.ABS.SG
- c. *atʔəyə-n* *ya-kətyəntat-ʔen* *saatə-nrə-ma*
father-ABS.SG RES-run-RES.3SG.S lasso-hold-SIM
'Father ran holding the lasso.'

Incorporated Verbs

(40) What is incorporated?

tə-re-rʔit-ekwet-γʔe

1SG.S/A-FUT-ride.reindeer.in.a.race-depart-TH

(41) What is incorporated?

ətʔəγə-n

riu-pkir-γʔ-i

amŋon-γəpə

father-ABS.SG

pasture.herd.at.night-arrived-TH-2/3SG.S

tundra-ABL

- Similar to ‘verb root serialization polysynthesis’ [Matisen 2003]. What’s the difference?

Incorporated Verbs

(40) What is incorporated?

tə-re-rʔit-ekwet-γʔe

1SG.S/A-FUT-ride.reindeer.in.a.race-depart-TH

‘Father went away to take part in a reindeer race’.

(41) What is incorporated?

ətʔəγə-n

riu-pkir-γʔ-i

amŋon-γəpə

father-ABS.SG

pasture.herd.at.night-arrived-TH-2/3SG.S

tundra-ABL

‘Father came back from the night watch in tundra’.

- Similar to ‘verb root serialization polysynthesis’ [Matisen 2003]. What’s the difference?

Adverb Incorporation

- Both into transitive (42) and intransitive verbs (43):

(42) Adverb \rightarrow V_{TR}

- a. *ʔeɣeʔ-e pəne-ni-ne-t wata-t pətqə*
enemy-ERG sharpen-3SG.A.3.O-3SG.O-PL knife-ABS.PL again
- b. *ʔeɣeʔ-e pətqə-pəne-ni-ne-t wata-t*
enemy-ERG again-sharpen-3SG.A.3.O-3SG.O-PL knife-ABS.PL
'The enemies sharpened the knives again'.

Adverb Incorporation

- Adverb → V_{ITR}

(43a) *nə-mejəŋ-qin* *jara-ŋə*
ST-big-ST.3SG house-ABS.SG

(43b) *majŋə-ra-n*
big-house-ABS.SG
'A big house.'

(44a) *nə-mejŋ-ʔew* *wetyak-wʔ-e*
ST-big-ADV speak-TH-2/3SG.s

(44b) *majŋə-wetyak-wʔ-e*
big-speak-TH-2/3SG.s
'(He) spoke loud.'

- 'Qualitative' stems:
 - no strict border between adjectives and adverbs
 - enter the derivation unspecified with respect to PoS

POLYSYNTHESIS IN CHUKCHI: INCORPORATION

Chapter 3: A note on (non-)configurationality

Incorporation Into Nouns: Adjectives

- Adjectives can be incorporated into a noun in absolutive case

(45)a. *nə-ytin-qin* *newəsqet* *jet-yʔ-i*
ST-beautiful-ST.3SG girl.ABS.SG come-TH-2/3SG.s

b. *yətin-newəsqet* *jet-yʔ-i*
beautiful-girl.ABS.SG come-TH-2/3SG.s
'A beautiful girl came.'

Incorporation Into Nouns: Adjectives

- Adjectives are always incorporated into a noun in all other cases

(46)a. **nə-ytin-qin* *newəsqet-e* *qora-ŋə* †*?u-ni-n*
ST-beautiful-ST.3SG girl-ERG reindeer-ABS.SG see-3SG.A.3.O-3SG.O

b. *yətin-newəsqet-e* *qora-ŋə* †*?u-ni-n*
beautiful-girl-ERG reindeer-ABS.SG see-3SG.A.3.O-3SG.O

‘A beautiful girl saw a reindeer.’

Incorporation Into Nouns: Possessor

- Possessors are never incorporated in absolutive case

(47)a. *epeqej-nin* *sakəyet* *jet-yʔ-i*
grandmother-POSS sister.ABS.SG come-TH-2/3SG.S

b. **apaqaj-nena-sakəyet* *jet-yʔ-i*
grandmother-POSS-sister.ABS.SG come-TH-2/3SG.S
'Grandmother's sister.'

Incorporation Into Nouns: Demonstratives

- Demonstratives are never incorporated in absolutive case
- Demonstratives can be incorporated in other cases

(48a) *notqen waʔə*
this knife.ABS.SG

(48b) **noten-waʔə*
this.INC-knife.ABS.SG
'[I took] this knife.'

(49a) *notqena-na waʔa-ta*
this-ERG knife-ERG

(49b) *noten-waʔa-ta*
this.INC-knife-ERG
'[I cut it] with this knife.'

