

Creating New Verbs in Okuna

Motion, Means, and Manner

Overview

Okuna, a naturalistic *a priori* artlang, has a series of **prefixes** which can attach to verb stems to derive new verbs.

In this talk I discuss some of these prefixes, and show how they originated through grammaticalization of incorporated nouns and subordinate verbs.

The goal is to provide a case study in how to use the *already-existing grammatical resources* of a conlang to derive new words (as an alternative to building vocabulary through simple relexification), in the hopes that this might inspire other conlangers.

Basic Okuna sentence structure

- Default **verb-final** word order
- **Case marking** on subjects and objects
 - **Ergative (ERG)** : agents, actors
 - **Nominative (NOM)** : themes
 - **Dative (DAT)** : recipient, endpoint in an event of motion or transfer of force, path traversed by an object, patient in an event of creation or consumption

Basic Okuna sentence structure

Ergative marking on **agents**,
Nominative marking on **themes**:

Hitole *lima*
door.NOM open
'The door opens'

Sakialma *hosta*
Sakial.ERG dance
'Sakial dances'

Sakialma *hitole* *lima*
Sakial.ERG door.NOM open
'Sakial opens the door'

Basic Okuna sentence structure

Dative marking on recipients:

lhai *kihune* *moita*
woman.DAT letter.NOM receive
'The woman receives a letter'

Sakialma *ihai* *kihune* *lasta*
Sakial.ERG woman.DAT letter.NOM send
'Sakial sends a letter to the woman'

Basic Okuna sentence structure

Dative marking on a patient or recipient of force:

Sakialma *halmai* *tala*
Sakial.ERG book.DAT read
'Sakial reads the book'

Sakialma *palahtai* *kahta*
Sakial.ERG tree.DAT hit
'Sakial hits the tree'

Basic Okuna sentence structure

Dative marking on a goal or path of motion:

Sakiale *sihkunoi* *eta*

Sakial.NOM river.DAT go

‘Sakial goes to the river’

Sakiale *sihkunoi* *tlisa*

Sakial.NOM river.DAT cross

‘Sakial crosses the river’

Pseudo-Incorporation

A nominative, dative, or ergative noun phrase is replaced by a noun phrase which is **unmarked for case**; the unmarked noun phrase is non-referential

Sakialma *halmai* *italai*
Sakial.NOM book.DAT PROG.read.PRES
'Sakial is reading the book'

Sakialma *halma* *italai*
Sakial.ERG book PROG.read.PRES
'Sakial is reading { a book / books }'
or 'Sakial is doing some book-reading'

Pseudo-Incorporation

The **unmarked noun phrase** forms a unit with the verb. It must *immediately* precede the verb; they cannot be separated by intervening words:

Sakialma *halmai* *eima* *italai*
Sakial.NOM book.DAT still PROG.read.PRES
'Sakial is still reading the book'

Sakialma *eima* *halma* *italai*
Sakial.ERG still book PROG.read.PRES
'Sakial is still reading { a book / books }'
or 'Sakial is still book-reading'

Pseudo-Incorporation

An **incorporated noun phrase** can replace a **dative** argument to name a generic type of patient, goal etc.:

Sakialma halmai italai
Sakial.NOM book.DAT PROG.read.PRES
'Sakial is reading the book'

Sakialma halma italai
Sakial.ERG book PROG.read.PRES
'Sakial is reading { a book / books }'

lit. 'Sakial is book-reading'

Pseudo-Incorporation

An **incorporated noun phrase** can replace a **nominative** argument to name a generic type of theme:

Sakialma *iasè* *ikei* *uktié*
Sakial.ERG food.NOM dog.DAT give.AOR
'Sakial gave the food to the dog'

Sakialma *ikei* *iasè* *uktié*
Sakial.ERG dog.DAT food give.AOR
'Sakial fed the dog'

lit. 'Sakial food-gave to the dog'

Pseudo-Incorporation

An **incorporated noun phrase** can replace an **ergative** argument to name a generic type of agent or causer:

Kodoi *tohauatma* *laisne* *ndoké*
house.DAT big.fire.ERG just destroy.AOR
'The house was just destroyed by the blaze'

Kodoi *laisne* *tohauat* *ndoké*
house.DAT just big.fire destroy.AOR
'The house was just destroyed in a blaze'

lit. 'The house was just blaze-destroyed'

Pseudo-Incorporation

An **incorporated noun phrase** can also be added to a clause with an **ergative** agent and a **dative** patient.

This extra noun phrase can name a generic **instrument** or the type of **material from which something is made**:

Sakialma *makai* *hané*
Sakial.ERG meat.DAT cut.AOR
'Sakial cut (into) the meat'

Sakialma *makai* *kamal* *hané*
Sakial.ERG meat.DAT knife cut.AOR
'Sakial cut (into) the meat with a knife'

lit. 'Sakial knife-cut (in)to the meat'

Pseudo-Incorporation

An **incorporated noun phrase** can also be added to a clause with an **ergative** agent and a **dative** patient.

