Camille Coiteux-King

Linguistics 450

Comparisons and Research: Spokane

Spokane (ISO 639-3 code: SPO), and its nearly identical dialect Kalispel, is a member of the Interior Salish language family and is primarily spoken in eastern Washington state. A critically endangered language, it is no longer used as a first language and is spoken by only a smattering of tribe elders (Ethnologue.com). The language is characterized by many distinctive linguistic features: most notably the complex phonological system containing a large consonant inventory (31 consonants, according to Carlson (2000)) juxtaposed by a relatively small number of vowels (Mithun, 1999). Spokane also features a distinct high tone and low tone used to distinguish words otherwise identical in terms of consonants and vowels (Berman, 2012) – a rare variation from other Interior Salish languages. The grammar of the Spokane language is highly complex, with an intricate system of affixes and noun classifications (Berman, 2012). This grammar complexity was demonstrated in the transcriptions found in Carlson's "Spokane" IPA illustration by use of hyphens to mark morpheme boundaries, but for the sake of convention and ease of reading will not be included in my updated transcriptions.

My Original Vowel Chart:

	Front	Back
Close	i	u
Close-Mid	ɪ	
Open-Mid	ɛ | ɛ͡ɪ ↑	ʌ | ɔ
Open		ɑ | a͡ʊ↑ | a͡ɪ ↘ | ɑ̠

Revised Vowel Chart from Carlson (2000):

	Front	Central	Back
Close	i		u
Close-Mid	e	(ə)	o
Open		a	

The Spokane language includes a standard 5-vowel system: close vowels [i], [u]; close-mid [e], [o], and an epenthetic [ə]; and open [a]. The main differences between my vowel chart and Carlson's chart are my transcription of mid and central vowels. He writes that "unstressed epenthetic vowels, all in the region of [ə]" are used to break up consonant clusters and are determined by the surrounding consonants (Carlson, 2000). I had originally included the lower, more centralized, and less stressed vowels in my chart ([ɔ] and [ɪ]) because I'm not so familiar with the language conventions of Spokane yet. I relate this phenomenon to the convention of the sound [ei] in English, such as in the word "made". Phonetically, this would be transcribed as [meid] but, due to the English convention of a vowel remaining lax before a plosive, it would correctly be transcribed as [meɪd]. As a native English speaker, I have knowledge of these conventions and can thus put them to use. However, as a student rudimentarily studying Spokane, I wouldn't have known that the sounds [ɔ] and [ɪ] are actually environmentally-specific realizations of [ə]. According to Carlson, the open-mid back vowel [ɔ] appears before rounded uvulars, and the close-mid front vowel [ɪ] usually precedes palatals or alveolars. I also mistook the central open vowel [a] for the back open vowel [ɑ], but it's difficult for me to hear the difference between the two so I don't have any qualms with this revision. I have removed all diphthongs from my chart based on both draft feedback and Carlson's explanation of the Spokane vowel convention.

Interestingly, Carlson makes no note of tone in the language even though a distinct high-tone/low-tone contrast has been verified and corroborated by such contributors as Berman (2012) and Mithun (1999).

My Original Consonant Chart:

	Bilabial	Labiovelar	Dental	Alveolar	Postalveolar	Palatal	Velar	Uvular	Glottal
Stops	p b		t	d			k g	q'	
Nasals	m			n					
Fricatives		ʍ		s	ʃ	ʝ	x	χ ʁ	h
Affricates				t͡s	t͡ʃ				
Lateral Fricatives				ɬ					
Approximants		w		ɹ					
Lateral Approximants						ʎ	ɫ		

Revised Consonant Chart from Carlson (2000):

	Bilabial	Alveolar	Postalveolar	Palatal	Labialized Velar	Uvular	Pharyngeal	Glottal
Plosive	p	t			kʷ	q qʷ		ʔ
Affricate		t͡s	t͡ʃ					
Nasal	m	n						
Fricative		s	ʃ		xʷ	χ χʷ		h
Lateral Fricative		ɬ						
Approximant		ɹ		j	w		ʕ ʕʷ	
Lateral Approximant		l						
Ejective Stop	p'	t'			kʷ'	q' qʷ'		
Ejective Affricate		t͡s'	t͡ʃ'					
Ejective Lateral Affricate		t͡ɬ'						

