

Morphology

Morphological analysis

Linguistics 200

Spring 2006

Announcements and reminders

- Quiz about morphology now open, closes Fri noon
- Phonology homework due Thursday at beginning of section. Work from .pdf only from now on.

Overview of morphology unit

- General concepts, morphological analysis (today)
- Part of speech (a.k.a. grammatical category, lexical category) (Fri)
- Different types of morphology (Mon)

Morphological competence

- What native speakers know about well-formed words
 - Understand meaning of words, including novel ones
 - “Prevent Los Angelization Now” (PLAN)

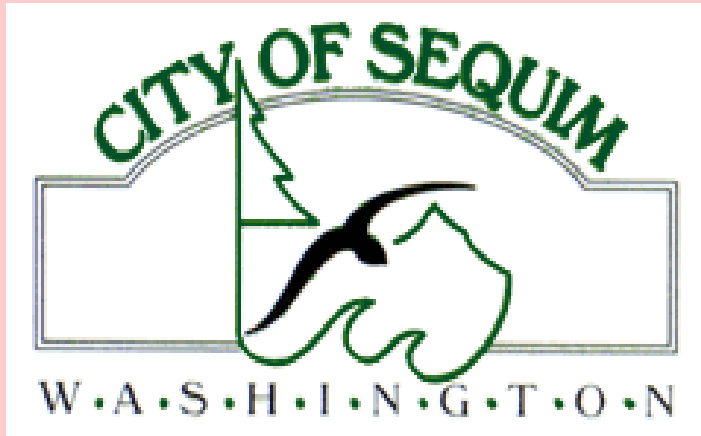
The drive to Los Angelization *by Carolyn Chase*

Over the years, we've heard a lot about "Los Angelization." The last round of managed growth sentiment in San Diego was epitomized in the 80s by PLAN (Prevent Los Angelization Now). While PLAN fizzled, the use of "Los Angelization" still resonates with San Diegans as an epithet...

Morphological competence

- Includes:
 - Understanding properties of words
 - appropriate context for use (part of speech)
 - ‘we’ve heard about Los Angelization’
 - The PLAN group wants to stop Los Angelization of this area.
 - *Developers want to Los Angelization this area.
(Developers want to Los Angelize this area.)

Another new word



- Sequim [skwim]
- Sign as you drive out of town
 - “Thanks for Sequimming”

New usage of a word

- “Kinko’s, the new way to office”
 - advertising slogan used around 1996
 - "An integral part of Kinko's marketing strategy, The new way to officeTM, calls for more aggressive use of computer and digital technologies to link customers whenever and wherever they are conducting business," said Dan Frederickson, Kinko's President...

Reaction to “to office”



- **Re: "The new way to 'office'"???**

- ----- ORIGINAL MESSAGE TEXT -----

Have any of you noticed the new Kinko's ad slogan -- "The new way to office"?

"Office" as a verb? I guess it's just an advertising thing, and it did catch my attention. I'm generally in favor of verbizing nouns where a useful purpose is served, and I am part of their "small office, home office" target market.

But, this new verb they are proposing sounds so odd. I suppose you could argue that it is specific to white-collar work, while the verb "work" is non-specific.

----- END OF ORIGINAL MESSAGE -----

- But what does "office" as a verb mean? Does it mean "to photocopy stuff?"

Maybe "send memos and letters?" If using a noun as a verb is just an inventive way to get a point across, I might not squirm too much. But that! "The new way to office" doesn't mean a darn thing to me

- To be honest, I really didn't have a problem understanding what this means...or at least what I think it means.

I take it that "to office" is to do the things that I'd do at my company office.

To use Kinko's for the things that I know they do is to use them for photocopying, faxing, scanning, DTP, word processing, sending and receiving mail and packages, direct mail programs, mailing list maintenance, etc.

It's kind of a takeoff on the verb to work. However, "to office" would mean only the type of work that you would perform in an office environment as opposed to a factory or manufacturing setting.

I MAY have a little more understanding of the concept than some since except for my current situation, I worked in home offices for more than 10 years...and that's the target audience. If you've (and I'm not refering to you as "you", but to the collective you) never used a home office, then you aren't going to use them as much as home office users would, so they don't care if you know what they are talking about or agree with their terminology.

Besides..it's advertising. The goal is not to use correct terminology. The goal is to use terminology that gets the point across. The goal is to have you remember the name and discuss it with others.

They've succeeded...no?

Morphology is about words...

