

# Velar Fronting in Aalsea

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# Questions about Alsea

- What are the regularities of distribution for fronted velars?
- Are the exceptions:
  - Systematic?
  - Lexical?
- What is the place of fronting in the phonology?

# Velar Fronting on the Northwest Coast

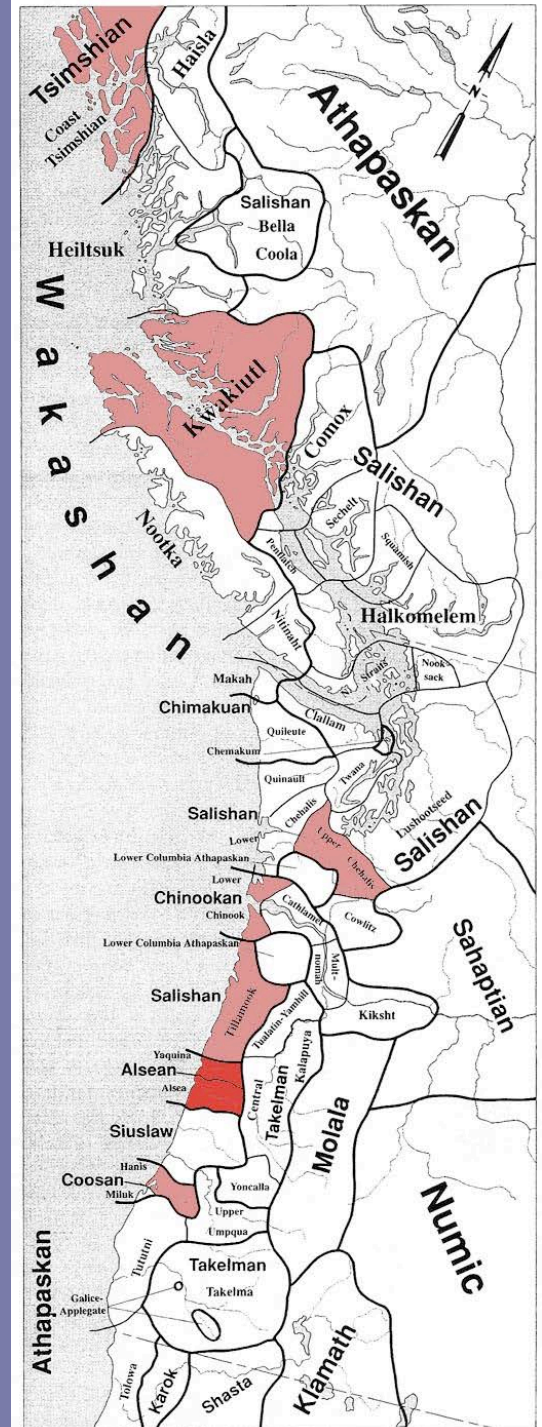
## Coastal Oregon (and Washington)

- Coos
  - Alsea
  - Tillamook
  - Lower Chinook
  - Upper Chehalis
- (some speakers, according to Boas)

## Further North

- Kwakiutl
- Tsimshian
- (Bella Coola)

Jacobs (1954)



# Fronting in Hanis Coos

“...a strong tendency, inherent in the language, to assimilate, whenever possible, the consonants of the *k*-series to the character of the preceding or following vowels. As a consequence of this tendency, *i*-vowels are invariably followed or preceded by the anterior palatals...”

Frachtenberg (1922)

“When *k*, *k'*, *g* appear before *e*, *i*, *ə*, they have a short *y*-sound after them, thus: the word for “bowl”, *kədámin*, sounds like *kyədámin*.”

Grant (1994)

# Fronting in Bella Coola

/p <sup>k</sup> m/	[p <sup>h</sup> k̚ə̃m]	‘mosquito’
/k <sup>l</sup> kl/	[k̚il̚k̚il̚]	‘herring’
/t <sup>k<sup>w</sup></sup> m/	[t <sup>h</sup> k̚ <sup>w</sup> ũ̃m]	‘to dig clover roots’
/lu-lx/	[lo:l̚x̚] ~ [l̥öwəl̚x̚]	‘bark is getting loose’

Nater (1979)

# Alsea velars

- The large majority of velar stops in Alsea are transcribed as **fronted** in the original sources.
- Some plain velars are written in situations of **possible contrast** with fronted velars.
- Is there an **actual contrast**?

# Sample transcriptions

	‘two’	‘head’	‘brother’
Dorsey 1884	qǎçʼ-kǐ	çlú-kʼǐ	mú-tšik
Sapir 1906	xîlkʷ	ɬōkʷ!ɪ	—
Frachtenberg 1910, 1913	xɛλk·	λōk·	mūʼtsik·
Jacobs 1935	xəɬk̚	ɬú·k̚ʼ	mú·tšik
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# Jacobs (1935)

Includes both points of articulation in his set of “primary phonemes”.

“The primary phonemes are the three simple vowels symbolized as *a, i, u*; two diphthongs *ai, au*; a series of intermediate consonants composed of seven stops (*B, D, Ğ, G, GW, Ğ̣, Ğ̣W*) and one affricative (*DJ*); a series of glottalized consonants of the seven stops (*p', t', ḳ', k', k'w, q', q'w*) and two affricatives (*t'c, t'ɕ*); surd continuants *c, ç, x, xw, ç, çw, h, hw, m, n, l, ɕ*; and the glottal stop.”

# Jacobs (1954)

Later he seems to identify the fronted sounds as secondary realizations:

“[a]coustically, rather than phonemically, anterior palatals...”

However, he also says:

“Whether any anterior palatals so far recorded are phonemes rather than allophones of something else remains to be determined.”