Spokane features a rich consonant system with many dorsal consonants, a vast ejective system, and frequent use of labialization in velars, uvulars, and pharyngeals. The language contains only voiceless stops at five places of articulation: bilabial [p], alveolar [t], velar [k],

uvular [q], and glottal [ʔ]. All stops are separately glottalized to an ejective manner of articulation. I originally did not include a separate row for ejective stops (or any other manner) because I honestly only heard [q'] with the occasional [p'] and didn't think it warranted another row. After listening to the recordings again, I can start to hear more ejection and I understand the necessity of another ejective row. Labialization occurs in all dorsal plosives and fricatives. This was not originally included in my chart because I transcribed all labialization as [qw], for example, and I can't quite differentiate the sound of a labialized consonant versus a consonant + [w]. The language makes rare use of lateral fricatives and affricates: [ɬ] and its ejective counterpart [t͡ɬ']; [t͡ʃ], [t͡s] and their respective ejective counterparts [t͡ʃ'], [t͡s']. It contains fricatives at five places of articulation: alveolar [s], postalveolar [ʃ], velar [x], uvular [χ], and glottal [h]. Additionally, there are approximants at four places of articulation: alveolar [ɹ], palatal [j], velar [w], and pharyngeal [ʕ], along with lateral alveolar approximant [l]. I didn't originally include [ʕ] as I am totally unfamiliar with the sound and was not able to recognize it. It's still hard to hear in the recordings, but I trust all of the expert data I've acquired and have no qualms about including it in my chart. As for the palatal [j], I can't really differentiate between all of the palatal sounds and transcribed [j] as [ɟ] or [ʎ] in multiple instances. I still can't hear any difference after listening to the recordings, but once again I trust my expert sources and don't have a problem with editing my chart.

Throughout this exercise, one of my most consistent mistakes was transcribing vowels in the place of syllabic consonants, i.e.: "perch fish" as [ˈtʌq'tɛq'] instead of [t͡s'qt͡s'iq], "box" as [ˈʃɪnʃɪˈɬ] instead of [ʃn̩ʔʃn̩ʔen̩ʔeʔ], "see" as [ˈuiːt͡ʃʌm] instead of [wit͡ʃm̩], etc. In "perch fish", I put [ʌ] between the ejective affricate [t͡s'] and plosive [q]; in "box", I put [ɪ] between the

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fricative [ʃ] and pharyngealized nasal [nˤ]; in "see", I put [ʌ] between the affricate [t͡ʃ] and

nasal [m]. There are more instances of this in my transcriptions, but I've only highlighted three

for the sake of brevity. I still hear these vowels as I listen to the recordings again, but I think it

may come from my bias as an English speaker where unbroken consonant clusters aren't

allowed by convention (except for a few rare cases). Additionally, moving from different places

and manners of articulation most likely causes some vowel-sound hallucinations as the

movement, however rapid, is never immediate and thus produces a bit of sound. I came into a

similar problem with glottalization, i.e.: "be born" as [ˈk̠o̠ɬɹx] instead of [kʷulˤlˤ] and "bear

grass/skunk cabbage" as [pɛ͡ɪˈit͡ʃ] instead of [pʔit͡ʃ]. In "be born", I mistook the glottalized

approximant [lˤ] as an approximant + vowel [ɬɹ]; in "bear grass/skunk cabbage, I transcribed

the diphthong [ɛ͡ɪ] in place of the glottal stop [ʔ]. I think these transcription mistakes were also

due to my bias as an English speaker because we don't use a lot of glottal stops as an individual

phoneme, and when they *are* used it's usually in the context of vowels (i.e. the exclamation

"uh-oh" would be pronounced [ʔʌˈʔoʊ]) or commonly as a word-final replacement for [t], such

as in the noun "cat", which would be pronounced [cæʔ]. In the case of Spokane, it appears the

[ʔ] functions almost as a vowel rather than a vowel modifier as well as a diacritic for other

consonants.