- But what's a word?
- Problems with white space definition
 - Inconsistency in languages with writing systems
 - Variable spelling of compounds in (e.g.) English
 - *feedback*
 - *road rage*
 - *time-depth*
 - Not a possible test in languages without writing systems
- Fortunately, there are other tests for what is a word
 - A syntactic test. (Some) words can be an answer to question:
 - what did we just witness? *road rage*
 - what do I need most right now? *feedback*
 - what is the term in historical linguistics for estimated time from modern languages to ancestor language? *time-depth*

Words vs. morphemes

- Morpheme: largest form (sound, gesture) associated with a particular meaning
 - [flawr̩] ↔



Examples of morphemes (English)

<i>pause</i>	1 morpheme: <i>pause</i>
<i>paws</i>	2 morphemes: <i>paw</i> , <i>-s</i> paw – paws troop – troops judge – judges etc.

Caveat: morphemes vs. syllables

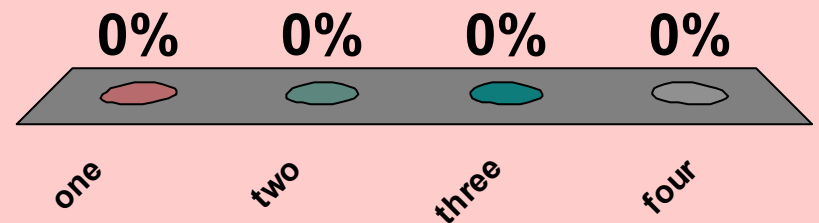
- Morphemes can be identified from comparison of sets of words, not from inherent phonological shape or length
- Ch. 7: “Words are composed of one or more syllables.”
- What’s a syllable anyway?
 - An abstract phonological unit consisting of a vowel (or segment functioning as a vowel) and perhaps one or more consonants
 - Count number of syllables in a word by counting vowels (or segments functioning as vowels)

Morpheme \neq syllable

	transcribed	# morphemes	# syllables
<i>paw</i>	[pɑ]	1	1
<i>par</i>	[pɑr]	1	1
<i>pause</i>	[paʒ]	1	1
<i>paws</i>	[paʒ]	2 (paw, -s)	1
<i>pawer</i>	[pɑr̩]	2 (paw, -er) cf. write, writer think, thinker pause, pauser	2

How many morphemes are there in 'to Sequim'?

1. one
2. two
3. three
4. four

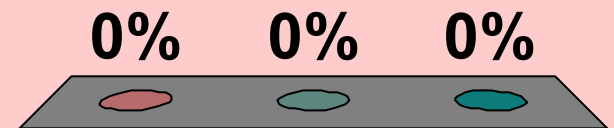


Free vs. bound morphemes

- **free:** can stand alone as word
 - *certain, able, carton, finch, pinch, sycamore*
- **bound:** must be attached to some other morpheme to form a word
 - representation includes hyphen
 - some bound morphemes in English
 - -s, -es (-/z/) plural
 - -ize (-/əjz/) ‘to cause to become’
 - un- (/ʌn/-) negative

In *Los Angelization*

1. -ation is a free morpheme.
- ➡ 2. -ation is a bound morpheme.
3. Los Angeles is a bound morpheme.



-ation is a free morph...

-ation is a bound mo...

Los Angeles is a bou...

Root vs. affix morphemes

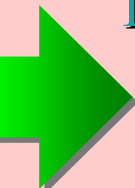
■ Roots

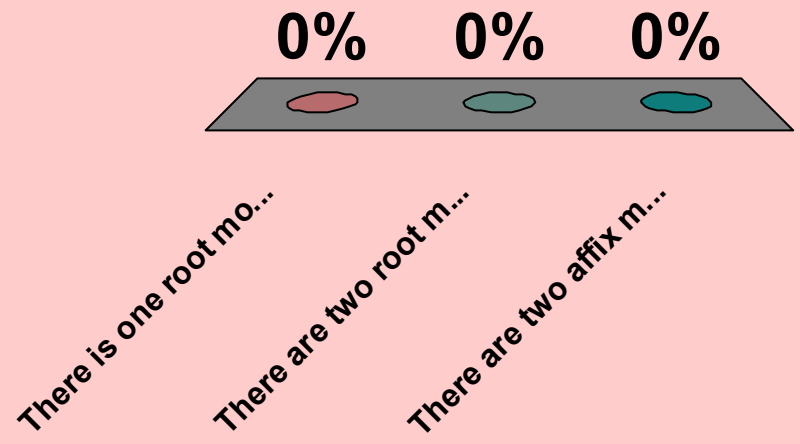
- meaning: contains major (referring, lexical) component of word meaning
- phonological shape: *typically* have longer, more complex shapes than affixes (but not always)
- can be bound or free morphemes
- one (or more) root morphemes per word (basically)
 - e.g. *flower* is a word which consists of one morpheme, which is a root morpheme