# Digitized data sources

- Frachtenberg (1910, 1913)
  - elicitation notes
  - 4860 velar stop tokens
- Frachtenberg (1917, 1920)
  - published texts
  - 11,015 velar stop tokens
- Jacobs (1935)
  - elicitation notes
  - 5348 velar stop tokens

# Following context: K\_

	Frachtenberg Notes		Frachtenberg Texts		Jacobs Notes		Pooled	
	k(!)	k · (!)	k(!)	k · (!)	k(')	ḱ(')	plain	front
i, e, y	31	1937	23	3779	412	1857	466	7573
u, o, w	1305	59	2378	109	885	93	4568	261
a	81	324	38	928	80	639	199	1891
ə	5	67	38	841	34	133	77	1041
C	115	463	27	1367	323	417	465	2247
#	18	455	30	1454	21	441	69	2350

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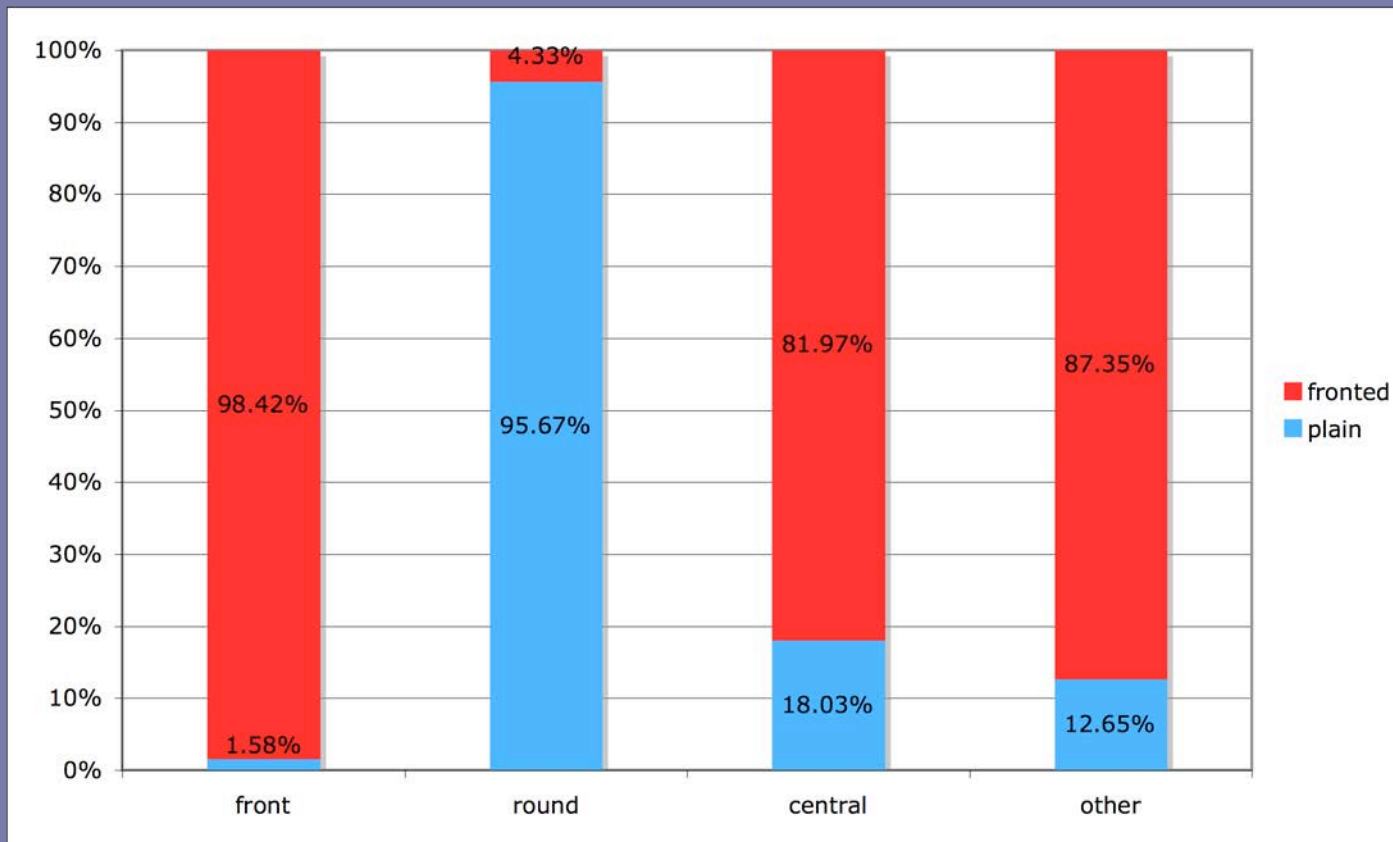
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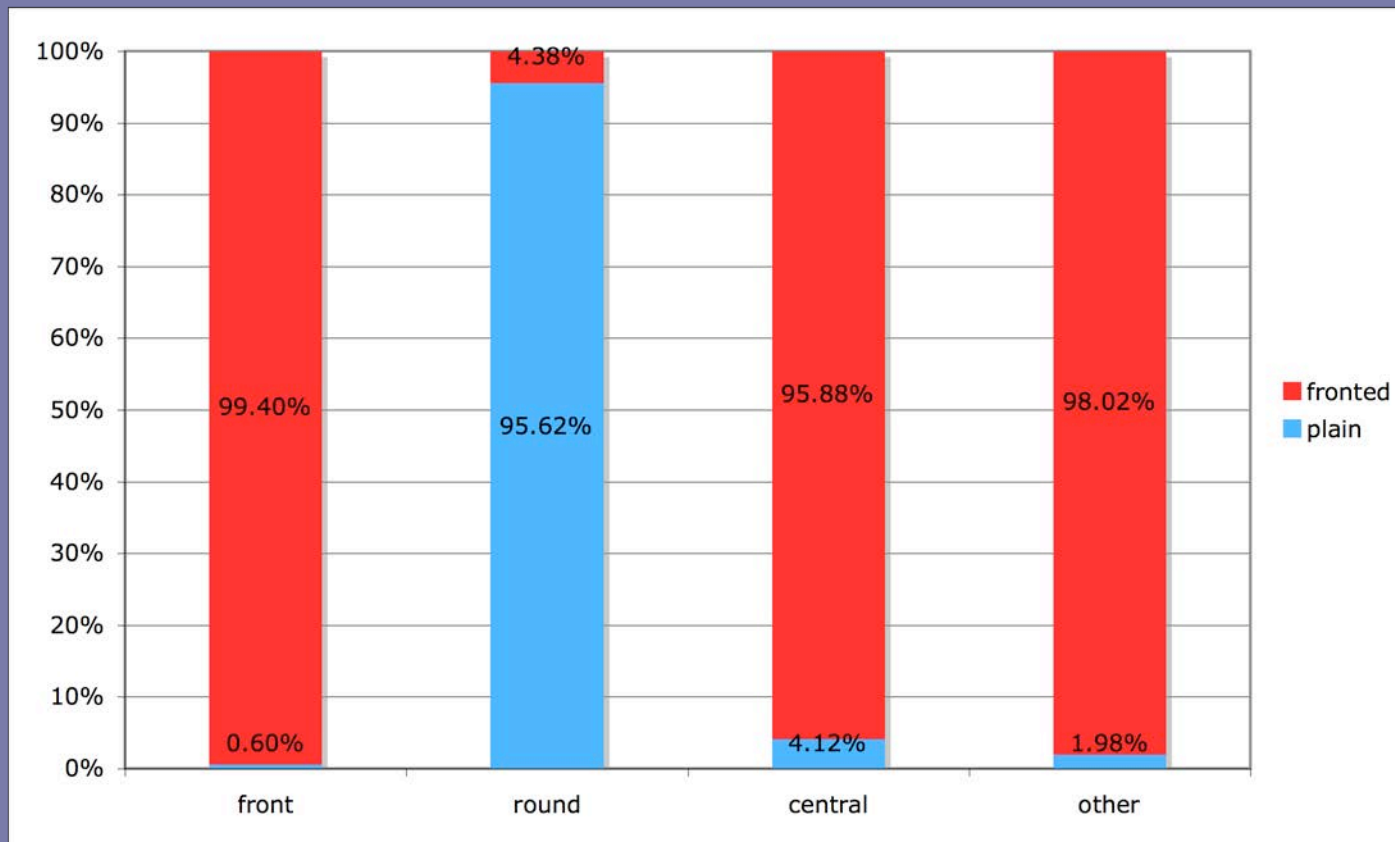
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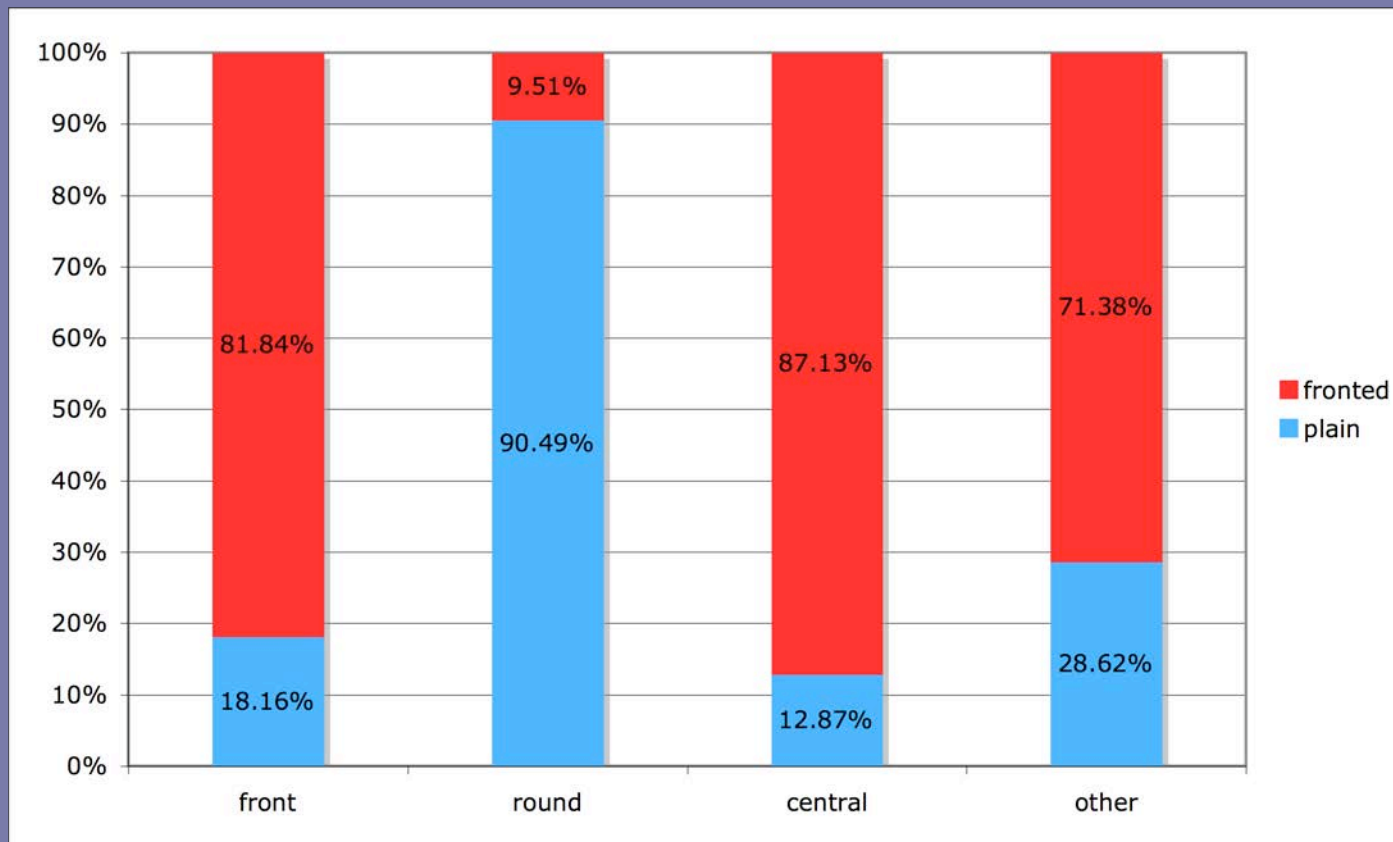
# Frachtenberg notes: K\_