This extra noun phrase can name a generic **instrument** or the type of **material from which something is made**:

Sakialma *kopoi* *uosté*
Sakial.ERG pot.DAT shape.AOR
'Sakial made a pot'

Sakialma *kopoi* *sute* *uosté*
Sakial.ERG pot.DAT clay shape.AOR
'Sakial made a pot out of clay'

lit. 'Sakial clay-shaped (in)to a pot'

Pseudo-Incorporation

Through a process of **phonological reduction** and **grammaticalization**, an incorporated noun can fuse with the following verb and get reanalyzed as a prefix:

[**N** **V**] → **Pfx-V**

Verb prefixes < incorporated nouns

Sakialma *keuli* *mul* *patlé*
Sakial.ERG chair.DAT cloth cover.AOR
'Sakial covered the chair with a cloth'

lit. 'Sakial cloth-covered the chair'

[*mul patla*] → *mupatla* 'clothe, get dressed'

Sakialma *mupatlé*
Sakial.ERG dress.AOR
'Sakial got dressed'

Sakialma *pyie* *mupatlé*
Sakial.ERG child.DAT dress.AOR
'Sakial dressed the child'

Verb prefixes < incorporated nouns

<i>ksas</i> salt	<i>patla</i> cover	→	<i>ksapatla</i>	‘salt, coat with salt’
<i>ksas</i> salt	<i>landa</i> preserve	→	<i>ksalanda</i>	‘cure/preserve with salt’
<i>him</i> interior	<i>eka</i> be.empty	→	<i>himeka</i>	‘be hollow, empty inside’
<i>inie</i> eyes	<i>tuma</i> block/impair	→	<i>intuma</i>	‘be blind’

naua ‘palm’ > **na-** ‘do s.th with one’s hands’

<i>ekpa</i>	‘bear, hold, take’	<i>nakpa</i>	‘carry in one’s hands’
<i>kahta</i>	‘hit, strike’	<i>nakahta</i>	‘punch, slap’
<i>katia</i>	‘make a sharp sound’	<i>nakatia</i>	‘clap, applaud’
<i>pesa</i>	‘brush, sweep’	<i>napesa</i>	‘strum (an instrument)’
<i>tiyisa</i>	‘raise, elevate’	<i>natiyisa</i>	‘pick up, hold up’
<i>tupa</i>	‘walk’	<i>natupa</i>	‘crawl on hands and knees’

sot ‘word’ > **so-** ‘do s.th with words’

<i>kasta</i>	‘go against, oppose’	<i>sokasta</i>	‘argue’
<i>lhila</i>	‘stretch taut’	<i>solhila</i>	‘exaggerate’
<i>moita</i>	‘receive’	<i>somoita</i>	‘hear news of’
<i>niokta</i>	‘return’	<i>soniokta</i>	‘answer, respond’
<i>uata</i>	‘stop, cease’	<i>souata</i>	‘interrupt’
<i>uosta</i>	‘give shape to’	<i>souosta</i>	‘describe; explain’

minu ‘mind’ > ***mi-*** ‘do s.th in/with one’s mind’

<i>hepa</i>	‘go along, follow path’	<i>mihepa</i>	‘ponder’
<i>houda</i>	‘be slow’	<i>mihouda</i>	‘be bored, lethargic’
<i>hyla</i>	‘pass by’	<i>mihyla</i>	‘overlook, ignore’
<i>kyitsa</i>	‘talk about’	<i>mikyitsa</i>	‘think about’
<i>lhinta</i>	‘be nimble’	<i>milhinta</i>	‘be smart, clever’
<i>teka</i>	‘get, fetch, acquire’	<i>miteka</i>	‘presume, infer’

tsan ‘body’ > **tsa-** ‘do s.th with/to the (whole) body’

<i>hompā</i>	‘push forcefully’	<i>tsahompā</i>	‘push with one’s whole body; wrestle’
<i>hota</i>	‘join, connect’	<i>tsahota</i>	‘mate, copulate’
<i>kanta</i>	‘be upright, vertical’	<i>tsakanta</i>	‘lean against’
<i>laha</i>	‘release’	<i>tsalaha</i>	‘cremate’
<i>mota</i>	‘come together’	<i>tsamota</i>	‘have sex’
<i>paua</i>	‘wash’	<i>tsapaua</i>	‘bathe’

??? > **ki-** 'do s.th using a sharp pointed tool'

<i>hana</i>	'cut into'	<i>kihana</i>	'pierce, poke a hole in'
<i>kahta</i>	'hit, strike'	<i>kikahta</i>	'stab, poke, prick, jab'
<i>taha</i>	'kill (for food)'	<i>kitaha</i>	'spear, stab, kill with a harpoon'
<i>tluha</i>	'press (on)'	<i>kitluha</i>	'drill, bore a hole into'
<i>untapa</i>	'braid, plait'	<i>kiontapa</i>	'knit'

Converb constructions

A verb can take the suffix **-e** to form the **converb** form. A converb immediately precedes and modifies another verb.