Affixes

- Affix types
 - **Prefixes**--added before another morpheme
 - /ʌn/- negative
 - **Suffixes**---added after another morpheme
 - -/ɑjz/ 'to cause to become'
 - -/z/ plural
 - **Infixes**---added within a root
 - an ex. from English pp. 79-80

In the word *flowers*

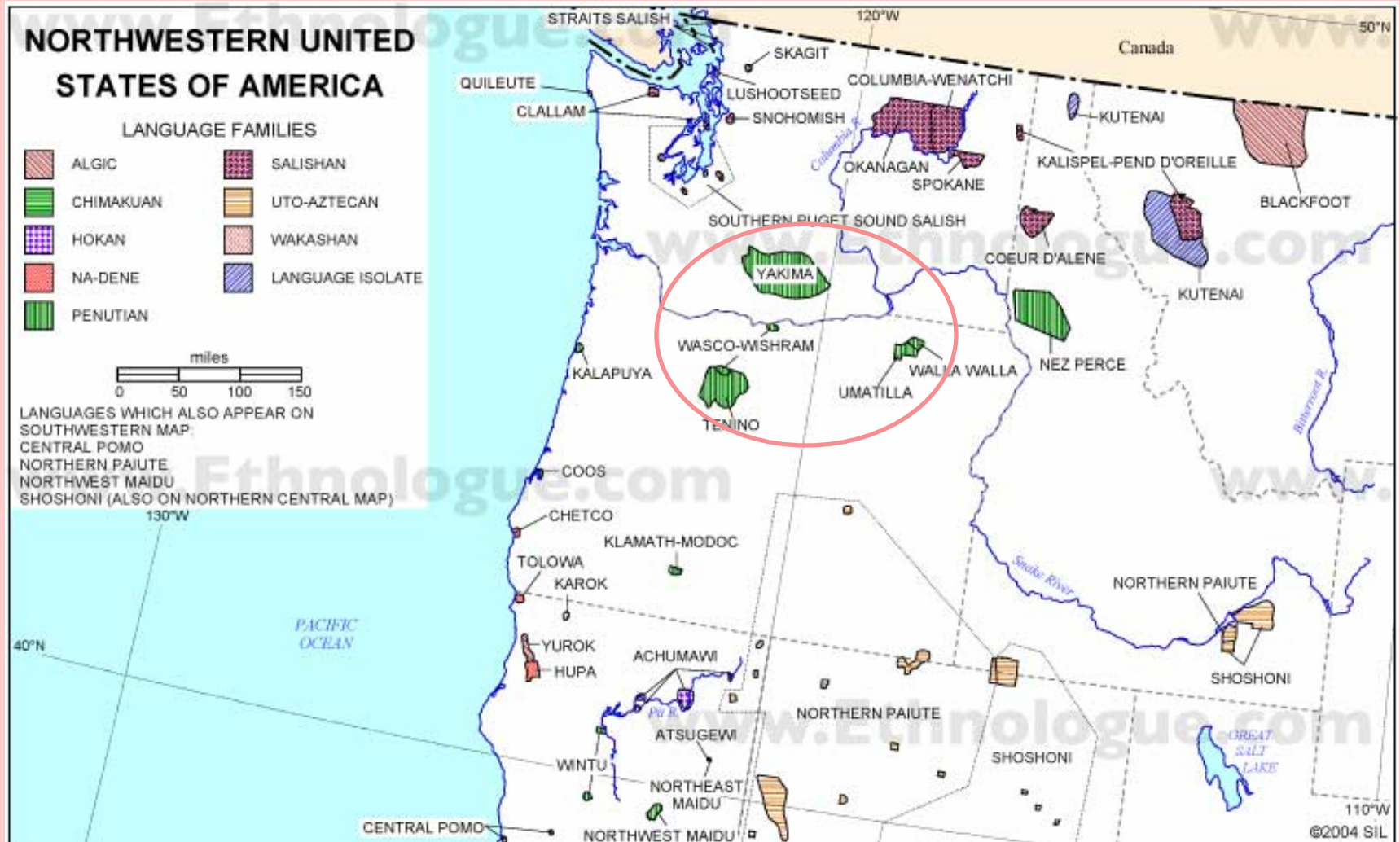
- 
1. There is one root morpheme and one affix morpheme.
 2. There are two root morphemes.
 3. There are two affix morphemes.



How to tell what is a morpheme?