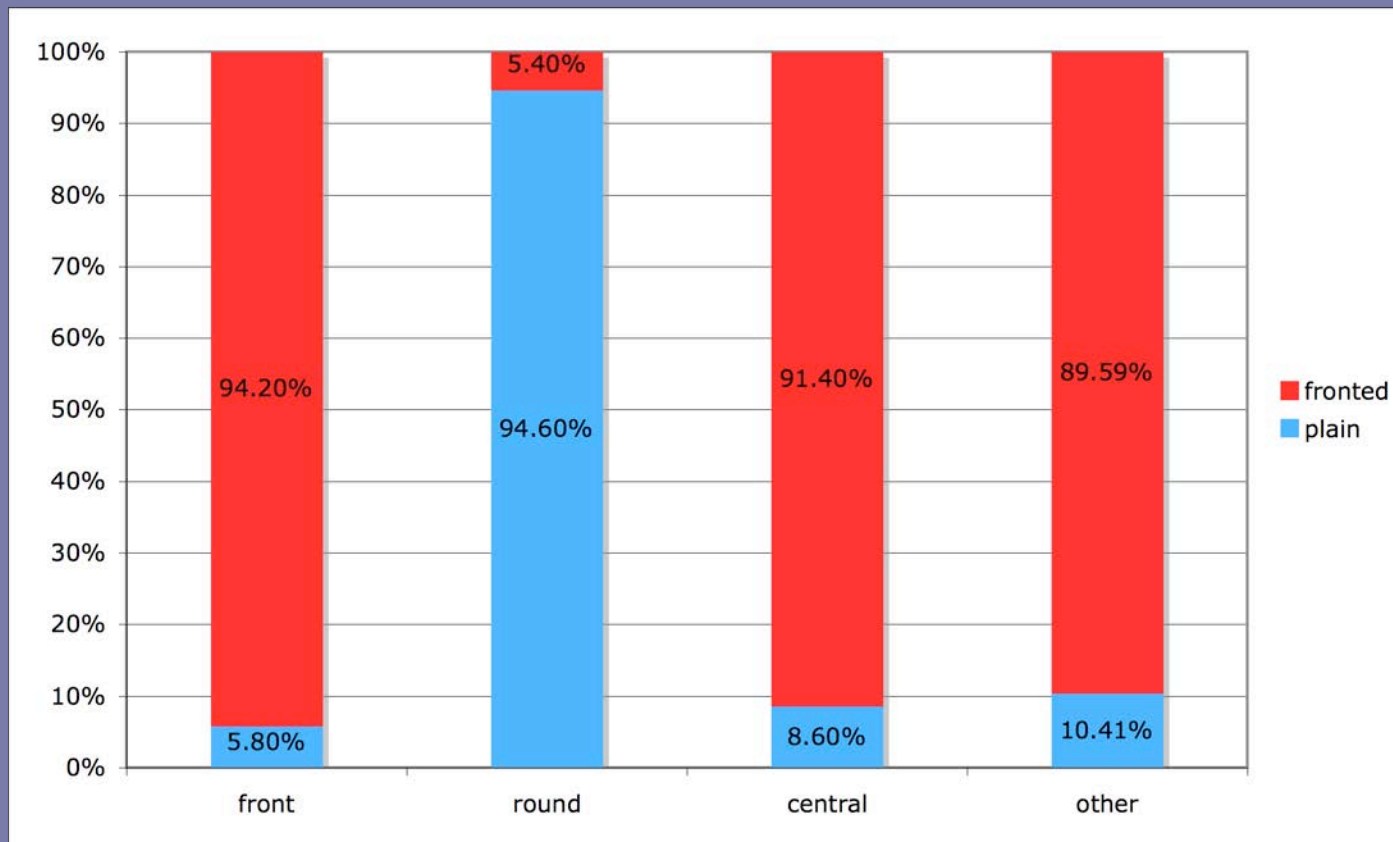
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# Jacobs notes: K\_