       Another problem I noticed was when the voicing is the same, I mixed up either the

place of articulation or the manner of articulation. For example, I mistook the voiceless velar

stop [k] for the voiceless bilabial stop [p] in the word "eagle" ([mɹɪkɑˈɬuks] rather than

[mlqˈnups]), so my place of articulation was incorrect. More examples include words where I

mistook the voiced alveolar nasal [n] for a voiced alveolar lateral approximant [l] such as:

"hat" as [q'wɑ͡tsq'ʉɬ] instead of [qʷa͡tsqn], "box" as [ˈʃɪnʃɹˈɬɬ] instead of [ʃnˤʃnˤenˤeʔ], and

"carry in arms" as [q'ʉˈɬɛːm̩] rather than [kʷnem]. I found these mistakes to be quite

interesting as they're very consistent throughout my transcriptions. Some of my errors may simply come from the less-than-stellar recording quality, which would severely impact my ability to effectively recognize acoustic-phonetic cues. I think it was also difficult to recognize these sounds properly because once again, as one who does not speak Spokane, I have no perceptual constancy and am unable to remedy any acoustic variability through knowledge of conventions. I can hear these differences as I listen to the recordings again, but I wonder if I'm only hearing these sounds because I want to hear them rather than actually recognizing the differences.

Throughout all of my transcriptions, I consistently used a velarised alveolar lateral approximant [ɫ] instead of a simple alveolar lateral approximant [l], the open back [ɑ] instead of the open central [a], and centralized versions of [i], [e], and [o] ([ɪ], [ɛ], [ʌ]/[ɔ], respectively). I didn't highlight these mistakes in my transcription chart as I exclusively used the mistaken phoneme and never mixed them up. I honestly think I mistook the [l] for a [ɫ] because I learned about it in class around the time I was transcribing these audio files and I thought it was a cool phenomenon. I also thought it would make sense for [l]'s to be velarised as so much of the Spokane language already uses posterior mouth functions to create utterances. I already explained my reasoning for mistaking the vowels prior, I just wanted to make note of them in the context of my transcriptions for posterity.

The last consistent mistake in my transcriptions was recognizing labialization, i.e.: "butterfly" as [q'wɛːˈɫuɫʌx] instead of [kʷelʔuleʔ], "hat" as [q'wat͡sq'ɯɫ] rather than [qʷat͡sqn], "buffalo" as [q'wɛɪʌɯˈq'waɪ] instead of [qʷ'iˈqʷ'aj], etc. I persistently transcribed a plosive + [w] (ex: [kw] or [qw]) instead of labializing the plosive as [kʷ] or [qʷ]. I don't perceive this as too much of a deviance from the "correct transcription" as they both represent lip-rounding immediately following a plosive sound. I'm not erudite enough to make the claim that a

labialized plosive and a plosive + [w] make two distinct sounds because they sound the same to me and perceptually seem to serve the same purpose. I ran into a similar perceptual qualm regarding the words "it shakes" and "short". The original and correct transcriptions are as follows: "it shakes" as [hɛɪ̯ˈʍɛɹ] instead of [hi ˈxʷeɹ], and "short" as [ˈʍiʍɛtst] rather than [ˈxʷixʷetst]. In both cases, I've "wrongly" transcribed the labialized velar fricative [xʷ] as the labiovelar fricative [ʍ]. Once again, these sound exactly the same to me, and even the places and manners of articulation seem practically identical. As a nonexpert, I'm comfortable claiming that these IPA symbols represent the same sound so I don't feel the need to call mine an incorrect transcription (at least where those symbols are involved).

I think the hardest part about this project was my unfamiliarity with Spokane language conventions. As we've discussed in lecture, our ability to hear isn't always perfect, but we can make up for any skill issues through acoustic-phonetic cues and our perceptual constancy. Through my knowledge of the English language, I can remedy any dubious "hearings" by using context clues and rules of convention. As I don't know any Spokane, I had to assume that whatever I was hearing initially was correct even if it was far from the actual transcription. Spokane also makes use of myriad dorsal consonants and, as an English speaker, I genuinely cannot recognize any pharyngeal phonemes. I've also never been exposed to ejectives before, and for a good portion of my project I thought I was dealing with a click language. My article (by Carlson) was also incredibly brief when discussing consonants, so it was a bit difficult to get a firm understanding of how exactly the language phonetics presented themselves.

