

## Noun Incorporation in Chukchi: $\nu$ P at the Interface

**Introduction** We will discuss several argument-structure alternations achieved via noun incorporation (NI) in Chukchi and show that while the result of NI is one morphophonological word, the process resembles pseudo noun incorporation (Massam 2001). The patterns are derived by base-generating incorporated material inside  $\nu$ P and proposing that a  $\nu$ P forms a unit that can be pronounced as a single word if its integrity is not disrupted.

**Data** Chukchi, an endangered Chukotko-Kamchatkan language, is morphologically ergative, shows agreement with both subject and object, and manipulates discourse structure through productive incorporation. The sentence in (1a) shows a transitive clause with all arguments expressed as free-standing DPs. In (1b), the direct object is incorporated, which affects transitivity: the subject is marked with the absolutive instead of the ergative, the object loses its case, and the predicate has intransitive agreement. Finally, (1c) demonstrates that a beneficiary can be promoted to the absolutive if DO has been incorporated, which results in a transitive clause.

- (1) a.  $\text{\textasciitilde{t}\text{\textasciitilde{y}}\text{-e}$        $\text{w}\text{\textasciitilde{a}}\text{\textasciitilde{t}}$        $\text{p}\text{\textasciitilde{a}}\text{\textasciitilde{n}}\text{-n}\text{\textasciitilde{i}}\text{n}$        $\text{e}\text{\textasciitilde{n}}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{a}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{\textasciitilde{a}}$   
 father-ERG      knife.ABS.SG      sharpen-3SG.A>3SG.O      neighbor-DAT  
 b.  $\text{\textasciitilde{t}\text{\textasciitilde{y}}\text{\textasciitilde{a}}\text{-n}$        $\text{w}\text{\textasciitilde{a}}\text{\textasciitilde{t}}\text{-m}\text{\textasciitilde{n}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{-e}$        $\text{e}\text{\textasciitilde{n}}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{a}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{\textasciitilde{a}}$   
 father-ABS.SG      knife-sharpen-TH-2/3SG.S      neighbor-DAT  
 c.  $\text{\textasciitilde{t}\text{\textasciitilde{y}}\text{-e}$        $\text{w}\text{\textasciitilde{a}}\text{\textasciitilde{t}}\text{-m}\text{\textasciitilde{n}}\text{-n}\text{\textasciitilde{e}}\text{n}$        $\text{e}\text{\textasciitilde{n}}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{a}}\text{\textasciitilde{t}}\text{\textasciitilde{a}}\text{-n}$   
 father-ERG      knife-sharpen-3SG.A>3SG.O      neighbor-ABS.SG

‘The father sharpened a knife for the neighbor.’

Not only absolutive-marked objects can be incorporated in Chukchi. Some double-object verbs like *jərʔetək* ‘to fill’ mark their Locatum with the instrumental and the Location with the absolutive, (2a). The contrast between (2b) and (2c–d) shows that the Locatum can be incorporated, whereas the Location cannot.

- (2) a.  $\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{-e}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{\textasciitilde{n}}\text{\textasciitilde{a}}$        $\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}\text{-e}$        $\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{n}}\text{-n}\text{\textasciitilde{i}}\text{n}$   
 girl-ERG      pot-ABS.SG      water-INS      content-VB-3SG.A>3SG.O  
 b.  $\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{-e}$        $\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}\text{-}\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{n}}\text{-n}\text{\textasciitilde{i}}\text{n}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{\textasciitilde{n}}\text{\textasciitilde{a}}$   
 girl-ERG      water-content-VB-3SG.A>3SG.O      pot-ABS.SG  
 c.  $\text{*}\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{\textasciitilde{t}}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{-i}$        $\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}\text{-e}$   
 girl.ABS.SG      pot-content-VB-TH-2/3SG.S      water-INS  
 d.  $\text{*}\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{-e}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{-i}$        $\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}$   
 girl-ERG      pot-content-VB-TH-2/3SG.S      water.ABS.SG

‘The girl filled the pot with water.’