# Pooled data: K\_



# Preceding context: \_K

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a	124	252	110	688	118	238	352	1178
ə	26	43	17	104	63	64	106	211
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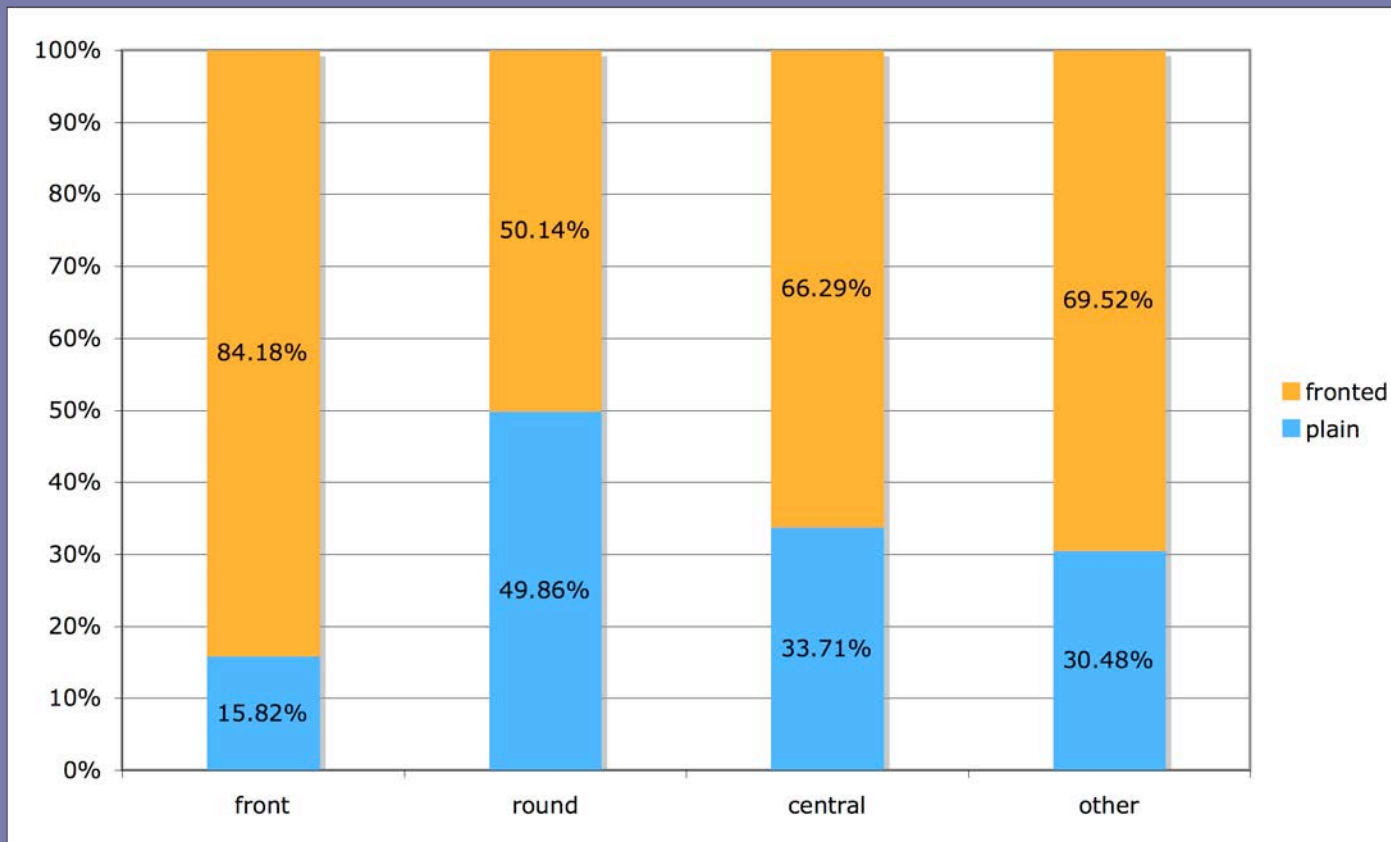