- An example of morphological analysis: Sahaptin
- Examples of two word formation strategies in Sahaptin
 - Affixation
 - Compounding
- (First, some background information on Sahaptin)

Sahaptin language area



Announcements and reminders

- Morphology homework, to be posted after lecture. Due Thurs Apr 27 at the beginning of section.
- “ASL...has phonology/has the equivalent of phonology.” (This quiz question will be rescored (eventually).)

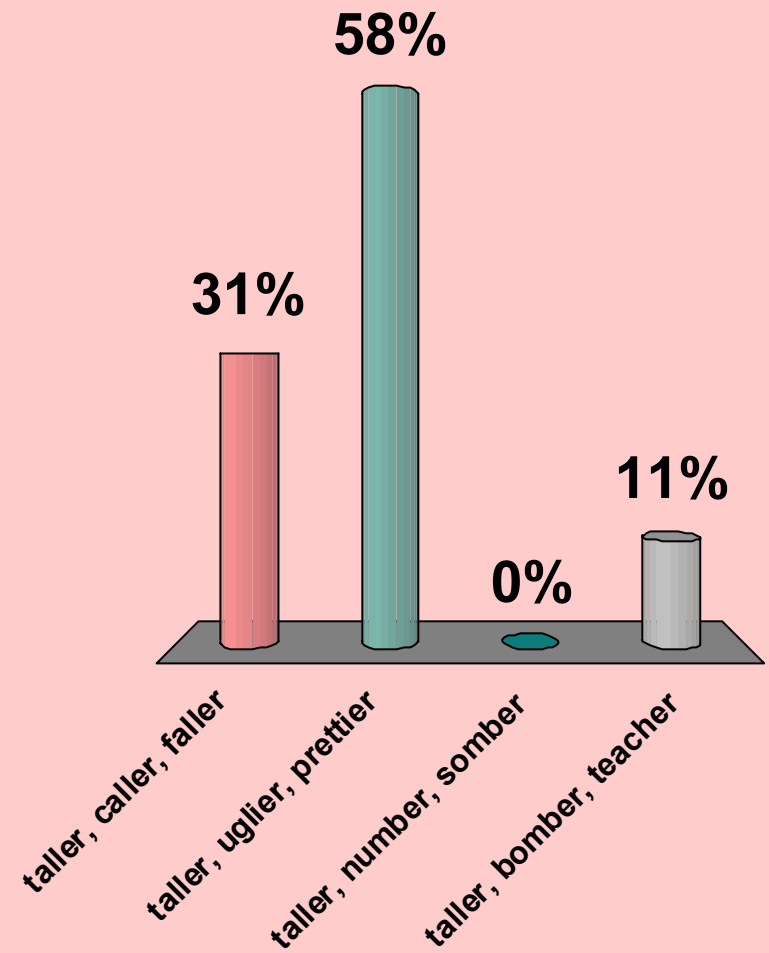
Which of the following words contain the same suffix?

