

A compositional approach to bipartite stems in Washo

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Goals

- 1 What are bipartite stems in Washo?
- 2 What determines the valence of bipartite stems?

Preview

dipá:ši

di- p+a:š -i

(1) 1SUBJ- fall+in(to) -IMPF

'I fell in.'

Outline

- 1 Background
 - Washo & its verbs
 - Bipartite verbs
 - A class-based approach
- 2 A compositional approach
 - Building the stem
 - Building transitivity

The Washo Language

- spoken near Lake Tahoe
 - Great Basin region
- ~ 10-15 fluent native speakers
- genetic isolate



Basic verbal structure

- word order: SOV (with some flexibility)
- NOM/ACC alignment
 - no overt case marking on lexical NPs
- prefixal verbal agreement with SUBJ (sometimes OBJ)

Basic verbal structure cont.

- tense/aspect/mood indicated through suffixes
- pronouns only used for emphasis
- other verbal morphology: pluractional reduplication, reflexives, causatives, etc.

Jacobsen (1964, 1980) described verbs composed of two **bound** elements

- (lexical prefix - dependent stem)
- initial - final

What can be initials and finals?

initial	gloss	final	gloss
<i>p-</i>	fall	<i>-itiʔ</i>	down
<i>yeŋ-</i>	run.PL	<i>-a:š</i>	in
(2) <i>k'ule-</i>	sit.SG	<i>-aʔam</i>	in water
<i>tuʔm-</i>	foot	<i>-ileg</i>	red
<i>mu-</i>	mouth	<i>-išib</i>	straight
<i>ug-</i>	club	<i>-ak'im</i>	cut, sever

intransitive verbs, e.g.:

dipá:ši

di- p+a:š -i

(3) 1SUBJ- fall+in(to) -IMPF

'I fell in.'

transitive verbs, e.g.:

geséhuk'i

ge-se+ihuk'-i

(4) 3OBJ-by.heat+dry-IMPF

'She is drying it outdoors.'

Compositionality of meaning

How do initials and finals combine?

<i>Mu-</i> 'run.SG'	+	<i>-iʔiʃ</i> 'move (forward)'	=	<i>Muʔuʃ</i> 'run forward'
<i>Mu-</i> 'run.SG'	+	<i>-aʔam</i> 'in(to).water'	=	<i>Maʔam</i> 'run into water'
<i>dule-</i> 'hand'	+	<i>-aʔam</i> 'in(to).water'	=	<i>dulaʔam</i> 'put/have hand in(to) water'

Illicit bipartites

What **can't** be combined → what is unattested

instrumental initials and directional finals

- ☹ *ug-* 'with a club' + *-iti?* 'down' (≈ 'to down with a club')

manner of motion initials and attribute finals

- ☹ *Mu-* 'run' + *-ileg* 'red' (≈ 'to run red-ly' ??)

manner of motion initials and result state finals

- ☹ *Mu-* 'run' + *-at'ig* 'kill.SG' (≈ 'to kill by running')

Scope of bipartites

How many Washo verbs are bipartite?

- almost all
- limited number of monomorphemic stems:
 - *emlu* 'eat', *i:gi* 'see', etc.
- limited number of finals that can also stand alone:
 - (-)*ihuk* 'dry'

Jacobsen 1980

Jacobsen divided bipartite verbs into three classes (per position) based (roughly) on:

- combinatorics of elements
- semantic meaning

Transitivity in Jacobsen's analysis

In Jacobsen (1980, 1986)'s approach:

- **initials** determine transitivity
- finals have no inherent transitivity

Clear classes?

But wait...

- ... what about *mu-* 'taste' (2a, INTR) and *mu-* 'in/with the mouth' (2b, TR) ?
- ... or *gele-* 'voice, manner of speaking' (2a, INTR) and *gele-* 'by asking, commanding, calling' (2b, TR) ?

Drawbacks

Forced to posit multiple initials with the same form but different transitivity

- e.g. *mu-* ‘taste’ (2a, INTR), *mu-* ‘in/with the mouth’ (2b, TR)

The problem:

- NOT homophony (by itself), but regular systematic homophony
- the intuition that morphemes with similar meanings could be the same morpheme

So where does transitivity come from?