When formed from a verb denoting an action, the **converb** names the **means** by which the event named by the main verb is carried out.

lihka

‘cut’

lihke

‘by means of cutting’ [converb]

tèpa

‘remove, strip (from the outside of s.th)’

lihke tèpa

‘remove by cutting’ → ‘cut off’

Converb constructions

tlynka 'push'

Sakialma *nakà* *itlynkai*
Sakial.ERG rock.NOM PROG.push.PRES
'Sakial is pushing (on) the rock'

tlynke 'by (means of) pushing'

Sakialma *loin* *tlynke* *puhtlé*
Sakial.ERG cauldron.DAT push.CV overturn.AOR
'Sakial pushed over the cauldron'

lit. 'Sakial overturned the cauldron by [means of] pushing [it]'

Converb constructions

ianta 'jump'

Hiuama *ianté*
horse.ERG jump.AOR
'The horse jumped'

iante 'by (means of) jumping'

Hiuà *mutoi* *iante* *tlisé*
horse.NOM fence.DAT jump.CV go:over.AOR
'The horse jumped over the fence'

lit. 'The horse went over the fence by [means of] jumping'

Converb constructions

Like an incorporated noun phrase, a converb forms a *unit* with the verb it modifies. They cannot be separated by intervening elements (e.g., the negative scope marker *n-* or *ntse*):

Hiuà *mutoi* *ntlisuma*
horse.NOM fence.DAT NEG-go:over.AOR:NEG
'The horse didn't go over the fence'

Hiuà *mutoi* *ntse* *iante* *tlisuma*
horse.NOM fence.DAT NEG jump.CV go:over.AOR:NEG
'The horse didn't jump over the fence'

Verb prefixes < eventive converbs

Like incorporated nouns, converbs can undergo **phonological reduction** and **grammaticalization** to become verb prefixes (often with semantic shift):

[*kahte* *pohua*] ‘burst by hitting’
hit.CV burst

↓ *reanalysis*

kapohua ‘burst by hitting’
> ‘burst violently or suddenly’
> ‘explode, rupture’

ka(h)- ‘forcefully, suddenly, unexpectedly’

<i>atia</i>	‘approach’	<i>kahatia</i>	‘lunge at, thrust’
<i>heulhta</i>	‘pull’	<i>kaheulhta</i>	‘pull hard, yank’
<i>patla</i>	‘cover’	<i>kapatla</i>	‘smother’
<i>sasa</i>	‘find, encounter’	<i>kasasa</i>	‘stumble on unexpectedly’
<i>sòlha</i>	‘throw’	<i>kasòlha</i>	‘hurl, throw hard’
<i>tsypa</i>	‘submerge’	<i>katsypa</i>	‘drown’

Verb prefixes < eventive converbs

[*ekpe* *tsyipa*] ‘be submerged by being held’
hold.CV submerged

↓ *reanalysis*

ketsyipa ‘hold s.th underwater,
keep s.th submerged in liquid’

ke- ‘keeping, holding, maintaining’

<i>luma</i>	‘be open’	<i>keluma</i>	‘hold open, sustain’
<i>mainka</i>	‘be fixed in place’	<i>kemainka</i>	‘hold in place, support’
<i>mokta</i>	‘come home’	<i>kemokta</i>	‘welcome, invite, host’
<i>peuta</i>	‘wait for’	<i>kepeuta</i>	‘anticipate’
<i>teha</i>	‘stay/leave behind’	<i>keteha</i>	‘hold back, detain, delay’
<i>toilha</i>	‘stand’	<i>ketoilha</i>	‘hold up(right), support’

un- ‘circular motion, action directed inward/towards self’

<i>hista</i>	‘lead’	<i>unkista</i>	‘lead in circles; confuse’
<i>loda</i>	‘roll over’	<i>undoda</i>	‘roll up’
<i>lhoma</i>	‘add, increase’	<i>untloma</i>	‘multiply’
<i>nesapa</i>	‘ask’	<i>untsapa</i>	‘wonder, ask oneself’
<i>paha</i>	‘fold’	<i>umpaha</i>	‘fold up, fold over’
<i>tapa</i>	‘weave’	<i>untapa</i>	‘twist, braid’

Converb constructions (cont.)

Okuna does not have adjectives; instead, properties and attributes are expressed by **stative verbs** (e.g., *toha* ‘be big’).