Non-Configurationality in NP

- Free word order within noun phrase

(50) a. *ɲotqena-t* *nə-ytin-qine-t* *ɲewəsqet-ti*
 this-ABS.PL ST-beautiful-ST.3SG-PL girl-ABS.PL

b. *nə-ytin-qine-t* *ɲotqena-t* *ɲewəsqet-ti*

c. *ɲotqena-t* *ɲewəsqet-ti* *nə-ytin-qine-t*

d. *ɲewəsqet-ti* *ɲotqena-t* *nə-ytin-qine-t*

‘These beautiful girls [are my daughters].’

Configurationality in NP

- Restrictions on incorporation into noun:
 - Num > Adj > N
 - Dem > Adj > N
 - (Adj_{SIZE} > Adj_{COLOR})

- (51) a. *ɲoten-eɬɣ-ʔattʔəqaj-a na-jʔo-ɣəm*
this-white-dog-ERG LOW.A-reach-1SG.O
- b. **eɬɣə-ɲoten-ʔattʔəqaj-a na-jʔo-ɣəm*
white-this-dog-ERG LOW.A-reach-1SG.O
'These white dogs caught me.'

POLYSYNTHESIS IN CHUKCHI: INCORPORATION

Chapter 4: Complex incorporation

Complex Incorporated Nouns

Recall that Chukchi INs may contain incorporated modifiers:

(52) *saj-koka-kayaryajpə-n-təmne-k-wʔ-e*
tea-pot-cover-TR-loose-CS-TH-2/3SG.S
'He lost (a/the) cover of a tea pot'.

(53) *awetqə-watə-mna-γʔ-e*
dull-knife-sharpen-TH-2/3SG.S
'He sharpened (a/the) dull knife'.

(54) *ətʔəγə-n* *mayʔa-ʔ-at-ʔəttʔə-n-qametw-ak-wʔe*
father-ABS.SG dog.sledge-ATR-VB-dog-TR-eat-CS-2/3SG.S
'Father fed (the) sled dogs'.

Complex Incorporated Nouns

What's the limit?

(55) No [[POSS-N]-V]

atʰəɣ-əʔttʔə-n-qametwa-k-wʔ-e

father-dog-TR-eat-CS-TH-2/3SG.S

Expected meaning: 'He fed father's dogs'.

(57) No [[DEM-N]-V]

ɲoten-waʦə-mna-ɣʔ-e

this.INC-knife-sharpen-TH-2/3SG.S

Exp. meaning: 'He sharpened this knife'.

(56) No [[NUM-N]V]

**ɲəron-əʔttʔə-n-qametwa-k-wʔ-e*

three-dog-TR-eat-CS-TH-2/3SG.S

Exp. meaning: 'He fed three dogs'.

Type IV?

What can be incorporated in ABS NP can be incorporated with its head into verb.

- Unincorporated modifiers can be stranded ([Polinsky 1993] dialect and some of our consultants)

(58) *ŋawetə-n* *ɣ-ʔattʔə-n-qametwa-w-ten* *ŋəroq*
housewife-ABS.SG PF-dog-TR-eat-CS-PF.3SG three
'The housewife fed three dogs'.

Type III/Type IV?

Type III	???	Type IV
Unmodified INs	INs modified by compounding	Modifiers stranded
Nahuatl, Ainu, Mapudung	Chukchi?	Sthrn Tiwa, Mayali, Ojibwe...

Double Incorporation

- ‘Template Incorporation’

(59) Two verbs

- a. *t-kətyəntə-reo-†qət-γʔa-k*
1SG.S/A-run-pasture.herd.at.night-go-TH-1SG.S
- b. **t-reo-kətyəntə-†qət-γʔa-k*
1SG.S/A-pasture.herd.at.night-run-go-TH-1SG.S
- c. *t-riu-†qət-γʔe-k* *emre-riu-ŋe*
1SG.S/A-run-go-TH-1SG.S PURP-pasture.herd.at.night-PURP
‘He ran to pasture herd at night’.

Double Incorporation

- ‘Template Incorporation’

(60) Two nouns

- | | | |
|----|--------------------------------|---------------|
| a. | <i>wat̥a-mna-γʔ-e</i> | <i>wəkw-e</i> |
| | knife-sharpen-TH-2/3SG.S | stone-INS |
| b. | <i>wəkwə-mna-ne-n</i> | <i>wat̥a</i> |
| | stone-sharpen-3SG.A.3.O-3SG.O | knife-ABS.SG |
| c. | <i>wəkwə-wat̥a-mna-γʔ-e</i> | |
| | stone-knife-sharpen-TH-2/3SG.S | |
| d. | <i>*wat̥a-wəkwə-mna-γʔ-e</i> | |
| | knife-stone-sharpen-TH-2/3SG.S | |
- ‘He sharpened the knife with a stone’.

Double Incorporation

- ‘Template Incorporation’

(61) Adverb + Noun

- a. *wenwə-waʔa-mna-γʔa-t*
secretly-knife-sharpen-TH-PL
- b. **waʔa-wenwə-mna-γʔa-t*
knife-secretly-sharpen-TH-PL
‘He sharpened the knife secretly’.