Although incorporation of both arguments is allowed, an ordering constraint is imposed: the Locatum must appear closer to the stem than the Location, which is illustrated in (3).

- (3) a.  $\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{\textasciitilde{t}}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}\text{-}\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{-i}$   
 girl.ABS.SG      pot-water-content-VB-TH-2/3SG.S  
 b.  $\text{*}\text{\textasciitilde{w}}\text{\textasciitilde{e}}\text{\textasciitilde{s}}\text{\textasciitilde{q}}\text{\textasciitilde{e}}\text{\textasciitilde{t}}$        $\text{m}\text{\textasciitilde{i}}\text{\textasciitilde{m}}\text{\textasciitilde{t}}\text{-}\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{j}\text{\textasciitilde{a}}\text{\textasciitilde{r}}\text{\textasciitilde{t}}\text{-e}\text{\textasciitilde{t}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{-i}$   
 girl.ABS.SG      water-pot-content-VB-TH-2/3SG.S

‘The girl filled the pot with water.’

A slightly different pattern is observed with adjuncts: either an argument or an adverb can be incorporated in sentences like (4) but if both are incorporated, the DO appears closer to the verb’s stem, (4b–c). The availability of adjunct and double-object incorporation undermines the attractiveness of movement analyses for Chukchi NI, especially those that tie incorporation to the Theme/DO status of the argument (e.g., Baker 2009).

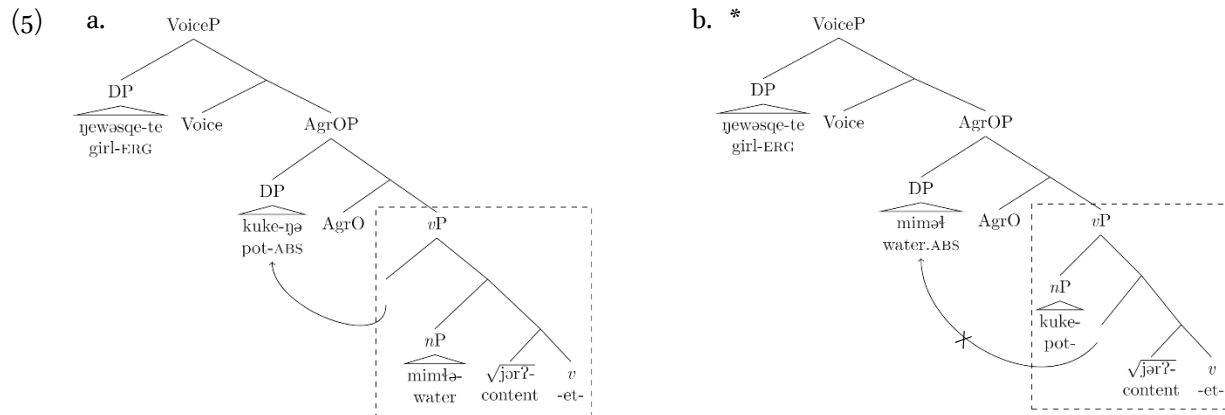
- (4) a.  $\text{\textasciitilde{y}}\text{\textasciitilde{a}}\text{\textasciitilde{m}}\text{-n}\text{\textasciitilde{a}}\text{n}$        $\text{k}\text{\textasciitilde{u}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{\textasciitilde{n}}\text{\textasciitilde{a}}$        $\text{t}\text{\textasciitilde{a}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{a}}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{\textasciitilde{a}}\text{-}\text{m}\text{\textasciitilde{a}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{\textasciitilde{t}}\text{\textasciitilde{a}}\text{-n}$   
 I-ERG      pot-ABS.SG      1SG.S/A-quick-wipe-TH-3SG.O  
 b.  $\text{\textasciitilde{y}}\text{\textasciitilde{a}}\text{\textasciitilde{m}}$        $\text{t}\text{\textasciitilde{a}}\text{-}\text{\textasciitilde{y}}\text{\textasciitilde{a}}\text{\textasciitilde{y}}\text{\textasciitilde{t}}\text{\textasciitilde{a}}\text{-}\text{k}\text{\textasciitilde{a}}\text{\textasciitilde{k}}\text{\textasciitilde{a}}\text{-}\text{m}\text{\textasciitilde{a}}\text{\textasciitilde{k}}\text{\textasciitilde{e}}\text{-}\text{\textasciitilde{t}}\text{\textasciitilde{a}}\text{-k}$   
 I.ABS      1SG.S/A-quick-pot-wipe-TH-1SG.S