- 1 The final is the root of the verb, and some initial is required for lexicalization
- 2 Transitivity is built compositionally in the bimorphemic stems

What is a root?

A root is the portion of a word that:

- is common to a set of derived or inflected forms, if any, when all affixes are removed
- is not further analyzable into meaningful elements, being morphologically simple, and
- carries the principle portion of meaning of the words in which it functions.

(from the SIL Glossary of Linguistic Terms)

Final as root

	INITIAL	FINAL
(5) common to a set of forms	✓	✓
morphologically simple	✓	✓
never semantically empty		✓
can stand-alone		✓

What is a stem?

A stem is the root or roots of a word, together with any derivational affixes, to which inflectional affixes are added.

(also from the SIL Glossary of Linguistic Terms)

Stems in Washo

Washo has a restriction on bare roots being verbal stems - something has to fill the initial position for the stem to be inflected

- final is core element in verbal complex
- initials must fit subcategorization requirements of final

Initial position is a slot to be filled

Hierarchical stem

The verb stem is hierarchical:

stem[modifier *root*[result/attribute/path]]

initial

final

club

break

Finals

finals (roots) can encode:

	paths	<i>-ahad</i> ‘across’	<i>-iti?</i> ‘down(wards)’
(6)	result state	<i>-a:baš</i> ‘kill/die.PL’	<i>-ipu</i> ‘stab’
	attribute	<i>-ileg</i> ‘red’	<i>-ilpil</i> ‘blue’

What can be an initial?

- initial can be modifier – e.g. manner (of motion), instrument (of change of state)
- initial can also be **logical object** of verb

Initials as logical objects

A small set of body part terms (foot, hand, head, etc.) can fill the initial slot. The resulting sentence is:

- logically transitive
- syntactically intransitive

John tuʔmáʔami

John ∅-tuʔm+aʔam-i

(7) John 3SUBJ-foot+in(to).water-IMPF

‘John is putting his foot into water.’

Logical objects as incorporated nouns

Body parts and no other noun-like initials (eg. instrumentals) can form a phrase with an element outside the verb:

- t'í:yelilu* *tuʔmáʔami*
t'í:yeli-lu \emptyset -tuʔm+aʔam-i
 (8) **big**-INSTR 3SUBJ-foot+in(to).water-IMPF

‘She is putting her big foot into water.’

- * *t'í:yelilu* *gewgát'igi*
t'í:yeli-lu ge-ug+at'ig-i
 (9) **big**-INSTR 3OBJ-club+kill/die.SG-IMPF

‘ * He killed it with a big (club-like object).’

If the body part incorporates were objects, then the verb was transitive at some point prior to lexicalization.

- some finals can be in both intransitive and transitive stems
- transitivity cannot be a property solely of finals

Transitivity is built compositionally in the bimorphemic stems

- NOT stipulated by the initial morphemes
- NOT stipulated by the final morphemes

Compositionality

Valence is the product of the combination of initial and final

- manner-of-motion + path = intransitive
p- 'fall' + *-iti?* 'down' = *piti?* 'fall down'
- instrumental + result state = transitive
de- 'with.hand' + *-at'ig* 'kill.SG' = *dat'ig* 'kill with hand'
- body part + attribute = intransitive
dule- 'hand' + *-ileg* 'red' = *duleleg* 'red-handed'

- (10) *mú:šibi*
∅-mu-i:šib-i
3SUBJ-run-straight-IMPF
'He is running straight.'
- (11) *ʔilší:šibiʔi*
∅-ʔil-RED-i:šib-iʔ-i
3SUBJ-ATTR-straight-ATTR-IMPF
'It is straight.'
- (12) *gedé:šibi*
ge-de-i:šib-i
3OBJ-with.(instrument.in).hand-straight-IMPF
'She is pushing it straight (with an instrument in hand).'

Summary

- Finals are the verbal root and initials are required for lexicalization.
- Transitivity is not stipulated by initials but rather derived compositionally.
- Lingering questions
 - How do ditransitives work?
 - How do bipartite stems interact with valence-changing morphemes such as the causative suffix *-ha*?

For Further Reading I



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