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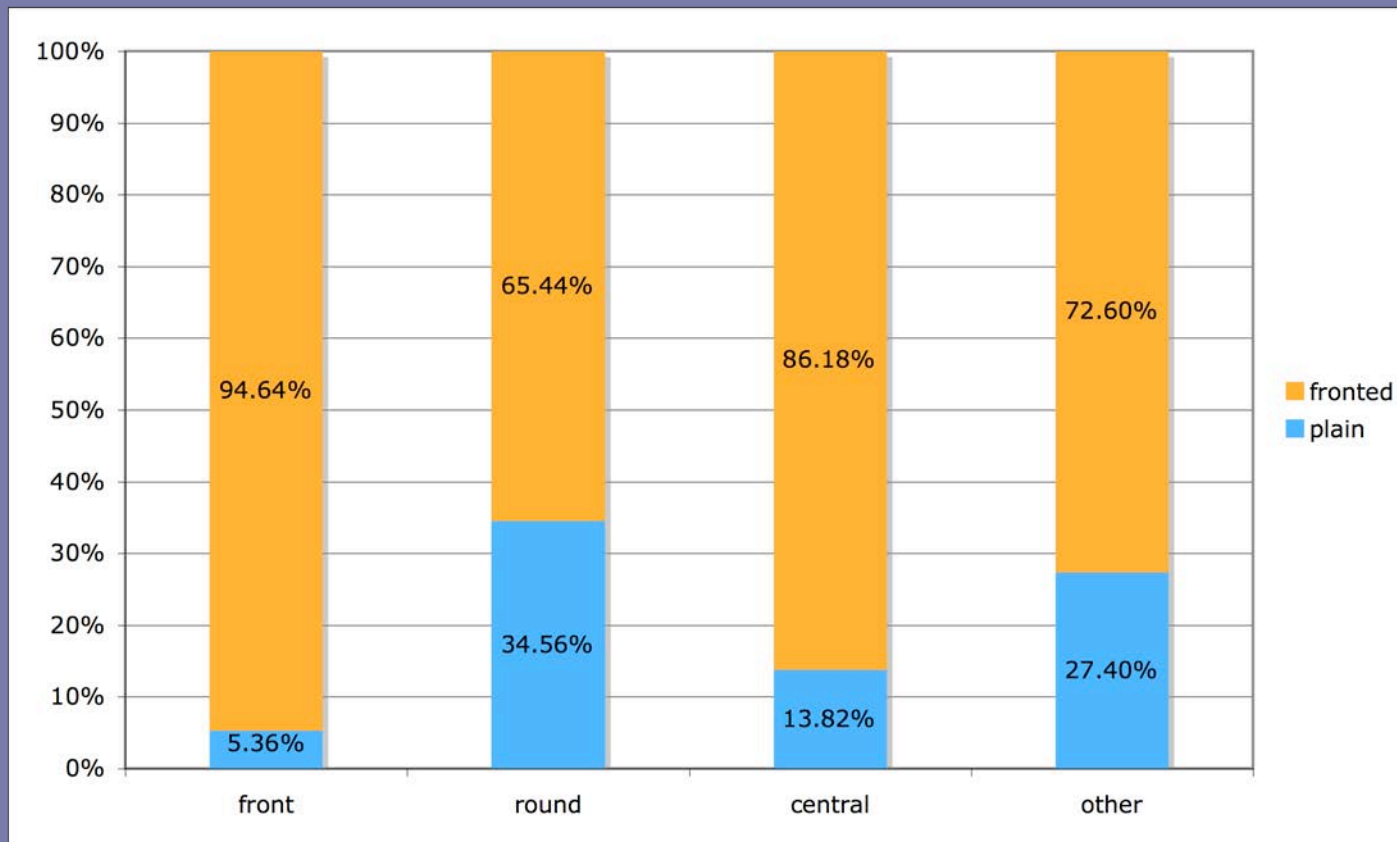
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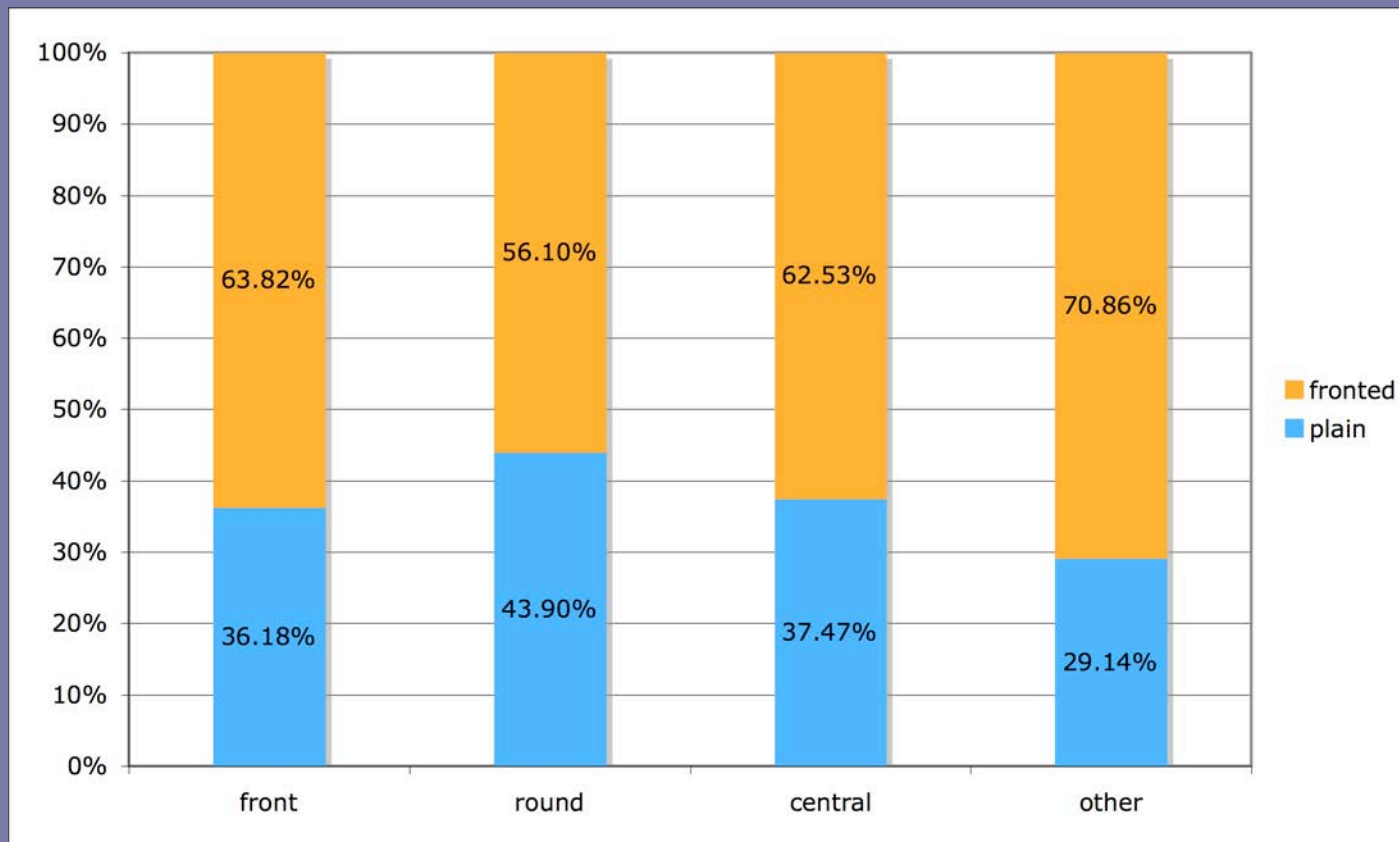
# Frachtenberg notes: \_K