1. taller, caller, faller

2. taller, uglier, prettier

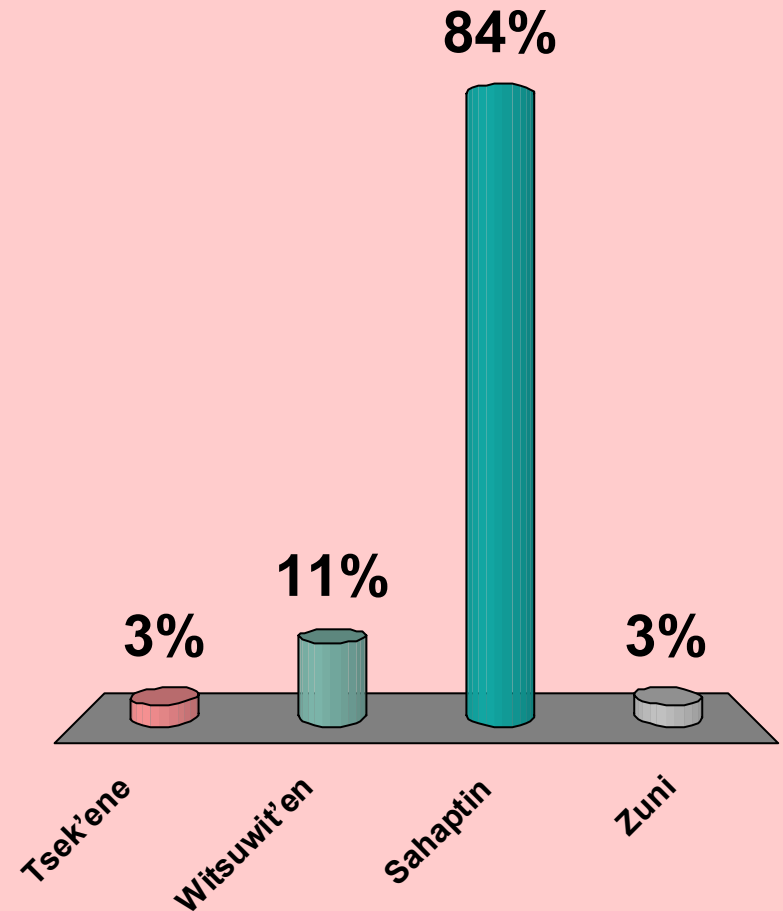
3. taller, number, somber

4. taller, bomber, teacher



The language we were talking about at the end of Wednesday's lecture is

1. Tsek'ene
2. Witsuwit'en
- ➔ 3. Sahaptin
4. Zuni



Virginia Beavert



digging [pjaχí] ‘bitterroot’ above [wiináas] (Wenas), Apr 03





Vowel system

	<i>front</i>	<i>central</i>	<i>back</i>
<i>high</i>	i ii	ɨ	u uu
<i>low</i>		ɑ ɶ	

[ɨ] = high central unrounded vowel

[ii] = [i:] = long high front unrounded vowel *etc.*







Sahaptin short vowels

	<i>front</i>	<i>central</i>	<i>back</i>
<i>high</i>	[tít]- ‘fart’ 	[ʔítít]  ‘tooth’	[ʔítút] ‘your dad’ 
<i>low</i>		[táki]  ‘turkey’	

[ɑ], more narrowly transcribed, would be [ʌ]

[´] is transcriptional symbol for stress

Sahaptin short vs. long vowels

<i>short</i>	<i>long</i>
[piš́íš] ‘paternal aunt’	[č́íiř] ‘water’ 
[pjúř] ‘snake’  	[púuř] ‘juniper’ 
[sts’át] ‘night’ 	[sts’áat] ‘dark’ 

Note quality difference between [a], [aa]

Sahaptin consonants

	<i>labial</i>	<i>alveolar</i>	<i>palatal</i>	<i>velar</i>	<i>labio-velar</i>	<i>uvular</i>	<i>labio-uvular</i>	<i>glottal</i>
<i>stops</i>	p p'	t t'		k k'	k ^w k ^w '	q q'	q ^w q ^w '	ʔ
<i>affricates</i>		ts ts'	č č'					
<i>lateral</i>		tɬ tɬ'						
<i>fricatives</i>		s	š	x	x ^w	χ	χ ^w	h
<i>lateral</i>		ɬ						
<i>nasals</i>	m	n						
<i>approximants</i>			j		w			
<i>lateral</i>		l						

Sahaptin ejectives

- [q'] = uvular ejective
- [q'] in Sahaptin
 - [q'áχnu] 'sharp-tailed grouse'
 - [q'íχni] 'torn'
- cf. Witsuwit'en [q']
 - [q'əχ] 'backwards'

Morphological analysis

■ How?

- Compare two or more words which differ minimally in form and meaning
 - Pairwise comparison best
- Identify largest form associated with a particular meaning
 - morpheme

Some Sahaptin verbs

sínwišaaš	‘I’m talking’
ʔanáwišaaš	‘I’m hungry’
káamšaaš	‘I miss’ (something)

Pairwise comparison

sínwišaaš	‘I’m talking’
ʔanáwišaaš	‘I’m hungry’

Difference must be ‘talk’ vs. ‘(be) hungry’

sín ‘talk’

wišaaš

‘I (am)’ (present)

ʔaná ‘be hungry’

káamšaaš	‘I miss’
----------	----------

Revised analysis:

sínwi ‘talk’

šaaš

‘I (am)’ (present)

ʔanáwi ‘be hungry’

káam ‘miss’

More Sahaptin verbs

A verb paradigm

sínwišaaš	‘I’m talking’
sínwišaam	‘you’re talking’
?isínwiša	‘he/she is talking’
sínwišataš	‘we’re talking’
sínwišapam	‘you (pl.) are talking’
pasínwiša	‘they’re talking’

Person/number affixes

-aš	‘I’
-am	‘you’
?i-	‘he/she’
-taš	‘we’
-pam	‘you (pl.)’
pa-	‘they’