Double Incorporation

- ‘Scopal Incorporation’

(62) Two adverbs

- a. *ʔeqeʔʔ-e* *winwə-pətqə-pəne-ni-ne-t* *waʔa-t*
 enemy-ERG secretly-again-sharpen-3SG.A.3.O-3SG.O-PL knife-ABS.PL
 ‘The enemies secretly sharpened the knives again’.
- b. *ʔeqeʔʔ-e* *pətqə-winwə-pəne-ni-ne-t* *waʔa-t*
 enemy-ERG again-secretly-sharpen-3SG.A.3.O-3SG.O-PL knife-ABS.PL
 ‘The enemies again sharpened the knives secretly’.

POLYSYNTHESIS IN CHUKCHI: LEXICAL AFFIXATION

Lexical Affixes

- Root VS Affixal Polysynthesis [Matisen 2003]

Chukchi – mostly ‘root’

However, 10-14 denominal verbal affixes

<i>-yiti</i>	SEARCH	‘search, go searching’
<i>-yarki</i>	DRAG.OUT	‘drag out, cut, pull out’
<i>-ŋatt</i>	CATCH	‘hunt smthg, strike someone’
<i>-u</i>	EAT	‘eat smthg, get by hunting’
<i>-nŋe</i>	GET	‘get, buy, acquire’
<i>te-...-ŋ</i>	MAKE	‘make, repair, prepare, do’
<i>-yt</i>	GO.TO	‘go somewhere’
<i>-ŋata</i>	GO.DO	‘go for smthg, go to do smthg with smthg’
...		

Lexical Affixes: Boundness

- (63) a. **nɲe-ni-ne-t* *kenti-t*
GET-3SG.A.3.O-3SG.O-PL candy-NOM.PL
- b. *kur-ni-n* *kenti-t*
buy-3SG.A.3.O-3SG.O-PL candy-NOM.PL
'She bought some candies'.

Lexical Affixes: Boundness

- No incorporation into verbs with similar meaning (64):

a. **tə-kenti-nkur-yʔe*

1SG.S/A-candy-buy-TH

b. *tə-kenti-nɲe-yʔe*

1SG.S/A-candy-GET-TH

‘She bought some sweets’.

Semantic properties

- Broad meaning (depends on the host):

(65) *-u* ‘consume’

a. *tekisy-u-k*

meat-EAT-INF

‘to eat raw meat’

b. *president-u-k*

prezident-EAT-INF

‘to eat ‘Prezident’ cheese’

c. *nə-ʔeq-imət-u-qin*

ST-bad-water-EAT-ST.3SG

‘he drinks vodka’

d. *n-taʔak-o-qen*

ST-tobacco-EAT-ST.3SG

‘he smokes cigarettes’

Semantic properties

- Broad meaning (depends on the host):

(66) *-u* 'get by hunting' with wild animals

- | | | |
|--------------------------|-----------------------------|-------------------------|
| a. <i>umk-u-γʔ-e</i> | 'polar.bear-EAT-TH-2/3SG.S' | 'he killed a wild bear' |
| b. <i>ye-mitut-u-tin</i> | 'rabbit-EAT-TH-2/3SG.S' | 'he killed a rabbit' |

(67) Both meanings with some nouns

ye-nn-u-tin

PF-fish-EAT-PF.3SG

'He ate fish'/'He caught a fish'.

Syntactic properties

(68) Raising is allowed

- a. *nə-kenti-nɲe-qin* *nanana-ytə*
 ST-candy-GET-ST.3SG child-ALL
- b. *n-ine-kenti-nɲe-qine-t* *nenene-t*
 ST-INV-candy-GET-ST.3SG-PL child-NOM.PL
- 'Mother bought children some candies'.

Syntactic properties

(69) Host can be complex

a. *nə-qewʔe-memʔə-saj-o-tore*

ST-cold-water-tea-EAT-NP.2SG

‘You drink tea with cold water’.

b. *ye-mejnə-wiʔ-kupre-nne-tin*

PF-big-price-net-GET-PF.3SG

‘He has bought a really expensive net’.

Syntactic properties

(70) Accessible for anaphora

pʔon-yeʔe-k, *yese-ni-ne-t*
mushroom-SEARCH-LOC gather-3SG.A.3.O-3SG.O-PL
'She went to pick mushrooms and gathered some'.

- Lexical affixes and incorporating verbs differ only in boundness

Conclusion

Polysynthetic features of Chukchi word:

- 2+ lexical morphemes in a single word (incorporation/lexical affixation)
- Indexing and Type III incorporation — tool to express 3 or more arguments/adjuncts by a single word
- Evidence for layered morphology ('recursive' derivation and incorporation)