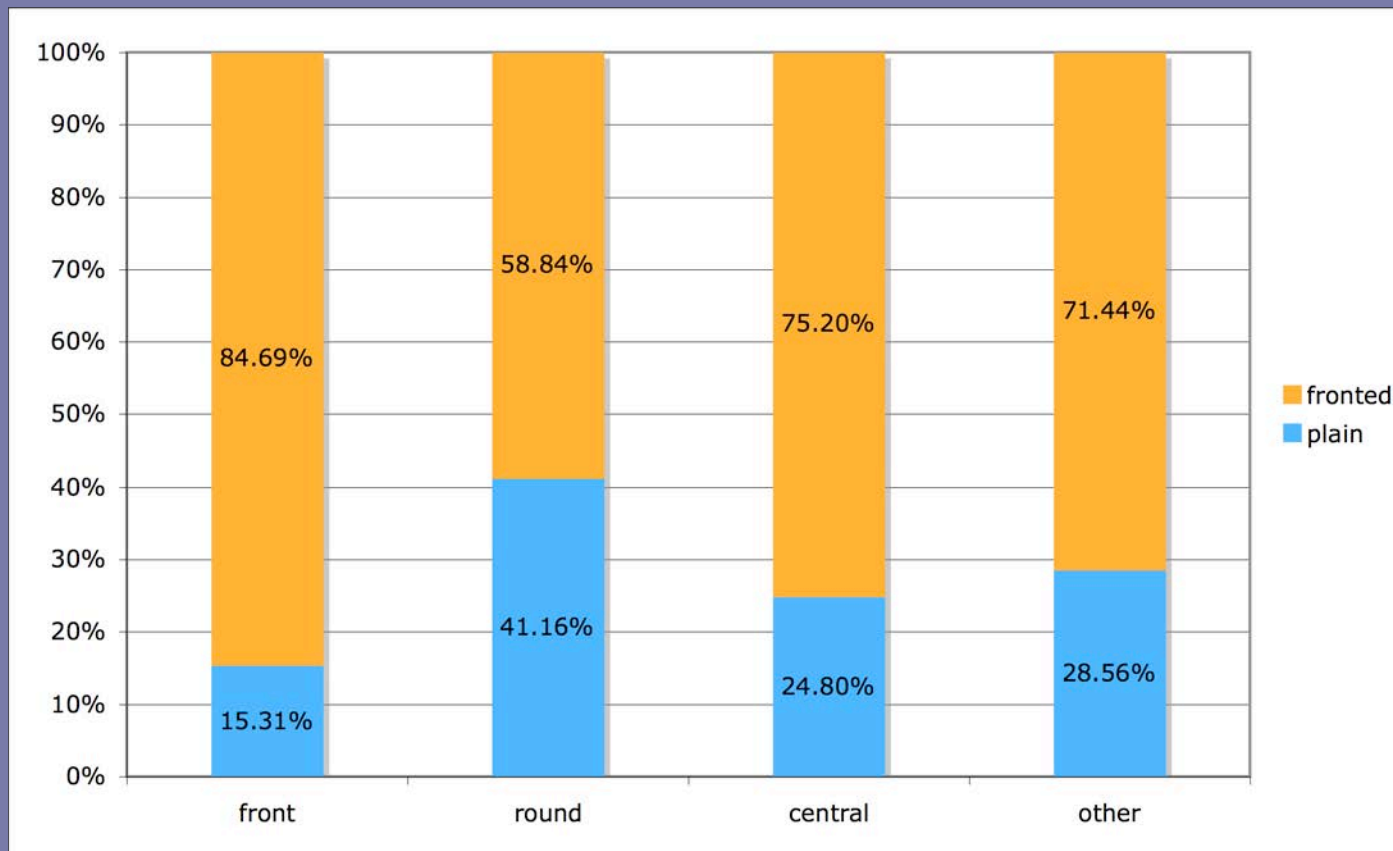
# Frachtenberg texts: \_K



# Jacobs notes: \_K



# Pooled data: \_K



# Interim conclusions

- Fronting of /k/ is the default realization.
- Transcribed [ku] reflects the phoneme /k<sup>w</sup>/, which does not undergo fronting.
- There's some noise in the data due to epenthetic vowels, variable transcriptions, etc.

Transcribed [ku]

Not an exception.

# Rounded velar

/k<sup>w</sup>aɪ, k<sup>w</sup>ɪ/ ‘reach, arrive’:

shows transcription [ku] from /k<sup>w</sup>/

kwaɪ-a

‘reached’

Gwa’āɪ-atx̣

‘is coming ashore’

kuɪ-aɪ’

‘would (not) reach’

Gwəl-a’im

‘(will) come ashore’

# Velar + /u/

/musk, msk+u/ 'suck out poison':  
shows /ku/ across morpheme boundary

mu's<sub>ḱ</sub>-itxanx

'is sucking it'

ɬə-mu's<sub>ḱ</sub>-idi

'(can't) suck it out'

ɬə'-mš<sub>iḱ</sub>-ɛlt

'(stopped) sucking on him'

mi<sub>sḱ</sub>-u'inx

'sucked it out'



# Velar + /u/

/c̣kyut̚, c̣kuyt̚, c̣kyt̚/ ‘escape’:

shows /ku/ resulting from CV metathesis

tṣ̌ḳiyu't̚-əʃɛl      ‘it escaped’

tṣ̌ḳu'it̚-iyu      ‘an escape’

tṣ̌ḳit̚-u'wim      ‘(will) escape’

Transcribed [ki]

Variation and context.

# Frachtenberg vs. Jacobs

k·īyū<sup>n</sup>'sa

hak·ī<sup>n</sup>'k·ī

tsk·ila'mxat

sins k·ī'k·s

i'k·-nī'x

gi'u<sup>n</sup>ša

hagi<sup>n</sup>'( ' ) ġi

tšgila'mxat'

šə'nš ḳikš

'ik-nī'x

i'ḳ-nī'x

'tobacco'

'from here'

'camas'

'my eye(s)'

'for you'

Jacobs often seems to omit mark of fronting adjacent to front vowel, and before consonant.