In essence, Spokane is an incredibly diverse language that makes full use of all places and manners of articulation. This full range of motion creates an interesting vowel phenomenon, in which the epenthetic [ə] is realized as different central vowels depending on

its environment. Its large number of consonants (31, by Carlson's count) is demonstrated through the convention of unbroken consonant clusters, which is not a very common phenomenon among the world's most populous languages. Spokane is also unique in the regard that all plosives are voiceless, and all of these voiceless plosives have ejective counterparts. Ejection is also relayed in some affricates. It makes full use of glottalization and labialization as well. Though this is a fascinating language phonetically, further research may prove difficult as the language is critically endangered and spoken only by tribe elders. Most members of the Spokane tribe now use English or another, more popular language as their prior means of communication, so Spokane's necessity as a primary point of conveyance has become almost moot. Additionally, the sole form of orthography available for Spokane is a phonetically based system that only began in the last two decades so there is no written literature widely available. This language is greatly important within the circle of Washington's native culture, but will need to go through considerable conservation efforts in order to survive. For now, the majority of Spokane research is limited to Barry F. Carlson and, unless there's a major cultural resurgence, it's doubtful any new research will emerge.

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Appendix:

Original Transcriptions with Corrections:

#	Word Gloss	Transcription	Corrected
31	dark	tiːˈkɪp	hiˈt͡ʃʼim̃ˀ
20	perch fish	ˈtʌqʼtɛqʼ	t͡sʼqˈt͡sʼiq
33	be born	ˈkɔ̰ɬ̰x	kʷulˀlˀ
5	eagle	mɪɹkaˈɬuks	mlqˈnups
15	suckerfish	ˈt͡ʃɬɛn̩	t͡ʃˈleneʔ
19	butterfly	qʼwɛːˈɬuɬʌx	kʷelˀuleʔ
30	cry	t͡sˈqʼakɔx	t͡sʼqʷaqʷ
34	dull	tiˈɬigtx	jˀlˀˈjˀilˀt
14	it shakes	hɛɹˈʍɛɹ	hi ˈxʷeɹ
10	box	ˈʃɪnʃɪˈɬ̰ɬ̰	ʃnˀʃnˀenˀeʔ
16	grandmother	ˈʝaʎáx	jaˈjaʔ
13	hand	ˈkɛɬʃ	t͡ʃelʃ
28	it is one piece	ˈkiɔˈiɬʃ	hiˈʕʷiɬ
22	hat	qʼwat͡sqʼuɬ	qʷat͡sqn
29	dead	qʼuˈɬiɬ	t͡ɬˈlil
1	scratch	ˈpʼax	paχχ
25	short	ˈʍiʍɛtst	ˈxʷixʷetst
18	carry in arms	qʼuˈɬɛːm̩	kʷnem
17	see	ˈuːt͡ʃʌm	wit͡ʃm

#	Word Gloss	Transcription	Corrected
21	sweathouse	ˈsɬɑqʼist	ˈslaqʼist
39	broken	ˈmau̯ˈtx	maʕʷˤt
8	knife	ˈnikˈt͡ʃɛm̩n	ˈnˤinˤt͡ʃʼmˤnˤ
11	boat	ˈsːtikʌm	sˈtiɬm
2	old	ˈpʼɔkːpɔˈhuṭ	pʼχʷpʼ ˈχʷotʰ
4	sweet	diṭˈɪʃ	hit ˈiʃ
23	buffalo	qʼwɛɪʎɯˈqʼwɑɪ	qʷʼiˈqʷʼaj
24	bear grass/ skunk cabbag	pɛɪˈit͡ʃ	pˤit͡ʃ
26	father-in-law	ˈtʁɑàˈχɛx	sχaˤˈχeˤ
36	call someone/name some	ˈɑu̯ɪŋ̩	ʕawn
7	got enough to eat	nɑnmukˈtin	nanqˈt͡sin
9	seven	ˈsɪspɛ̣ɬ	ˈsispʼlˤ
3	when	pisˈtɛp	pis ˈtemˤ
35	snow goose	púˈùx	ˈwˤuˤwˤuˤ
12	he	sˈniχkt	t͡sniɬts
27	leave/ a remainder	ˈʌʋɛɬʌm̩	χʷelm
6	swallow bird	bɔqqˈsɪn	mˤomˤqʷʼtsnˤ
38	crow	tɑˈɑ̃x	t͡saʕˤaʕˤ

*Listed above are my original transcriptions next to Carlson's "correct" transcriptions. I have

highlighted what I believe to be the most prominent errors in blue, with some words being

completely blue if I felt my transcriptions were completely incorrect.