When a stative verb appears in the **converb** form, it can modify another verb to indicate the **manner** in which the event denoted by that verb takes place (cf. manner adverbs like ‘quickly’).

Converb constructions (cont.)

kiota 'be quick'

Hastine kiota
deer.NOM be:quick
'The deer is quick'

kiote 'quickly, by being quick'

Hastinma kiote ikiompai
deer.ERG be:quick.CV PROG.run.PRES
'The deer is running quickly'

Converb constructions (cont.)

kela 'be together, be in a (reciprocal) relationship'

Sakial ka Elime ahkame kelat
Sakial and Elim.NOM sibling be:together.PL

'Sakial and Elim are siblings'

(lit. 'Sakial and Elim are in-a-mutual-relationship [as] siblings')

kele 'together, mutually'

Sakial ka Elimma satlai kele tokit
Sakial and Elim.ERG roof.DAT be:together.CV fix.AOR.PL

'Sakial and Elim fixed the roof together'

kel- ‘mutually, reciprocally, (to/with) each other’

<i>ehua</i>	‘have, own’	<i>kelehua</i>	‘own jointly/collectively’
<i>hutopa</i>	‘depend on’	<i>kelhutopa</i>	‘be interdependent’
<i>milhta</i>	‘turn; change’	<i>kelmilhta</i>	‘reach consensus’
<i>ohtla</i>	‘resemble’	<i>kelohtla</i>	‘be similar, alike’
<i>otla</i>	‘separate’	<i>kelotla</i>	‘part ways, disband, disperse’
<i>uktia</i>	‘give’	<i>keluktia</i>	‘trade, exchange’

ta(h)- ‘intensely’ (< *tama* ‘be strong, mighty’)

<i>eupa</i>	‘be alone’	<i>taheupa</i>	‘be all alone; be unique’
<i>henka</i>	‘be enjoyable’	<i>tahenka</i>	‘be delightful’
<i>iasa</i>	‘eat’	<i>taiasa</i>	‘eat heartily, eat one’s fill’
<i>iona</i>	‘know’	<i>taiona</i>	‘know for certain’
<i>koipa</i>	‘be known, familiar’	<i>takoipa</i>	‘be widely known, famous’
<i>sonka</i>	‘be surprising’	<i>tasonka</i>	‘be astounding, amazing’

lia- ‘to an extended degree’ (< *liakna* ‘be long’)

<i>hosta</i>	‘be powerful’	<i>liahosta</i>	‘be mighty’
<i>hotsma</i>	‘be angry’	<i>liahotsma</i>	‘be enraged, livid’
<i>kaihpa</i>	‘be down’	<i>liakaihpa</i>	‘be a long way down’
<i>luma</i>	‘be open, ignited’	<i>lialuma</i>	‘be wide open; be roaring [fire]’
<i>tima</i>	‘lie, be situated’	<i>liatima</i>	‘be remote, distant, far off’

tsi- ‘briefly, abruptly; with minimal effort’

<i>hàta</i>	‘shout, cry’	<i>tsihàta</i>	‘cry out suddenly, exclaim’
<i>kahta</i>	‘hit, strike’	<i>tsikahta</i>	‘jab, prod, poke’
<i>lima</i>	‘open; ignite’	<i>tsilima</i>	‘quickly open and then close; flash, glint’
<i>milhta</i>	‘turn’	<i>tsimilhta</i>	‘swerve’
<i>muka</i>	‘close; extinguish’	<i>tsimuka</i>	‘quickly close and then open; wink, blink’

Natlang analogues (Talmy 2007)

Instrument/cause verb prefixes in **Atsugewi** (Hokan; California):

- ci-* 'using one's hands'
- ma-* 'using one's feet'
- ca-* 'by means of the wind blowing on s.th'
- uh-* 'by means of pounding/chopping/batting with a long thin object'
- mi-* 'by means of cutting with a knife'
- cu-* 'by means of poking/piercing/propping with a long thin object'

Natlang analogues (Talmy 2007)

Instrument/cause verb prefixes in **Atsugewi** (Hokan; California):

m'aast'aq'ipsnukka

/w-ma-st'aq'-ipsnu-ikk-a/

3sSUB-using.feet-move.icky.material-inside-to.here-INDIC

'He tracked up the house with muddy feet'

more lit. 'He moved icky material into here using his feet'

Natlang analogues (Talmy 2007)

Manner of motion verb formatives in **Nez Perce/Nimipuutímt** (Sahaptian):

Hi-qqo-láhsa-ya

3sgSUB-galloping-go.up-PST

‘He galloped up’ (lit. ‘He galloping-ascended’)

ʔipsqi- ‘(by) walking’

wilé:- ‘(by) running’

tuk’weme- ‘(by) slithering’

tu:k’e- ‘(by) using a cane’