Person/number affixes

		number →	
		sg.	pl.
person ↓	1	-as	-taš
	2	-am	-pam
	3	?i-	pa-

More Sahaptin verbs

ʔanáwišaaš	‘I’m hungry’
ʔanáwišanaaš	‘I was hungry’
ʔanáwiχaaš	‘I’m usually hungry’
ʔanáwiχanaaš	‘I used to be hungry’
sínwišaaš	‘I’m talking’
sínwiχaaš	‘I usually talk’
sínwišanaaš	‘I was talking’
sínwiχanaaš	‘I used to talk’

sínwišaaš	‘I’m talking’
ʔisínwiša	‘he’s talking’
sínwiχaaš	‘I usually talk’

- sínwišaaš vs. ʔisínwiša
-aaš ‘I’, ʔi- ‘he’
- sínwiχaaš vs. sínwišaaš
-χa ‘usually’, -ša present

sínwiχaaš	‘I usually talk’
sínwiχanaaš	‘I used to talk’
sínwišanaaš	‘I was talking’

sínwiχaaš vs. sínwiχanaaš

-χa-aš ‘usually’-‘I’

-χa-na-aš ‘usually’-past-‘I’

What is Sahaptin *-ša*?

- ‘present’ usage (without *-na*) actually incomplete, ongoing activity or state
 - *imperfective aspect*
 - *ša-na* (imperfective-past) (incomplete activity/state in the past)
- Tense: time of an event/state (relative to some other time); typically present, past, future
- Aspect: other characteristic of event/state
 - complete: *perfective*
 - incomplete: *imperfective*
 - relevance to later time: *perfect*

Summary of morphological analysis

- Roots (content morphemes)
 - sínwi ‘talk’
 - ʔanáwi ‘be hungry’
 - káam ‘miss’
- Suffixes (functional (grammatical) morphemes)
 - -ša imperfective
 - -χa ‘usually’ (habitual)
 - -na past
 - -aš ‘I’ (first person singular) (and other person/number affixes)

More Sahaptin verbs

ʔanáwišaam	‘you’re hungry’
ʔiʔanáwiša	‘he/she is hungry’
ʔanáwišataš	‘we’re hungry’
ʔanáwišapam	‘you (pl.) are hungry’
paʔanáwiša	‘they’re hungry’
pajúwišaam	‘you’re sick, hurt’
pajúwišaaš	‘I’m sick, hurt’
papajúwiša	‘they’re sick, hurt’
papnúša	‘they’re sleeping’

More morphemes

pajúwi-	‘be sick, hurt’
pnú-	‘sleep’

More Sahaptin words

[t'] = alveolar ejective, [ɬ] = voiceless lateral fricative

ʔipnúša	‘he/she/it is sleeping’
ʔipnúta	‘he/she/it will sleep’
ʔipnúna	‘he/she/it slept’
pnúnaam	‘you slept’
pnut’áwaas	‘bed’
pnutá	‘sleeper, one who sleeps’
pnunáɬ	‘insomniac’
wašanáɬ	‘wild horse’
pawášaša	‘they’re riding’
wašat’áwaas	‘saddle’

New morphemes

- wáša ‘ride’
- -ta ‘will’ (future)
- -t’áwaas (instrument by which)
- -łá ‘one who’ (agent)
- -náł ‘that which does not (verb), that which is not (verbed)’: ‘that which (one) does not’ (negative agent)

More words with -t'áwaas

sap'ináwi	'measure'	sap'inawit'áwaas	'ruler, measuring tape, etc.'
twáluu	'fish w/ dipnet'	twaluut'áwaas	'dipnet pole'
łq'íwi	'play'	łq'iwit'áwaas	'toy'
panáti	'ascend, go up'	panatit'áwaas	'ladder'
láqajɣi	'shine'	laqajɣit'áwaas	'light, lamp, etc.'
saalí	'cut with scissors'	saalit'áwaas	'scissors'


Compounding in English

- [root] [root]

	<i>noun</i>	<i>verb</i>	<i>adjective</i>
<i>noun</i>	tray table	gift wrap	skin-deep
<i>verb</i>	thinktank	?	?
<i>adjective</i>	high school	dry-clean	red-hot