- c. \* $\gamma\text{əm}$  tə-koka- $\gamma\text{ay}\text{ʔ}\text{ə}$ -ma $\text{ɛ}$ - $\text{ʔa}$ -k  
 I.ABS 1SG.S/A-pot-quick-wipe-TH-1SG.S  
 'I quickly wiped a pot.'

**Analysis** We propose that a contiguous chunk of a syntactic tree, a  $\nu\text{P}$ , can be pronounced as one phonological word in Chukchi, providing evidence for an additional step of integration compared to languages in which an unmarked DO and the verb form a prosodic unit (Serdobolskaya 2015). We argue that the incorporated nominal is an  $n\text{P}/d\text{P}$ , since it can appear with a nominalizer and host direct modification adjectives (Cinque 2010) but not numerals, possessors, or demonstratives. This supports Barrie and Mathieu (2016), who analyze NI as phrasal movement, but unlike them, we propose that incorporated nominals do not move and are base-generated adjacent to the verb. This blurs the distinction between NI and pseudo-NI, suggesting that morphophonological integration (vowel harmony, stem change etc.) constitutes an independent PF phenomenon.

A  $\nu\text{P}$  in Chukchi is pronounced as a single word if all nominals in its domain are  $n\text{P}$ s devoid of  $D^\circ$ . Thus, the order of incorporation reflects the order of merger: the  $n\text{P}$  that appears closer to the verb's stem is merged with it first, explaining the contrast in (3). To receive Absolutive and trigger object agreement, a DP must move out of the  $\nu\text{P}$  (Bobaljik 1993, Massam 2001 a.o.), but if a nominal is an  $n\text{P}$ , lacking a D-layer, it does not need to get Absolutive and can be pronounced together with the verb. DPs that get lexically determined case, like the Locatum in (2), receive it in situ, which disrupts the contiguity of  $\nu\text{P}$  and results in all arguments being expressed as separate words.

Working in the dependent case framework, Abramovitz (2020) posits movement of the absolutive DP out of VP in the closely related Koryak. The crucial reason for positing movement for us is not case competition but sensitivity to relative locality (e.g., Deal (2013) on possessor raising). While the Location can be raised and leave the Locatum inside the  $\nu\text{P}$ , (2b) represented in (5a), the opposite is impossible because (i) the Locatum can get case in situ and (ii) the Location serves as an intervener, (2d) represented in (5b). Adverbial and nominal adjuncts do not count as interveners, making argument movement and one-word spell-out of  $\nu\text{P}$  possible, (4a). Finally, the sentence in (2c) is ungrammatical because the Location argument does not form a constituent with the verb to the exclusion of the Locatum and a non-contiguous structure cannot form a phonological word.



**Conclusion** We showed that (i) patterns of Chukchi NI are best accounted for by base generation and not by movement, (ii) promotion to absolutive obeys locality constraints and (iii)  $\nu\text{P}$  constitutes a one-word spell-out domain that can be disrupted by structures larger than an  $n\text{P}$ , for instance, a DP.

**Selected References** Abramovitz, Rafael. 2020. Successive-cyclic wh-movement feeds case competition in Koryak. Ms., MIT. Baker, Mark C. 2009. Is head movement still needed for noun incorporation? *Lingua* 119(2): 148–165. Barrie, Michael and Eric Mathieu. 2016. Noun incorporation and phrasal movement. *Natural Language and Linguistic Theory* 34 (1): 1–51. Deal, Amy Rose. 2013. Possessor raising. *Linguistic Inquiry* 37: 391–432. Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19: 153–197.