# Variation by Jacobs

nī'ṣ̌ḳ

'far away'

ɬə-ni'ṣ̌G-iyuṣ̌xam

'(will) go a long way'

na'(')ṭḳ

'river'

na'ā'ṭG-au

'creek'

nā'ṭG-ikṣ̌

'to the river'

G̣iya'i

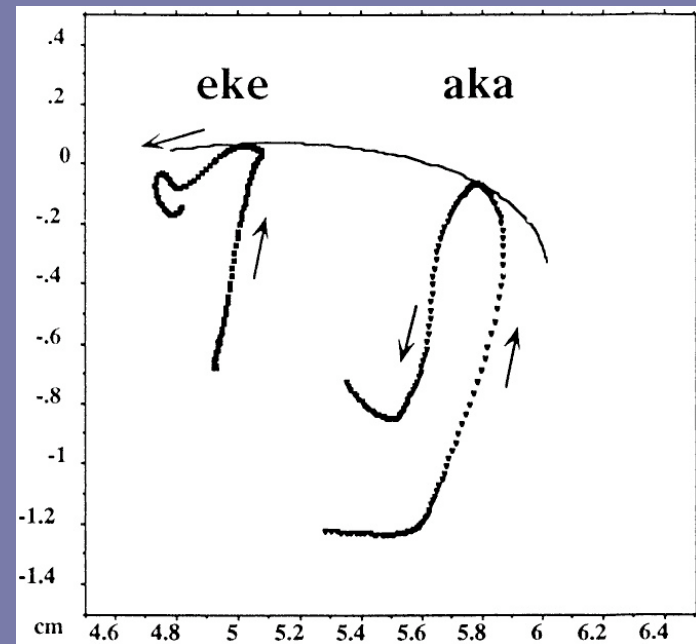
'knife'

tṣ̌-G̣i'a'i-ḳ

'his knife'

# Coarticulation

- Where did the transcribers draw the line between “plain” and “fronted”?
- Did they correct (unconsciously) for coarticulatory effects?



Ewe articulations from  
Ladefoged and Maddieson (1994)

# Not just coarticulation

Most realizations consistent across contexts; cf. irrealis proclitic /k/

+ /p/	k·əp, ɟip	‘you pl. will’
+ /awx/	k·aux, ɟaux	‘they du. will’
+ /uk <sup>w</sup> /	k·uk <sup>u</sup> , ɟuk <sup>w</sup>	‘will up’
+ /qawa?/	ɟqawa’	‘all will’

Transcribed [ka]

Sometimes /qa/,  
but not always.

# Livingston Farrand

- Collected texts in 1900.
- Frachtenberg adapted and published 5 texts.
- Included in the Texts data.
- “Farrand never heard the velar *q*, but wrote all words that contain a velar, with a *k*.”
- For some words, Frachtenberg could apparently not verify the transcriptions and left <k> intact.



# Farrand vs. Jacobs

mə-tsiyak-**auxa**  
Djiyā'**ḡ**-au

'became hoarse'  
'is losing his voice'

**pk**-aī'nx  
pə**ḡ**-a'inx

'touched it'  
'touched it'

ts**ka**'tina  
tc**ḡ**a'Dən

'crane'  
'crane'

Cf. similar changes for Frachtenberg from his notes to the published texts.

# The case of ‘bird’

- Consistently written unfronted, although not frequently attested
  - F. **ka**kā'ya?
  - J. **ka**'**ka**ā'ya' (cf. Klikitat ka'kya)
- Related to Sahaptin ‘bird, animal’?
  - e.g., an exceptional borrowing
- Something about the sounds in this word?
  - repeated /ka/, following /y/

# The case of 'burn'

- Verb 'burn' consistently unfronted
  - F. tkəɫtʰ
  - J. tɕəɫtʰc, tɕa'li'ɫtʰc
- Possibly related 'fire' typically fronted
  - F. ɭk·ilʰ, ɭk·ilīʰ
  - J. ɬɕi'ɪ'ɫʰ, ɬɕilī'ɫʰ
- Role for following front vowel in 'fire'?
  - morphological relationship not transparent
  - perhaps 'burn' has special history?

# The case of 'monster'

- Also consistently unfronted
  - F. akī<sup>n</sup>,
  - J. aci<sup>n</sup>,
- Mythological creature
  - perhaps a borrowing

# Exceptionality

- If these words are true exceptions...
- Then the fronting rule is somewhat “deep” in the phonology
  - though not as deep as Trisyllabic Shortening
- Again, clearly not just phonetic coarticulation
- A (largely) allophonic rule of velar realization
  - but not exceptionless like English flapping

# Diminutives

- Uvulars raise to velars in the presence of the diminutive suffix.

qwi''	Gwī'y-au	'canoe'
ša'qal	ša'ā'kəl-au	'fish tail'
ʈk̡aG̡a'uχamt	ʈk̡aGa'uχamD-au	'dove'
tšqε' <sup>n</sup> χ	tšGi'i' <sup>n</sup> χ-au	'dog'

- In the 20-odd examples, no velar that results from raising is transcribed with fronting.
- /k/ in same phonological category as in apparent exceptional words such as 'bird' ?

# [ɛ] in Jacobs

- Frequent realization of /a/ adjacent to fronted consonants [l, ɬ, y, k]

ɔ̃ɛ<sup>n</sup>'k                      'woodpecker'

hi'k̃ɛ, hi'k̃a                      'just'

ɬiyɛ'                      'not'

məɬɛ'nɣ                      'know it'

u.<sup>(')</sup>lu.'š̃ɛl                      'drowned'

- Does this require a shared phonological feature to trigger the rule?
  - or may in fact be more gradient assimilation
  - not always transcribed as such by Jacobs

# Generalizations

- Non–rounded velars are normally fronted.
- This is the default realization, not strictly dependent on adjacent vowels.
- There may be a few lexical exceptions.
  - related to borrowing?
- Suggests more abstract level of representation.
  - The diminutive (and [ɛ] perhaps) support this.
- A relatively early rule that feeds other processes.
  - Precedes metathesis and suffixation
  - Counterfered by diminutive raising



# Answers to questions

- What are the regularities of distribution for fronted velars?
  - Nearly all tokens of unrounded /k/
- Systematic exceptions:
  - Non-transcription next to front vowels
  - Non-application in diminutives
- Lexical exceptions
  - Possible small set of words, e.g. ‘bird’ and ‘burn’
- What is the place of fronting in the phonology?
  - A somewhat early (lexical) rule
  - Subject to exceptions and counterfeeding