Some compounds in Sahaptin

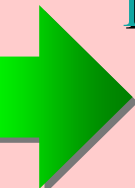
Noun compounds: noun-noun or adj-noun

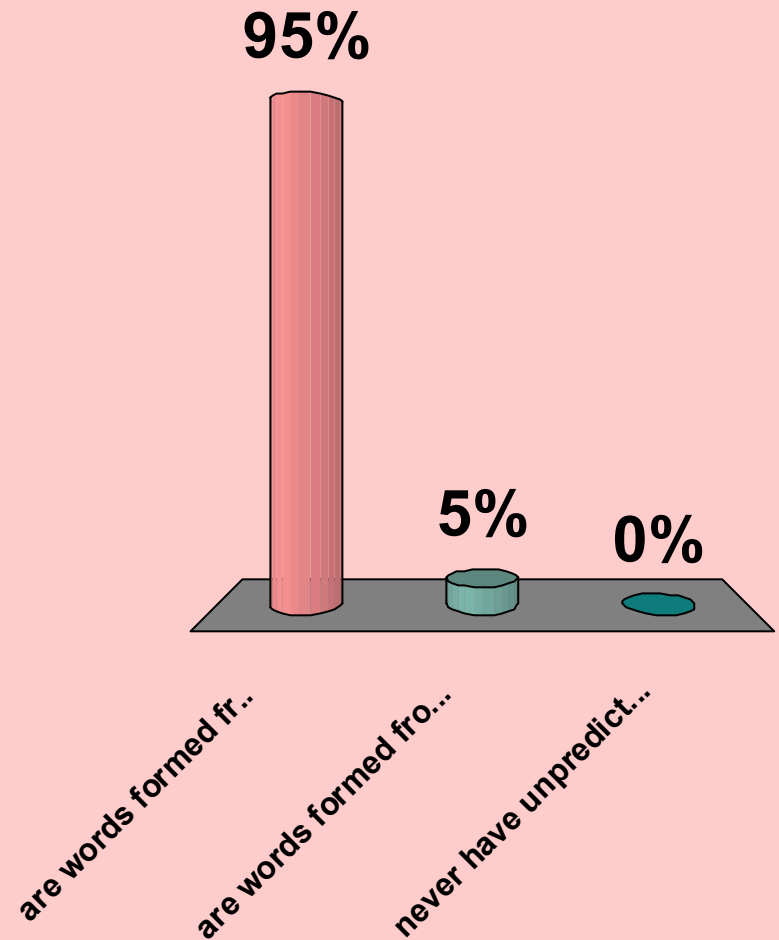
<i>compound</i>	<i>meaning</i>	<i>root</i> ₁	<i>root</i> ₂
k'tít pšwá 	‘shale’	k'tít ‘solid, hard’	pšwá ‘rock’
?ipáp timna 	‘palm of hand’	?ipáp ‘hand, arm’	timná ‘heart’
čilwit wapsúχ 	‘devil’	čilwít ‘bad’	wapsúχ ‘scholarly’
nč'i ?istí	‘awl, ice pick’	nč'í ‘big’	?istí ‘metal’

Announcements and reminders

- Quiz on syntax (ch. 4) opens Tues Apr. 25, 10 am; closes Fri Apr. 28, noon
- My office hours: today (Mon) 3-5
- Midterm:
 - Fri. May 5
 - multiple choice format
 - requires Mark Sense form
 - through morphology

Compounds...

- 
1. are words formed from two or more roots; e.g. *tray table*
 2. are words formed from a root + affix; e.g. *trays*
 3. never have unpredictable semantic changes



Allomorphs of a morpheme

A morpheme may have more than one phonological shape.
The different shapes are often predictable from context.

Examples from English: plural suffix and past tense suffix,
discussed in Ch. 7.

-[əz]	-[s]	-[z]
[fɪnʃ <u>əz</u>]	[kæts <u>s</u>]	[dæg <u>z</u>]
[pɹɪ <u>səz</u>]	[səks <u>s</u>]	[ʃu <u>z</u>]
[ʃʌŋ <u>əz</u>]	[dəfendənts <u>s</u>]	[lɔɪr <u>z</u>]

Allomorphs

Distribution of allomorphs of English plural suffix:

sibilant ____	voiceless non-sibilant ____	voiced non-sibilant ____
-[əz]	-[s]	-[z]

English sibilants = [s z š ž č ĵ]

Underlying representation

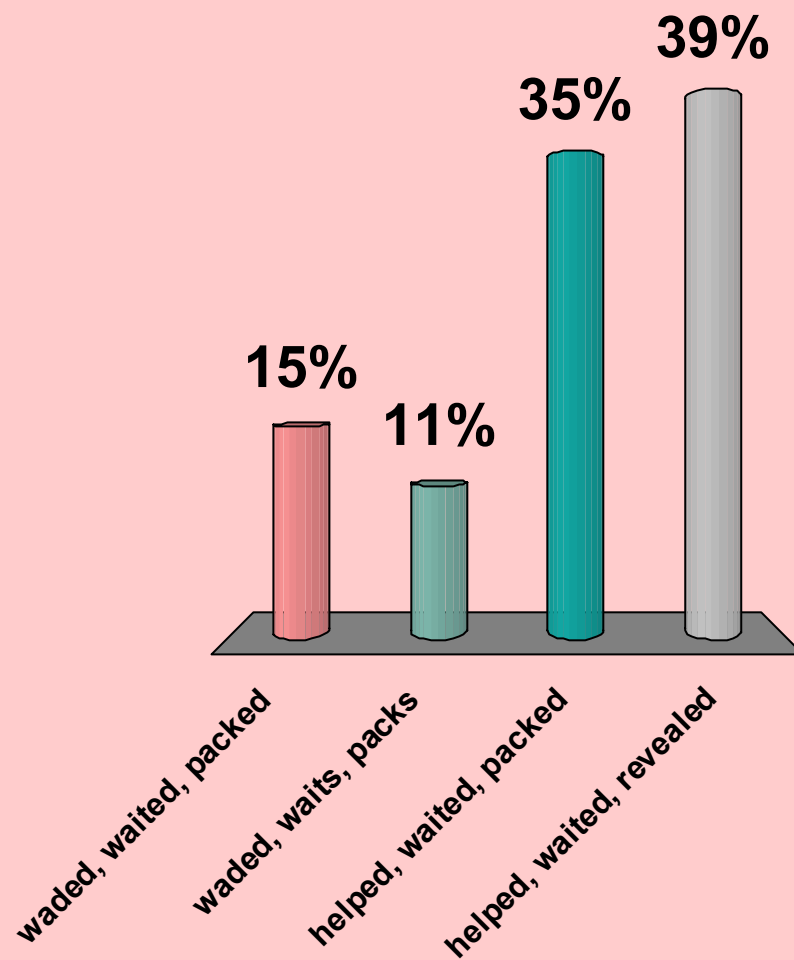
- The forms of the English plural suffix are predictable from context.
- The plural suffix has a basic representation: *-/z/*
- Phonology
 - $\emptyset \rightarrow [\emptyset]$ / sibilant ____ sibilant
 - */z/* $\rightarrow [s]$ / voiceless non-sibilant ____

Allomorphs

- Phonological rules can convert one phoneme into another
 - e.g. /z/ → [s] / voiceless_____
 - with such rules, different morphemes almost always involved: *morphophonemic rules*
- Morphology (plural suffix) /kæt-z/
 Phonology (voicing assimilation) ↓
s
 Phonetic representation [kæts]

Which set of words illustrates the three allomorphs of the past tense suffix in English?

1. *waded, waited, packed*
2. *waded, waits, packs*
3. *helped, waited, packed*
- ➔ 4. *helped, waited, revealed*



Sahaptin allomorphs

■ Allomorphs of the dual suffix

mjánaš	‘child’	mjánašin	‘two children’
ʔap’úus	‘cat’	ʔap’úusin	‘two cats’
nišátwaj	‘roommate’	nišátwajin	‘two roommates’
tł’áwi	‘rival’	tł’áwijin	‘two rivals’
wiší	‘rat’	wišíjin	‘two rats’
tíla	‘paternal grandfather’	tílaqjin	‘two paternal grandfathers’
jíχa	‘beaver’	jíχajin	‘two beavers’

- What about other vowels? ([i], [u])
 - No morpheme ends in [i]
 - Only [u]-final examples slightly irregular

łmáma	‘old woman’	łmamatúwin	‘two old women’	łmamatúma	‘old women’
χ ^w ísaat	‘old man’	χ ^w (i)saatúwin	‘two old men’	χ ^w (i)saatúma	‘old men’

łmáma ‘old woman’ łmamatú- ‘old women’ (du./pl.)

χ^wísaat ‘old man’ χ^wisaatú- ‘old men’ (du./pl.)

Distribution of dual suffix allomorphs

in	/ C ____
jin	/ a, i ____
win	/ u ____

Two plausible analyses

1. -/in/ is basic form of suffix

Glide Epenthesis rules

0 → w / u ____

0 → j / other vowels ____

2. -/jin/ is basic form of suffix

j → w / u ____

j → 0 / C ____

Deciding between the analyses

- **-[ji] adjectival**

- [táatpasji] ‘wearing a shirt, dress’

- [táatpas] ‘shirt, dress’

- [qájχ ʔáčaašji] ‘sharp-sighted’

- [ʔáčaaš] ‘eyes’

- **-[ji] adjectival is invariant, maintains [j] after consonant**

- suggests that dual suffix is **-/in/** (analysis 1)

- (otherwise $j \rightarrow 0 / C ___$ should apply to **-ji** adjectival)

Summary

- Morphemes
- Some morphological processes: affixation, compounding
- Morphological analysis
- Allomorphs of morphemes